

**THIRD EDITION**

Best Practices in

Writing  
Instruction

---

edited by

**Steve Graham**

**Charles A. MacArthur**

**Michael Hebert**

## Also Available

Developing Strategic Writers through Genre

Instruction: Resources for Grades 3–5

*Zoi A. Philippakos, Charles A. MacArthur, and David L. Coker Jr.*

Handbook of Learning Disabilities, Second Edition

*Edited by H. Lee Swanson, Karen R. Harris, and Steve Graham*

Handbook of Writing Research, Second Edition

*Edited by Charles A. MacArthur, Steve Graham, and Jill*

*Fitzgerald*

# Best Practices in *Writing Instruction*

**THIRD EDITION**

edited by

Steve Graham

Charles A. MacArthur

Michael Hebert



THE GUILFORD PRESS  
New York London

Epub Edition ISBN: 9781462538010; Kindle Edition ISBN: 9781462537990

Copyright © 2019 The Guilford Press  
A Division of Guilford Publications, Inc.  
370 Seventh Avenue, Suite 1200, New York, NY 10001  
[www.guilford.com](http://www.guilford.com)

All rights reserved

No part of this book may be reproduced, translated, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, microfilming, recording, or otherwise, without written permission from the publisher.

Last digit is print number: 9 8 7 6 5 4 3 2 1

Library of Congress Cataloging-in-Publication Data is available from the publisher.

ISBN 978-1-4625-3796-9 (paperback)

ISBN 978-1-4625-3797-6 (hardcover)

*To my better three-quarters; in other words, to my wife,*

*Karen Harris*

—STEVE GRAHAM

*To my wife, Dorothy Hsaio, and my three boys,*

*Alexander, Peter, and Daniel*

—CHARLES A. MACARTHUR

*To the memory of my grandmother, Lorraine (Mona)*

*Czepiel*

—MICHAEL HEBERT

# About the Editors

**Steve Graham, EdD**, is the Warner Professor in the Division of Educational Leadership and Innovation at Mary Lou Fulton Teachers College, Arizona State University. He is also Research Professor in the Learning Science Institute at the Australian Catholic University in Brisbane. Dr. Graham is editor of the *Journal of Educational Psychology*. He has coedited several books, including *Handbook of Writing Research, Second Edition*, and *Handbook of Learning Disabilities, Second Edition*. He is the coauthor of three influential Carnegie Corporation reports: *Writing Next*, *Writing to Read*, and *Informing Writing*. Dr. Graham has received numerous awards, including the Sylvia Scribner Award from Division C of the American Educational Research Association (AERA), the Career Research Award from the Council for Exceptional Children (CEC), the Kauffman–Hallahan Distinguished Researcher Award from the CEC Division of Research, the Samuel A. Kirk Award from the CEC Division of Learning Disabilities, the Distinguished Researcher Award from the special education interest group of the AERA, and the Wiederholt Distinguished Lecturer Award from the Council of Learning Disabilities. He was elected to the Reading Hall of Fame in 2018 and is a Fellow of AERA, Division 15 of the American Psychological Association, and the International Academy for Research in Learning Disabilities.

**Charles A. MacArthur, PhD**, is Professor of Special Education and Literacy in the School of Education at the University of Delaware. His major research interests include writing development and instruction for struggling writers,

development of self-regulated strategies, adult literacy, and applications of technology to support reading and writing. Currently, he is principal investigator of a research project evaluating a curriculum for college developmental writing courses based on self-regulated strategy instruction. He is coeditor of the *Journal of Writing Research* and serves on the editorial boards of several other journals. Dr. MacArthur has published over 100 articles and book chapters and coedited or coauthored several books, including *Handbook of Writing Research, Second Edition*, and *Developing Strategic Writers through Genre Instruction*.

**Michael Hebert, PhD**, is Associate Professor in the Department of Special Education and Communication Disorders at the University of Nebraska–Lincoln. His primary research interests include the development and testing of writing interventions for students with disabilities, examining the impacts of writing on reading outcomes, and writing assessment. He is the coauthor of two influential Carnegie Corporation reports: *Writing to Read* and *Informing Writing*. Dr. Hebert is currently the principal investigator of an Early Career Development and Mentoring grant from the National Center for Special Education Research, with his project focused on developing an informational text writing intervention for fourth-grade struggling writers. He was previously a Fellow in the Experimental Education Research Training program supported by the Institute of Education Sciences. Dr. Hebert serves on the editorial board of the *Journal of Educational Psychology*.

# Contributors

**Rui Alexandre Alves, PhD**, Faculty of Psychology and Educational Sciences, University of Porto, Porto, Portugal

**Ashley Bildfell, MA**, Faculty of Education, School of Applied Child Psychology, Western University, London, Ontario, Canada

**Pietro Boscolo, PhD**, Department of Developmental Psychology and Socialization, University of Padua, Padua, Italy

**Ralph P. Ferretti, PhD**, School of Education, University of Delaware, Newark, Delaware

**Erin FitzPatrick, PhD**, Department of Special Education and Child Development, University of North Carolina at Charlotte, Charlotte, North Carolina

**Linda Friedrich, PhD**, Research and Evaluation, National Writing Project, Berkeley, California

**Carmen Gelati, PhD**, Department of Psychology, University of Milan–Bicocca, Milan, Italy

**Lauren Godfrey, MA**, School of Education, University of California, Irvine, Irvine, California

**Steve Graham, EdD**, Division of Educational Leadership and Innovation, Mary Lou Fulton Teachers College, Arizona State University, Tempe, Arizona

**Karen R. Harris, EdD**, Division of Educational Leadership and Innovation, Mary Lou Fulton Teachers College, Arizona State University, Tempe, Arizona

**Katrina N. Haug, MA**, Faculty of Education, Western University, London, Ontario, Canada

**Michael Hebert, PhD**, Department of Special Education and Communication Disorders, University of Nebraska–Lincoln, Lincoln, Nebraska

**R. Malatesha Joshi, PhD**, Literacy Education and Educational Psychology, Texas A&M University, College Station, Texas

**Rachel Karchmer-Klein, PhD**, School of Education, University of Delaware, Newark, Delaware

**Perry D. Klein, PhD**, Faculty of Education, University of Western Ontario, London, Ontario, Canada

**William E. Lewis, PhD**, School of Education, University of Delaware, Newark, Delaware

**Teresa Limpo, PhD**, Faculty of Psychology and Educational Sciences, University of Porto, Porto,



Portugal

**Charles A. MacArthur, PhD**, School of Education, University of Delaware, Newark, Delaware

**Debra McKeown, PhD**, Department of Teaching, Learning, and Culture, Texas A&M University, College Station, Texas

**Carol Booth Olson, PhD**, School of Education, University of California, Irvine, Irvine, California

**Adrian Pasquarella, PhD**, School of Education, University of Delaware, Newark, Delaware

**Amy Gillespie Rouse, PhD**, Department of Teaching and Learning, Southern Methodist University, Dallas, Texas

**Bruce Saddler, PhD**, Department of Educational and Counseling Psychology, University at Albany, State University of New York, Albany, New York

**Naymé Salas, PhD**, Department of Language, Literature and Social Sciences Teaching, School of Educational Sciences, Autonomous University of Barcelona, Barcelona, Spain

**Timothy Shanahan, PhD**, Department of Curriculum and Instruction, University of Illinois at Chicago, Chicago, Illinois

**Joshua Wilson, PhD**, School of Education, University of Delaware, Newark, Delaware

# Preface

We are pleased to present this third edition of *Best Practices in Writing Instruction*. The first edition was designed to help teachers become more effective at teaching writing. It presented evidence-based practices for enhancing the writing of students at all levels—elementary through high school. It also provided effective strategies for teaching writing to multilingual students and those with special needs. The second edition of *Best Practices* continued to provide practical examples of best practices in writing instruction across the grades, but every chapter focused on addressing the writing skills and applications stressed in the Common Core State Standards (CCSS). This third edition of *Best Practices* does not specifically focus on the CCSS, but it does cover all of the skills and applications emphasized in the Standards. Even more important, the third edition includes the newest and most effective instructional procedures for teaching writing to a broad array of children and youngsters from kindergarten to grade 12.

Every chapter in the third edition is extensively revised. The book begins with a chapter by Graham and Harris on designing an effective writing program, providing a structure that links the other 15 chapters together. We have added new chapters on (1) setting up the writing classroom and (2) teaching students to write from a source. The remaining chapters address how to teach narrative and argumentative writing, use writing to facilitate learning, write with digital tools, teach a wide array of skills and processes (handwriting, spelling, sentence construction, evaluation, and revising),

evaluate writing, connect reading and writing instruction, and teach writing to vulnerable populations.

One major change between the second and third editions of *Best Practices* is that Jill Fitzgerald decided to step down as one of the editors. We miss her greatly, but we are fortunate that Michael Hebert agreed to take her place.

We hope you enjoy this book and it helps you provide the best writing instruction possible to your students. If you liked the book or have any suggestions for us, please let us know ([steve.graham@asu.edu](mailto:steve.graham@asu.edu)).

# Contents

Also Available

Title Page

Copyright Page

Dedication

About the Editors

Contributors

Preface

## ***Part I***

### INTRODUCTION

CHAPTER 1

Evidence-Based Practices in Writing

Steve Graham and Karen R. Harris

## ***Part II***

### CREATING A SUPPORTIVE WRITING ENVIRONMENT

CHAPTER 2

Setting Up the Writing Classroom

Linda Friedrich

CHAPTER 3      [Motivating Writers](#)  
Pietro Boscolo and Carmen Gelati

### **Part III**

#### WRITING FOR DIFFERENT PURPOSES

CHAPTER 4      [Narrative Writing](#)  
Carol Booth Olson and Lauren Godfrey

CHAPTER 5      [Writing from Source Material](#)  
Michael Hebert

CHAPTER 6      [Argumentative Writing](#)  
Ralph P. Ferretti and William E. Lewis

CHAPTER 7      [Writing to Learn](#)  
Perry D. Klein, Katrina N. Haug, and Ashley Bildfell

CHAPTER 8      [Writing with Digital Tools](#)  
Rachel Karchmer-Klein

### **Part IV**

#### TEACHING WRITING

CHAPTER 9      [Handwriting and Spelling](#)  
Rui Alexandre Alves, Teresa Limpo, Naymé Salas, and R. Malatesha Joshi

CHAPTER 10     [Sentence Construction](#)  
Bruce Saddler

CHAPTER 11     [Planning](#)  
Debra McKeown and Erin FitzPatrick

CHAPTER 12     [Evaluation and Revision](#)  
Charles A. MacArthur

CHAPTER 13      [Reading–Writing Connections](#)  
Timothy Shanahan

CHAPTER 14      [Assessing Writing](#)  
Joshua Wilson

CHAPTER 15      [Instruction for Students with Special Needs](#)  
Amy Gillespie Rouse

CHAPTER 16      [Instruction for English Learners](#)  
Adrian Pasquarella

[Index](#)

[About Guilford Press](#)

[Discover Related Guilford Books](#)

*Part I*

# INTRODUCTION

# **Chapter 1**

## **Evidence-Based Practices in Writing**

Steve Graham  
Karen R. Harris

Since the publication of the first and second editions of *Best Practices in Writing Instruction* (Graham, MacArthur, & Fitzgerald, 2007, 2013), little has changed in how writing is taught in the majority of classrooms in the United States. Teachers report they devote little time to teaching writing beyond grade 3, and students do little writing in or out of school for academic purposes (Applebee & Langer, 2011; Brindle, Harris, Graham, & Hebert, 2016; Gillespie, Graham, Kiuahara, & Hebert, 2014; Graham, Cappizi, Harris, Hebert, & Morphy, 2014). This stands in stark contrast to the other members of the three R's—reading and mathematics—subjects in which schools and teachers have devoted considerable effort to improving students' performance.

The general lack of attention to improving writing instruction nationwide during this and the last several decades should not distract from the phenomenal job that many schools and teachers do when teaching writing (Wilcox, Jeffrey, & Gardner-Bixler, 2016). Rather, what these educators have accomplished illustrates what is possible when we squarely focus our efforts



on providing effective writing instruction. In fact, it is clear that we now have the instructional “know-how” needed to ensure that students become skillful writers. Reports from the Carnegie Corporation of New York (Graham, Harris, & Hebert, 2011; Graham & Hebert, 2010; Graham & Perin, 2007c) and the Institute of Education Sciences (Graham, Bollinger, et al., 2012; Graham et al., 2016) show we possess many tools for improving the quality of students’ writing.

It is especially important at this time that we focus on bringing these best practices in writing instruction more fully into all classrooms. Many students do not develop the writing skills needed to be successful in today’s world (National Center for Education Statistics, 2012). This places them at a disadvantage, as writing is virtually everywhere—at school, work, and home.

While concerns about students’ writing are not new (Sheils, 1975), calls to improve writing instruction were largely ignored by past educational reform efforts in the United States. This changed with the advent of the Common Core State Standards (CCSS) movement (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010). These standards, which were adopted by most states in the United States, made writing and writing instruction a central element of the school reform movement (Graham, Harris, & Santangelo, 2015). Learning to write and writing to learn were strongly emphasized in the CCSS, as students were expected to learn how to write for multiple purposes (e.g., to persuade, to inform, and to narrate) and use writing to recall, organize, analyze, interpret, and build knowledge about content or materials read across discipline-specific subjects. In effect, a basic goal of the CCSS was to revolutionize how writing was taught in U.S. schools and classrooms. This is a goal that we support without reservation.

This chapter and *Best Practices in Writing Instruction* as a whole address how we can provide effective writing instruction in today’s schools. We think that if teachers know *why writing is important*, they will invest the energy and time needed to develop an excellent writing program. If they understand *how writing develops*, they will approach writing instruction in a flexible and

reasonable manner. If they possess *effective tools for teaching writing*, they will have the know-how to maximize their students' success as writers. We address each of these assumptions in turn in this chapter and draw attention to other chapters in this volume that address each assumption more specifically.

## IS WRITING IMPORTANT?

The answer to this question is an unqualified YES! First, writing is an extremely versatile tool used to accomplish a variety of goals (Graham, 2006b). It provides a mechanism for maintaining personal links with family, friends, and colleagues when we are unable to be with them in person. We use writing to share information, tell stories, create imagined worlds, explore who we are, combat loneliness, and chronicle our experiences. Writing can even make us feel better, as writing about our feelings and experiences can benefit us psychologically and physiologically (Smyth, 1998).

Writing also provides a powerful tool for influencing others. Books like *Uncle Tom's Cabin* by Harriet Beecher Stowe provided a catalyst for antislavery beliefs in 19th-century America, whereas *The Jungle* by Upton Sinclair changed the way we think about food preparation. The persuasive effects of writing are so great that many governments ban "subversive" documents and jail the offending authors.

Writing is an indispensable tool for learning and communicating. We use writing as a medium to gather, preserve, and transmit information. Just as important, writing about what we are learning helps us understand and remember it better. The permanence of writing makes ideas we are studying readily available for review and evaluation, its explicitness encourages establishing connections between these ideas, and its active nature fosters the exploration of unexamined assumptions (Applebee, 1984). The impact of writing on learning was captured in two meta-analyses (Bangert-Drowns, Hurley, & Wilkinson, 2004; Graham & Perin, 2007c), which found that

writing about content material enhanced students' learning in social studies, science, mathematics, and the language arts. Two examples of a writing-to-learn activity are presented in [Figure 1.1](#) (see also Klein, Haug, & Bildfell, [Chapter 7](#), this volume).

**Grade 5:** Walt Longmire, a fifth-grade teacher, began an experiment on buoyancy by directing his students to look at the objects they would test (celery stick, wood, rock, Styrofoam, rubber ball, and key). Each child partnered with another student and wrote a prediction for each item, specifying whether it would sink to the bottom in a tank of water, float on top of it, or be suspended in between. They had to explain the rationale for each prediction. After discussing these predictions as a class, students conducted the experiments and made notes about what happened to each item as it was placed in the water. Students then reexamined their predictions and explanations, and revised them in writing as necessary. The class discussed the experiment as well as the revised predictions and explanations, drawing several general observations about buoyancy. Students recorded these in their science journal (Graham, 2013).

**Grade 11:** Beatrice Linwood, an eleventh-grade social studies teacher in Montana, had her class watch two films: one about the response of Dutch citizens to the Nazis' practice of making Jewish people wear a red star, another about the reaction of people in Germany to the same practice. As they watched the film, students were asked to take notes on how people in each country reacted to this practice, and why they thought they reacted in their respective manners. After viewing each film, the class discussed their notes and their reactions to the films. They were then asked to write a two-page paper about what would happen in present-day Montana if illegal immigrants were forced to wear a similar star. They shared and discussed their conclusions from their paper the next day.

**FIGURE 1.1.** Examples of writing-to-learn activities.

Furthermore, students understand material they read better if they write about it. As with writing about concepts presented in science or other content classes, writing about material read provides students with a tool for visibly and permanently recording, analyzing, connecting, personalizing, and manipulating key ideas from text. This has a strong impact on making text read more memorable and understandable (Graham & Hebert, 2010, 2011). This is the case for students in general, and those who are weaker readers and/or writers in particular. It is also the case for narrative and expository text and materials students read for language arts, science, and social studies.

Two examples of writing activities that improve students' comprehension of text in scientific studies are presented in [Figure 1.2](#) (see also Shanahan, [Chapter 13](#), this volume).

**Grade 3:** Alfredo Coda taught his third-grade students how to write questions about the stories they were reading in language arts. He started by having them read a short story, and then modeled how to generate and answer who, what, when, where, and why questions about the material read. As he modeled how to write each question he explained why each was important. Next, students read several additional stories and helped Mr. Coda generate and answer these same kinds of questions. Each student paired with another student and did the same thing. Each student shared his or her favorite question with the class. The final activity involved having students write their own questions and give them to a peer to answer after they read the text for which the questions were developed. The student who answered the questions gave the other student feedback on the quality of each question, indicating what he or she liked or how the question could be changed to make it better. This exercise was repeated several times until students had mastered this skill.

**Grade 10:** Sancho Saizarbitoria, a tenth-grade social studies teacher, asked his students to read and take notes on two-page descriptions of governments in four countries (two were republics and two were representative democracies). He then defined with the students each of these two forms of government, and the class identified which of the four countries were republics and which were representative democracies. He then asked them to write a two-page paper comparing and contrasting the two forms of government, indicating what they thought was best about each and why. He read their papers that evening, and after returning them the next day, they discussed misperceptions about what was evident in the papers and further explored the advantages and disadvantages of the two forms of government.

**FIGURE 1.2.** Examples of writing-to-read activities.

Finally, teaching students to write improves their reading skills. While reading and writing are not identical skills, they both rely on a common fund of knowledge, processes, and skills (Shanahan, 2016). Consequently, instruction that improves writing skills and processes improves reading skills and processes. Reading is also improved by having students engage in the process of composing text. Writers gain insights about reading by creating text for an audience to read. When they write, students must make their assumptions and premises explicit as well as observe the rules of logic, making them more aware of these same issues in the material they read.

Support for both of these premises was obtained in meta-analyses by Graham and colleagues (Graham & Hebert, 2010, 2011; Graham & Santangelo, 2014), who found that:

- Teaching spelling improved students' word-reading and comprehension skills.
- Teaching sentence constructions skills increased students' reading fluency.
- Implementing multicomponent writing instructional programs, such as the process writing approach or skills-based writing instructions, increased how well students comprehended text read.
- Increasing how much students write led to better reading comprehension.

As this brief discussion shows, writing is a flexible, versatile, and powerful tool. Writing helps students learn and it can help them become better readers (though research clearly indicates that both writing and reading competence requires substantial instruction in each separately, as well as in combination). Students can use writing to help them better understand themselves. Writing also allows them to communicate with, entertain, and persuade others.

## **HOW DOES WRITING DEVELOP?**

While our understanding of how writing develops is not complete, we know enough to be certain that the road from novice to competent writer is strongly influenced by the context in which writing takes place and changes in students' writing skills, strategies, knowledge, and motivation (Graham, 2006b). First, writing is a social activity involving an implicit or explicit dialogue between writer(s) and reader(s). It also takes place in a broader context where the purposes and meaning of writing are shaped by cultural, societal, and historical factors. For instance, written discourse differs considerably among a group of friends tweeting to one another versus the

types of academic text students are expected to write at school (Nystrand, 2006).

Writing is more than a social activity, however, as it requires the application of a variety of cognitive and affective processes. It is a goal-directed and self-sustained cognitive activity requiring the skillful management of the writing environment; the constraints imposed by the writing topic; the intentions of the writer(s); and the processes, knowledge, and skills involved in composing (Zimmerman & Reisemberg, 1997). Writers must juggle and master a commanding array of skills, knowledge, and processes, including knowledge about topic and genre; strategies for planning, drafting, revising, editing, and publishing text; and the skills needed to craft and transcribe ideas into sentences that convey the author's intended meaning. With the ongoing development of new ways of composing that can include visual and auditory information, this process has become even more demanding. Consistent with the conceptualizations above, two basic approaches have dominated much of the discussion about how writing develops. One viewpoint focuses on how context shapes writing development (Russell, 1997), whereas the other concentrates mostly on the role of cognition and motivation in writing (Hayes, 2012). Scholars of writing generally align themselves with one conceptualization or the other. We believe this is a mistake, as writing development (or instruction for that matter) cannot be adequately understood without considering both points of view (see also Bazerman et al., 2017). When we ask teachers about their writing practices, we find that they also think both points of view are essential, as evidenced by how they teach writing and what they believe about it (Cutler & Graham, 2008; Graham, Harris, Fink, & MacArthur, 2002).

## **Writing Development and Context**

The contextual view of writing development in the classroom is aptly illustrated in a model developed by Russell (1997). A basic structure in this

model is the activity system, which includes how actors (a student, pair of students, student and teacher, or class—perceived in social terms and taking into account the history of their involvement in the activity system) use concrete tools, such as paper and pencil or word processing, to accomplish an action leading to an outcome, such as writing a story or explaining how to apply a scientific principle. The outcome is accomplished in a problem space where the actors use writing tools in an ongoing interaction with others (peers and teachers) to shape the paper that is being produced over time in a shared direction.

A second basic structure in this model is the concept of genre. These are “typified ways of purposefully interacting in and among some activity system(s)” (Russell, 1997, p. 513). These typified ways of interacting become stabilized via regularized use of writing by and among students, creating a generally predictable approach for writing within a classroom (e.g., in some classes this takes the form of selecting a topic, planning, drafting, revising, editing, and publishing). These are conceived as only temporarily stabilized structures, however, because they are subject to change depending upon the context. For example, a new student entering a classroom with an established activity system for writing may appropriate some of the routinized tools used by his or her classmates, such as creating a semantic web for organizing writing ideas before drafting a paper. In turn, the new student may change typified ways of writing in a classroom, as other students in the class adapt unfamiliar routines applied by their new classmate, such as “freewriting” ideas about the topic before creating a first draft of the paper.

A more recent model of writing (Graham, 2018), drawing on both activity systems and the concept of genre, places writing and writing instruction within the context of specific writing communities. There are many possible writing communities a student can belong to, including writing communities in and outside of school. A writing community is defined as a group of people who share a basic set of goals and assumptions and use writing to achieve their purpose. In school, a writing community can involve a fourth-grade class whose primary purpose is to learn to write and write for various

purposes. It can also involve a tenth-grade science class that uses writing as a tool for understanding material read and results of experiments undertaken.

In addition to having specific purposes, writing communities such as the classrooms described above develop identities, values, norms, and preferred audiences. Within a writing community, members (e.g., teacher and students) assume different roles, responsibilities, identities, and levels of commitment. Members of a community use writing tools and resources along with typified patterns of action to accomplish their writing objectives and task. This work occurs in specific physical and social environments (e.g., brick-and-mortar classroom, digital classroom), and is shaped by a collective history. While the actions and behaviors of a writing community (e.g., teacher and students) become codified with time, they are open to change. In addition, a writing community, such as the fourth- or tenth-grade classes referred to earlier, is likely to contain considerable variability due to the existence of contradictions, conflict, multiple voices, disparate elements, and heterogeneity.

This contextual description of writing (Graham, 2018) suggests that while writing classrooms are likely to share many similarities (e.g., common purposes), no two classes are exactly alike. Even more importantly, writing and learning to write is shaped and constrained by the community in which they take place. The purposes, norms, values, forms, audiences, tools, sanctioned approaches, collaborators, environment, and collective history determine, at least in part, what is written as well as what is learned. As a result, we must carefully consider how we construct our classroom writing community.

Of course, what happens in our classroom is not completely up to each of us, as it is also shaped and constrained by larger forces involving culture, society, family, institution, politics, and history (Bazerman et al., 2017; Graham, 2018). An easy way to illustrate this is through the consequences of high-stakes testing for writing. Most states require annual high-stakes writing tests with students in specific grades. This institutional action increases the amount of time devoted to teaching writing, at least during the years when it



is tested (Graham et al., 2011). Not all of the effects of such testing are positive, however. Hillocks (2002) reported that it restricted writing instruction to what is measured. For instance, if narrative writing is tested in fourth grade, writing instruction may well be limited to this genre. Our experiences in schools substantiate this concern.

## **Writing Development and Cognitive/Motivational Capabilities**

While writing development is undoubtedly influenced by the communities in which it occurs (Graham, 2018), it is also shaped and constrained by the cognitive capabilities and resources that members of said community bring to the act of writing and learning. For instance, what students learn about writing will be influenced by their teachers' experience teaching writing, knowledge about how to teach it, attitudes about writing, and confidence as a writer and writing teacher. Likewise, students are not passive and inert figures in the classroom. They make many decisions that drive and shape what they write and what they learn. In effect, they exert some degree of agency over writing and learning to write that extends beyond the influence of the teacher or the context. For example, even when a teacher assigns a writing task, the student must still decide to do the task, determine how much effort to commit, formulate intentions and goals, and decide how to accomplish it.

It is important to realize that a student's volition and actions as a writer and learner are in turn shaped and constrained by limitations in human cognitive architecture and the writing knowledge, skills, strategies, and beliefs readily available to the student. Writing is a very complex skill involving the execution and coordination of attention, motor, visual, executive functioning, memory, and language, as well as writing knowledge, processes, and skills (Hayes, 2012). There are many competing actions that writers must attend to while writing, and if these actions require too much attention or cognitive resources, the cognitive system becomes overloaded, resulting in less than

optimal writing (McCutchen, 1988). This is particularly problematic for developing writers who are still mastering the basic knowledge, processes, skills, and beliefs needed to be a successful and skilled writer. Thus, an important goal in writing development is to help them acquire these resources.

The cognitive/motivational view of writing development described above can be aptly illustrated through a model of skilled writing developed by Hayes (2012). His model identifies the mental moves and motivational resources writers draw on as they compose text. These include the mental processes of text interpretation, reflection, and text production. Writers draw on these cognitive processes to create a representation of the writing task, develop a plan to complete it, draw conclusions about the audience and possible writing content, use cues from the writing plan or text produced so far to retrieve needed information from memory, turn these ideas and information into written sentences, and evaluate plans and text and modify them as needed. It also includes long-term memory (knowledge of the writing topic and audience as well vocabulary and linguistic, morphological, and genre knowledge, including schemas for carrying out particular writing tasks), working memory (which serves as an interface among cognitive processes, motivation, and memory, providing a mental place for holding information and ideas for writing as well as carrying out mental operations that require the writer's conscious attention), and motivation (the goals, predispositions, beliefs, and attitudes that influence the writer and the writing process).

As Hayes's (2012) model shows, skilled writers are strategic, motivated, and knowledgeable about the craft of writing. Not as explicitly identified in Hayes's model are the skills and abilities writers use to transform ideas into sentences that are then translated into text through handwriting, typing, and spelling. The goal of writing instruction should be for students to be facile at developing sentences and extended text that clearly convey meaning and reflect the writer's intentions, as well as to automatize the transcription skills of handwriting, typing, and spelling so that they require little conscious attention on the part of the developing writer.

The contextual and cognitive/motivational models described in this chapter provide a good roadmap for what should be attended to when designing effective writing programs for K–12 students. It is important to create a writing context in which students can flourish. This goal includes developing typified routines that facilitate writing development as well as addressing motivation and affect related to the writing process. It is also important to make sure students acquire the skills, strategies, knowledge, and will needed to become skilled writers. In the next section, we identify best practices for achieving these goals, and make connections to other chapters in this volume where specific best practices are described in greater detail.

## WHAT ARE BEST PRACTICES IN WRITING INSTRUCTION?

Daniel Walker, the 1999 Alaska Teacher of the Year, rightly noted, “Teaching is brain surgery without breaking the skin. It should not be entered into lightly” (Sennett, 2003). This is especially true for the teaching of writing, as it is a very complex and demanding activity. How, then, can we identify best practices in the teaching of writing?

- *The wisdom of professional writers.* One possible source for identifying best practices in writing is to draw on the wisdom of professional writers. These highly skilled writers have offered many suggestions about how to teach writing over the centuries, ranging from Mark Twain’s famous advice “When you catch an adjective, kill it”; to Winston Churchill’s admonishment “Short words are the best, and old words when short are the best of all.” While professional writers surely possess considerable wisdom about writing, their advice is most often aimed at other skilled writers who seek to make writing their profession, too. Consequently, we did not draw on this advice as a source for best practices for teaching developing writers in this chapter.

- *The wisdom of teachers.* Another possible source for best practices comes

from those who teach developing writers. Throughout their careers, teachers acquire incredible insights into how to teach students to write (see, e.g., Atwell, 1987; Graves, 1983). The drawback to this approach to identifying best practices is that it is difficult to separate the “wheat from the chaff,” to use a colloquial expression (Graham, 2010). There is usually no direct evidence showing which of the many methods a teacher uses is responsible for changes in students’ writing. When evidence is provided for a specific method, it commonly takes the form of a testimonial, as the writing of selected students is presented to show that a method works. This makes it difficult to determine whether the evidence provides a typical or an atypical picture of the method’s impact. Moreover, if a method is drawn from the experiences of a single teacher (regardless of how effective that teacher is), there is no way to predict whether it will be effective with other teachers.

To address this specific limitation, we identified best practices in writing in this chapter by examining the methods that exceptional teachers of literacy commonly apply when teaching writing (Graham & Perin, 2007b). This decision addressed the evidence issue above (at least in part), as students of these teachers made exceptional gains in their writing development. It also addressed the single teacher issue, as we considered an instructional method a best practice only if it was applied across most of the available studies of exceptional teachers. While our approach cannot establish that a particular method is solely responsible for improvements in students’ writing, it is reasonable to assume that practices that are commonly applied by exceptional writing teachers are potentially more important than those applied idiosyncratically.

This teacher-based approach to identifying best practices should not distract or take away from the potential power or effectiveness of methods that you have established as effective in your own classroom. In fact, what we hope you do is combine these methods with the best practices identified in this chapter and throughout this volume.

- *The scientific study of writing interventions.* A third source for best

practices can be drawn from scientific studies testing the effectiveness of specific writing practices. This provides a relatively trustworthy approach for identifying best practices, as such testing provides evidence on whether a procedure enhanced students' writing. It further makes it possible to determine how much confidence can be placed in the findings. As a result, the best practices identified in this chapter are also based on methods shown to be effective in scientific studies where writing outcomes were reliably assessed.

It must be noted that the scientific testing of instructional practices is not without its own problems. A scientifically validated practice is only as good as the evidence supporting it, and just because an instructional method was effective in multiple research studies does not guarantee that it will be effective in all other situations. There is hardly ever a perfect match between the conditions under which a writing method was implemented in a scientific study and the conditions in which it will subsequently be applied in your classroom (Graham, McKeown, Kiuahara, & Harris, 2012). The safest course of action is to monitor the effects of any best practice from this chapter you implement in your classroom to be sure it works with your students.

In the next sections, we identify teacher-based and scientifically based best practices that can be used to create an effective writing program. We structure the presentation of these practices so that they are responsive to what we know about writing development from a contextual as well as a cognitive/affective/motivational viewpoint. This includes creating a writing environment in which students can flourish and making sure they develop the skills, strategies, knowledge, and motivation needed to become skilled writers. We address each of these topics separately, with the exception of motivation, which is primarily addressed in the section on creating a supportive classroom environment.

## **Create a Supportive Classroom Where Writing**

## Development Can Flourish

Writing is hard work and learning to write well is even harder. Students are less likely to put forth their best efforts when writing or learning to write if they view the classroom as an unfriendly, chaotic, high-risk, or punitive place. Many students evidence mental withdrawal or evasion of productive work in such situations (Hansen, 1989). This makes it especially important to develop a classroom writing environment that is interesting, pleasant, and nonthreatening, where the teacher supports students and students support one another. This viewpoint is also evident in the classrooms of highly effective literacy teachers (Graham, Harris, et al., 2015; Graham & Perin, 2007b), where they:

- Are enthusiastic about writing and the teaching of writing, establishing a stimulating mood during writing time.
- Make students' writing visible by encouraging them to share it with others; displaying it on the wall; and publishing it in anthologies, books, or other classroom collections.
- Create a positive environment in which students are encouraged to try hard, to believe that the writing skills and strategies they are learning will permit them to write well, and to attribute success to effort and the tactics they are learning (see also Boscolo & Gelati, [Chapter 3](#), this volume).
- Set high but realistic expectations for students, encouraging them to surpass previous efforts or accomplishments.
- Provide just enough support to students so they can make progress or carry out writing tasks, but encourage them to act in a self-regulated fashion, doing as much as they can on their own.
- Adapt writing assignments and instruction so that they are appropriate to the interests and needs of their students (see also Rouse, [Chapter 15](#), and Pasquarella, [Chapter 16](#), this volume).
- Keep students engaged by involving them in thoughtful activities (such

as gathering information for their composition) versus activities requiring less thoughtfulness (such as completing a workbook page that can be finished quickly, leaving many students disengaged).

- Create classroom routines that promote positive interactions among students.

Many of these same teacher-based best practices are also evident in the process approach to writing. This includes the following motivating and supportive practices: writing for real audiences; encouraging personal responsibility and ownership of writing projects; promoting high levels of student interactions, creating a pleasant and positive writing environment; and encouraging self-reflection and evaluation. It is important to keep in mind that this approach to teaching writing involves other instructional components such as creating routines in which students are asked to plan, draft, revise, and edit their text. While scientific studies testing the process approach do not provide evidence on the effectiveness of specific aspects of this method, such as the motivational and supportive practices identified above, the available research demonstrates that this overall approach does improve how well students in grades 1–12 write (see Graham & Sandmel, 2011, for a review of scientific studies).

Three specific writing practices that are supported by scientific testing are praise, goal setting, and creating instructional arrangements where students write together (see Graham et al., 2011, 2017; Graham & Perin, 2007a; Rogers & Graham, 2008, for reviews). When teachers reinforce a positive feature of students' writing, such as good word choice, students are more likely to make such choices in future papers. When providing such praise, it is important to be specific about what you like.

Providing students with clear, specific, and reasonably challenging goals improves the quality of what they write. Examples of such goals include:

- Asking elementary grade students to add three new ideas to their paper when revising it.

- Asking middle school students to address both sides of an argument when writing, providing three or more reasons to support their point of view and countering at least two reasons supporting the opposing view.

For both elementary and secondary students, creating arrangements where students work together to plan, draft, revise, or edit a composition improves the quality of what they write (see also Friedrich, [Chapter 2](#); McKeown & FitzPatrick, [Chapter 11](#); and MacArthur, [Chapter 12](#), this volume). The key to creating such routines is to provide students with specific directions and guidelines for what they will do when working together and to directly teach them how to apply these procedures. An example of peers working together to compose a composition is provided in [Figure 1.3](#).

Lonnie Bird taught his third-grade students how to work with another peer to plan, draft, revise, and edit their papers. Students were taught to work together as partners as they composed. He modeled and they practiced how to help each other with a variety of basic writing tasks including generating ideas, creating a draft, rereading essays, editing essays, choosing the best copy, and evaluating the final product. As they jointly composed papers, he monitored, prompted, and praised students and addressed their concerns.

**FIGURE 1.3.** Example of students working together to compose a composition. Based on Yarrow and Topping (2001).

We believe the most critical element in creating an environment where students can prosper and grow as writers is for them to write. The basic premise underlying this assumption is that students need to write frequently and regularly to become comfortable with writing, develop their ideas as they write, and further hone their skills as writers. Surprisingly, students spend very little time writing in school. When they do write, their writing is rarely longer than a single paragraph (Applebee & Langer, 2011). Highly effective literacy teachers, however, recognize that writing is essential, as youngsters in their classrooms (Graham & Perin, 2007a):



- Write often and for many different purposes, including to inform, persuade, and entertain (see also Olson & Godfrey, [Chapter 4](#); Hebert, [Chapter 5](#); Ferretti & Lewis, [Chapter 6](#); and Karchmer-Klein, [Chapter 8](#), this volume).
- Write frequently across the curriculum (see also Klein, Haug, & Bildfell, [Chapter 7](#), this volume).

These teacher-based best practices are supported by scientific experiments showing that increasing the frequency of elementary grade students' writing improves how well they write (Graham et al., 2017) and writing about material read or presented in content classes improves learning (Bangert-Drowns et al., 2004; Graham & Hebert, 2010, 2011; Graham & Perin, 2007c). We also think it is important for students to:

- Write for real audiences and purposes (see [Figure 1.4](#) for an example).
- Make personal choices about what they write, including encouraging them to develop unique interpretations of assigned writing topics.
- Write for extended periods of time about single topics.

Victoria Moretti and her class of fourth-grade students in Virginia planned a project to help save the Chesapeake Bay (Graham, 2013). They set out to clean a stream that ran behind their school and whose water eventually fed the bay. The class carried out a variety of writing tasks to help them meet their objective, including:

- Writing letters to the mayor and town council indicating why it was important that the bay become cleaner, how they were helping to make this a reality, and what the mayor and town council could do.
- Writing letters to two local newspapers indicating why local streams, rivers, and estuaries must be kept clean.
- Writing and performing a play for younger students at the school, showing what happens to fish and other wildlife when streams are polluted.
- Writing key messages on placards for a "Save-the-Bay" rally held at a local mall.
- Creating a list of activities for creating a cleaner bay (after interviewing parents, accessing online resources, and contacting environmental experts).

**FIGURE 1.4.** Example of writing for a real purpose.

Developing a supportive writing environment also requires some consideration of the tools students use when writing. Many schools still use 19th-century writing tools such as pencil and paper, even though scientific studies demonstrate that students in grades 1–12 show greater improvement in their writing over time when they use word processing to write at school versus writing by hand (Goldberg, Russell, & Cook, 2003; Morphy & Graham, 2012). Word processors have a number of advantages over writing by hand, as electronic text is legible; electronic text can easily be deleted, added to, rewritten, or moved; word processors are bundled with other software such as spell checkers or speech synthesis that can support the writer; and word processors can be connected to the web and other programs in which students can gather material for what they write as well as share their text with others. Despite these advantages, students still do most of their writing for school by hand. We obviously need to move writing instruction more squarely into the 21st century, making it possible for our students to take advantage of word processing and other electronic methods for composing (see Karchmer-Klein, [Chapter 8](#), this volume).

Finally, teacher assessment is essential to creating a supportive writing environment. When teachers monitor their students' progress as writers, they can adjust classroom practices to meet the collective as well as the individual needs of their students. When they provide students with feedback, they facilitate the learning of writing skills, strategies, or knowledge by helping students evaluate their progress and determine whether they need to exert more effort to be successful (Paas, Van Merriënboer, & Van Gog, 2012). Scientific studies have demonstrated that both of these assessment activities enhance students' writing performance (Graham et al., 2011; Graham, Hebert, & Harris, 2015; see Wilson, [Chapter 14](#), this volume, for additional information on best practices in writing assessment).

## **Teach Writing Strategies**

Writers employ a variety of strategies to help them manage the writing process and to create as well as improve what they write (Zimmerman & Riesemberg, 1997). These strategies include:

- Goal setting and planning (e.g., establishing rhetorical goals and tactics to achieve them).
- Seeking information (e.g., gathering information for writing).
- Record keeping (e.g., making notes).
- Organizing (e.g., ordering notes or text).
- Transforming (e.g., visualizing a character to facilitate written description).
- Self-monitoring (e.g., checking to see that writing goals are met).
- Reviewing records (e.g., reading notes or the text produced so far).
- Self-evaluating (e.g., assessing the quality of text or proposed plans).
- Revising (e.g., modifying text or plans for writing).
- Self-verbalizing (e.g., saying dialogue aloud or personal articulations about what needs to be done).
- Rehearsing (e.g., trying out a scene before writing it).
- Environmental structuring (e.g., finding a quiet place to write).
- Time planning (e.g., estimating and budgeting time for writing).
- Self-consequating (e.g., going to a movie as a reward for completing a writing task).

Highly effective teachers emphasize the use and teaching of such strategies (Graham, Harris, et al., 2015; Graham & Perin, 2007b), as they:

- Encourage students to treat writing as a process.
- Teach students strategies for planning, drafting, revising, and editing text.

The practice of explicitly teaching students strategies for planning, drafting, evaluating, and revising text is supported by scientific experiments showing that such instruction strongly improves the quality of writing

produced by students in grades 1–12 (see Graham, 2006a; Graham & Harris, 2003; Graham et al., 2011; Graham, Harris, & McKeown, 2013, for reviews). Strategies that improve students’ writing performance range from more general processes, such as brainstorming or semantic webbing (which can be applied across genres), to planning and revising strategies designed for specific types of writing, such as writing an explanation or writing to persuade (see also McKeown & FitzPatrick, [Chapter 11](#), and MacArthur, [Chapter 12](#), this volume).

At the most basic level, writing strategies instruction involves the teacher explaining the purpose and rationale of the strategy (as well as when and where to use it); modeling how to use the strategy (often multiple times); providing students with assistance in applying the strategy until they can apply it independently and effectively; and facilitating continued and adaptive use of the strategy (again through explanation, modeling, and guided practice). This basic routine for teaching writing strategies is enhanced when students are shown how to regulate the planning, drafting, revising, or editing strategies taught (see Graham, Harris, et al., 2015). This includes teaching them how to set goals for learning and using the strategies as well as monitoring the impact the strategy use has on their writing. The advantage of making such gains visible to students is that it is motivating and increases the likelihood they will use the strategy in the future. [Figure 1.5](#) presents an example of a strategy for planning and drafting an essay and provides a brief description of the basic procedures used to teach it. (We refer readers to Graham & Harris, 2005; Harris, Graham, Mason, & Freidlander, 2008, for other scientifically validated writing strategies and a more complete description of the self-regulated strategy development model used to develop these strategies.)

Henry Bear taught his tenth-grade class the following strategies for planning and drafting an essay (based on De La Paz & Graham, 2002):

- PLAN (*Pay attention to the prompt, List the main idea, Add supporting ideas, Number your ideas*).

- WRITE (*Work from your plan to develop your thesis statement, Remember your goals, Include transition words for each paragraph, Try to use different kinds of sentences, and Exciting, interesting, \$10,000 words*).

He taught these strategies using the self-regulated strategy development model (based on Harris, Graham, Mason, & Friedlander, 2008). It includes the following six stages of instruction:

1. *Develop background knowledge.* Students were taught background knowledge needed to use the strategy successfully.
2. *Describe it.* The strategy as well as its purpose and benefits was described and discussed.
3. *Model it.* Mr. Bear modeled how to use the strategy.
4. *Memorize it.* The students memorized the steps of the strategy and the accompanying mnemonics.
5. *Support it.* Mr. Bear supported students' use of the strategy, providing assistance as needed.
6. *Independent use.* Students used the strategy with few or no supports.

Students were also taught a number of self-regulation skills (including goal setting, self-monitoring, self-instruction, and self-reinforcement) to help them manage the writing strategies, the writing process, and their behavior.

**FIGURE 1.5.** Strategy for planning and drafting an essay.

## **Help Students Acquire the Knowledge Needed to Write Effectively**

Two types of knowledge that are especially important to writers are knowledge about the writing topic and knowledge about the genre(s) in which the writer will present this topic information. In a recent study (Olinghouse, Graham, & Gillespie, 2015), we found that both types of knowledge made a unique and significant contribution to predicting the quality of students' writing across different genres. This observation is buttressed by scientific intervention studies showing that methods used to help students access or organize topic knowledge in advance of writing improves the quality of what they write, whereas methods used to enhance students' knowledge of genres and the characteristics of good writing result in better text (see Graham, Harris, et al., 2015; Graham & Perin, 2007a).

One scientifically based best practice for helping students acquire

information to write about is prewriting activities. With these types of activities, students locate information through brainstorming, reading, or other informational-gathering procedures. They may also use a graphic organizer to help them structure this information. Another means for acquiring possible writing content is through inquiry. This is characterized by setting a clearly specified goal for the writing task (e.g., describe the actions of people), analyzing concrete and immediate data to obtain information needed to complete the task (e.g., observe one or more peers during specific activities), using specific strategies to conduct the analysis (e.g., retrospectively ask the person being observed the reason for his or her action), and applying what was learned (e.g., write a story where the insights from the inquiry are incorporated into the composition).

Two scientifically based best practices for acquiring information about specific genres or the characteristics of good writing include (1) teaching students about the characteristics of specific types of text (e.g., stories have a setting, starting event, characters, actions, resolution) and (2) providing them with good models for the types of writing they are expected to create (see [Figure 1.6](#)). Both activities have a positive impact on the quality of what students write (Graham, Harris, et al., 2015; Graham et al., 2018; Graham & Perin, 2007a).

Dorothy Caldwell, a seventh-grade teacher, initiated a discussion with her class about the characteristics of a good persuasive paper. As they generated ideas, she listed them on a whiteboard, providing a label for common persuasive elements such as claim and evidence. Next, they read an especially strong persuasive essay together and talked about the characteristics of the text that made it so convincing. They then conducted a “persuasive element hunt” as they read other persuasive essays to find and discuss other persuasive elements. These were also listed on the whiteboard. Again, Mrs. Caldwell provided labels for these elements or characteristics (e.g., “transition words”). Using the first persuasive essay as a model, students were asked to generate their own persuasive essay on whether people should be allowed to use their cell phone at school. They shared their essay with one or more peers (and in some instances with the class), receiving feedback on what worked and how they could make it even better. As they developed additional essays, they were encouraged to go beyond the initial models they used as a guide.

**FIGURE 1.6.** Teaching students about the characteristics of a good persuasive paper.

## Teach Foundational Writing Skills

Skilled writers rarely think about handwriting, typing, or spelling. They execute these skills correctly and with little to no conscious attention. Until they are mastered, these skills create several undesirable consequences for developing writing. First, misspellings and difficult-to-read handwriting makes text more difficult to read, and readers are more negative about the ideas in such text (Graham et al., 2011). Second, having to devote conscious attention to handwriting, typing, and spelling interferes with other writing processes (Scardamalia & Bereiter, 1986). For instance, having to switch attention to think about how to spell a word can lead the writer to forget ideas or plans held in working memory.

It is best to teach these transcription skills early, as children who experience difficulties with them may avoid writing and develop a mind-set that they cannot write (Berninger, Mizokawa, & Bragg, 1991). Scientific studies show that teaching handwriting, spelling, and typing to children in the primary grades has a positive impact on their writing (Graham, Harris, et al., 2015; Graham & Santangelo, 2014; Santangelo & Graham, 2016). In effect, interference from these skills is lessened, as children become increasingly fluent and correct in executing them. [Figure 1.7](#) presents an example of best practices for spelling (see also Alves, Limpo, Salas, & Joshi, [Chapter 9](#), this volume).

Every 2 weeks, Cady Longmire introduces her second-grade class to two contrasting spelling patterns (e.g., short vowels /a/ and /o/; short and long /a/; or long vowels /ay/ and /ai/). These patterns are introduced through a word-sorting activity, in which she sorts words involving the two patterns into different piles. She provides students with hints on why each card is placed in a particular pile (e.g., emphasizing a specific sound in a word), leading students to discover and specifically state (with her help) the rule underlying the spelling patterns. During the next 2 weeks, students:

- Search for words in their reading and writing that fit the patterns.
- Learn to spell common words that fit the patterns by playing games (e.g., Tic-Tac-

- Toe spelling).
- Build words with the patterns by adding consonants, blends, or diagraphs to rimes representing the pattern (e.g., the rime *at* for short /a/).

**FIGURE 1.7.** Teaching spelling skills.

A major part of a writer's effort when drafting text is involved in transforming ideas into the words and syntactic structures that convey the author's intended meanings. These goals include constructing sentences as well as using appropriate grammar, punctuation, capitalization, and so forth. Scientific studies show that teaching such sentence constructions skills not only improves the sentences students write (Andrews et al., 2006) but the quality of the text they produce (Graham, Harris, et al., 2015; Graham & Perin, 2007a). Such instruction typically involves teaching students how to combine simpler sentences into more sophisticated ones. With this approach, the teacher models how to combine two or more sentences into a more complex one. Students practice combining similar sentences to produce the same type of sentence the teacher did. Students then apply the sentence-combining skill in text they produce (see also Saddler, [Chapter 10](#), this volume).

It is also helpful to teach students strategies for writing different types of paragraphs, as this improves their ability to create such constructions (Rogers & Graham, 2008). An example of such a strategy involves procedures for developing a paragraph with an opening sentence, sentences that provide details related to the opening sentence, and a closing or passing sentence (to the next paragraph).

## **An Added Boost**

Reading and reading instruction also has a positive impact on students' development as writers (Shanahan, 2016). Students draw on overlapping pools of knowledge when reading and writing text. Engaging in reading can



inform writing, as writers may be more likely to think about their own audiences and how authors achieve their rhetorical purposes. Reading can be used as a source of information for writing. Reading practices that directly improve writing include (Graham et al., 2018):

- Teaching phonological awareness, phonics, and reading comprehension.
- Increasing how often students read.
- Designing opportunities for students to observe readers carry out a reading activity.
- Having students reading and analyze another person's text.
- Asking students to read text and emulate it.
- Encouraging students to obtain information for writing by reading text.

Teaching reading and writing together can also enhance students' writing (Graham et al., 2017). We think this is likely to be most successful when reading and writing instruction are purposefully integrated so that they are designed to improve both skills at the same time. For instance, the letter-sound associations taught in a phonics lesson correspond to the sound-letter association taught in a spelling lesson delivered on the same day. Even better is when the corresponding letter-sound and sound-letter combinations are taught in the same lesson.

It is important to remember, however, that reading and reading instruction are not powerful enough to ensure that students acquire all the writing skills, strategies, and knowledge need to be a skilled writer (Graham et al., 2018). This requires dedicated time to teach writing.

## **BRINGING IT ALL TOGETHER**

As this chapter shows, the teaching of writing is not a simple task, nor should it be the province of amateurs. A good starting point in designing an effective writing program is to determine how you will create a supportive writing environment. This task includes thinking about how to create a pleasant and

supportive writing environment; what needs to be done to enhance students' motivation to write; how students will support one another in a positive manner; and how assessment, evaluation, and feedback will be used in your classroom.

One critical issue to consider is what genres students need to develop competence in across the elementary, middle, and high school grades. At the end of elementary school, students should be well prepared for the demands of middle school, and similarly, at the end of middle school, students should be well prepared for the demands of high school. Then, it is important to determine what types of writing you want students to engage in during the course of the school year and exactly how writing will be used to support reading and learning and how reading and learning will be used to support writing. We then suggest that you think about what students need to learn about each of these forms or genres of writing. Consideration must also be given to the types of writing strategies (planning, drafting, revising, and editing) your students should master to use these genres or forms of writing effectively as well as the foundational skills (handwriting, typing, spelling, sentence construction, paragraph construction) that still require instruction.

Once you know what types of writing you plan to emphasize, how students will use writing to support reading and learning (and vice versa), and what you will teach, preliminary plans must be made as to how much time will be allotted to each aspect of the writing program (balancing the amount of time devoted to writing and instruction); how all of this will be sequenced; and how specific strategies, knowledge, and skills will be taught.

We further encourage you to think about the role of word processing and other 21st-century writing tools in your program, the types of adaptations that you might need to make for students in your classroom, and how your writing program will connect to what other teachers in the school are doing and in the community at large. Like writing, planning a writing program is a recursive and messy process that changes and must be at times reconceptualized as it unfolds. While there is no perfect writing program, this chapter and this volume provide you with a wide variety of best practices for

helping all students become skilled writers.

## REFERENCES

- Andrews, R., Torgerson, C., Beverton, S., Freeman, A., Locke, T., Low, G., et al. (2006). The effects of grammar teaching on writing development. *British Educational Research Journal*, 32, 39–55.
- Applebee, A. (1984). Writing and reasoning. *Review of Educational Research*, 54, 577–596.
- Applebee, A., & Langer, J. (2011). A snapshot of writing instruction in middle and high schools. *English Journal*, 100, 14–27.
- Atwell, N. (1987). *In the middle: Reading, writing, and learning from adolescents*. Portsmouth, NH: Heinemann.
- Bangert-Drowns, R. L., Hurley, M. M., & Wilkinson, B. (2004). The effects of school-based writing-to-learn interventions on academic achievement: A meta-analysis. *Review of Educational Research*, 74, 29–58.
- Bazerman, C., Applebee, A., Berninger, V., Brandt, D., Graham, S., Matsuda, P., et al. (2017). Taking the long view on writing development. *Research in the Teaching of English*, 51, 351–360.
- Berninger, V., Mizokawa, D., & Bragg, R. (1991). Theory-based diagnosis and remediation of writing disabilities. *Journal of School Psychology*, 29, 57–79.
- Brindle, M., Harris, K. R., Graham, S., & Hebert, M. (2016). Third and fourth grade teachers' classroom practices in writing: A national survey. *Reading and Writing: An International Journal*, 9, 929–954.
- Cutler, L., & Graham, S. (2008). Primary grade writing instruction: A national survey. *Journal of Educational Psychology*, 100, 907–919.
- De La Paz, S., & Graham, S. (2002). Explicitly teaching strategies, skills, and knowledge: Writing instruction in middle school classrooms. *Journal of Educational Psychology*, 94, 687–698.
- Gillespie, A., Graham, S., Kiuahara, S., & Hebert, M. (2014). High school teachers use of writing to support students' learning: A national survey. *Reading and Writing: An Interdisciplinary Journal*, 27(6), 1043–1072.
- Goldberg, A., Russell, M., & Cook, A. (2003). The effect of computers on student writing: A meta-analysis of studies from 1992 to 2002. *Journal of Technology, Learning, and Assessment*, 2. Retrieved from <http://escholarship.bc.edu/jtla/vol2/1>.
- Graham, S. (2006a). Strategy instruction and the teaching of writing: A meta-analysis. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (pp. 187–207). New York: Guilford Press.
- Graham, S. (2006b). Writing. In P. Alexander & P. Winne (Eds.), *Handbook of educational psychology* (pp. 457–478). Mahwah, NJ: Erlbaum.
- Graham, S. (2010). Teaching writing. In P. Hogan (Ed.), *Cambridge encyclopedia of language sciences* (pp. 848–851). Cambridge, UK: Cambridge University Press.
- Graham, S. (2013). Writing standards. In L. M. Morrow, K. K. Wixson, & T. Shanahan (Eds.), *Teaching with the Common Core Standards for English Language Arts, grades 3–5* (pp. 88–106). New York: Guilford Press.
- Graham, S. (2018). A writer(s) within community model of writing. In C. Bazerman, V. Berninger, D.

- Brandt, S. Graham, J. Langer, S. Murphy, et al. (Eds.), *The lifespan development of writing* (pp. 271–325). Urbana, IL: National Council of English.
- Graham, S., Bollinger, A., Booth Olson, C., D’Aoust, C., MacArthur, C., McCutchen, D., et al. (2012). *Teaching elementary school students to be effective writers: A practice guide*. Washington, DC: National Center for Education Evaluation and Regional Assistance (NCEE), Institute of Education Sciences, U.S. Department of Education.
- Graham, S., Bruch, J., Fitzgerald, J., Friedrich, L., Furgeson, J., Greene, K., et al. (2016). *Teaching secondary students to write effectively* (NCEE 2017-4002). Washington, DC: National Center for Education Evaluation and Regional Assistance (NCEE), Institute of Education Sciences, U.S. Department of Education.
- Graham, S., Cappizi, A., Harris, K. R., Hebert, M., & Morphy, P. (2014). Teaching writing to middle school students: A national survey. *Reading and Writing: An Interdisciplinary Journal*, 27, 1015–1042.
- Graham, S., & Harris, K. R. (2003). Students with learning disabilities and the process of writing: A meta-analysis of SRSD studies. In H. L. Swanson, K. R. Harris, & S. Graham (Eds.), *Handbook of learning disabilities* (pp. 383–402). New York: Guilford Press.
- Graham, S., & Harris, K. R. (2005). *Writing better: Teaching writing processes and self-regulation to students with learning problems*. Baltimore: Brookes.
- Graham, S., Harris, K. R., Fink, B., & MacArthur, C. A. (2002). Primary grade teachers’ theoretical orientations concerning writing instruction: Construct validation and a nationwide survey. *Contemporary Educational Psychology*, 27, 147–166.
- Graham, S., Harris, K. R., & Hebert, M. (2011). *Informing writing: The benefits of formative assessment*. Washington, DC: Alliance for Excellence in Education.
- Graham, S., Harris, K. R., & McKeown, D. (2013). The writing of students with learning disabilities, meta-analysis of self-regulated strategy development writing intervention studies, and future directions: Redux. In L. Swanson, K. R. Harris, & S. Graham (Eds.), *Handbook of learning disabilities* (2nd ed., pp. 405–438). New York: Guilford Press.
- Graham, S., Harris, K. R., & Santangelo, T. (2015). Research-based writing practices and the Common Core: Meta-analysis and meta-synthesis. *Elementary School Journal*, 115, 498–522.
- Graham, S., & Hebert, M. (2010). *Writing to read: Evidence for how writing can improve reading*. Washington, DC: Alliance for Excellence in Education.
- Graham, S., & Hebert, M. (2011). Writing-to-read: A meta-analysis of the impact of writing and writing instruction on reading. *Harvard Educational Review*, 81, 710–744.
- Graham, S., Hebert, M., & Harris, K. R. (2015). Formative assessment and writing: A meta-analysis. *Elementary School Journal*, 115, 524–547.
- Graham, S., Liu, K., Aitken, A., Ng, C., Bartlett, B., Harris, K. R., et al. (2018). Balancing reading and writing instruction: A meta-analysis. *Reading Research Quarterly*, 53, 279–304.
- Graham, S., Liu, K., Bartlett, B., Ng, C., Harris, K. R., Aitken, A., et al. (2018). Reading for writing: A meta-analysis of the impact of reading interventions on writing. *Review of Educational Research*, 88(2), 243–284.
- Graham, S., MacArthur, C., & Fitzgerald, J. (2007). *Best practices in writing instruction*. New York: Guilford Press.
- Graham, S., MacArthur, C., & Fitzgerald, J. (2013). *Best practices in writing instruction* (2nd ed.). New

York: Guilford Press.

- Graham, S., McKeown, D., Kiuahara, S., & Harris, K. R. (2012). A meta-analysis of writing instruction for students in the elementary grades. *Journal of Educational Psychology, 104*(4), 879–896.
- Graham, S., & Perin, D. (2007a). A meta-analysis of writing instruction for adolescent students. *Journal of Educational Psychology, 99*, 445–476.
- Graham, S., & Perin, D. (2007b). What we know, what we still need to know: Teaching adolescents to write. *Scientific Studies in Reading, 11*, 313–336.
- Graham, S., & Perin, D. (2007c). *Writing next: Effective strategies to improve writing of adolescents in middle and high schools*. Washington, DC: Alliance for Excellence in Education.
- Graham, S., & Sandmel, K. (2011). The process writing approach: A meta-analysis. *Journal of Educational Research, 104*(6), 396–407.
- Graham, S., & Santangelo, T. (2014). Does spelling instruction make students better spellers, readers, and writers?: A meta-analytic review. *Reading and Writing: An Interdisciplinary Journal, 27*, 1703–1743.
- Graves, D. (1983). *Writing: Teachers and children at work*. Exeter, NH: Heinemann.
- Hansen, D. (1989). Lesson evading and lesson dissembling: Ego strategies in the classroom. *American Journal of Education, 97*, 184–208.
- Harris, K. R., Graham, S., Mason, L., & Friedlander, B. (2008). *Powerful writing strategies for all students*. Baltimore: Brookes.
- Hayes, J. (2012). Modeling and remodeling writing. *Written Communication, 29*, 369–388.
- Hillocks, G. (2002). *The testing trap: How state writing assessments control learning*. New York: Teachers College Press.
- McCutchen, D. (1988). “Functional automaticity” in children’s writing: A problem of metacognitive control. *Written Communication, 5*, 306–324.
- Morphy, P., & Graham, S. (2012). Word processing programs and weaker writers/readers: A meta-analysis of research findings. *Reading and Writing: An Interdisciplinary Journal, 25*, 641–678.
- National Center for Education Statistics. (2012). *The nation’s report card: Writing 2011*. Washington, DC: Institute of Education Sciences, U.S. Department of Education.
- National Governors Association Center for Best Practices & Council of Chief State School Officers. (2010). *Common Core State Standards for English language arts and literacy in history/social studies, science, and technical subjects*. Washington, DC: Authors. Retrieved from [www.corestandards.org](http://www.corestandards.org).
- Nystrand, M. (2006). The social and historical context for writing research. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (pp. 11–27). New York: Guilford Press.
- Olinghouse, N., Graham, S., & Gillespie, A. (2015). The relationship of discourse and topic knowledge to writing performance. *Journal of Educational Psychology, 107*, 391–406.
- Paas, F., Van Merriënboer, J., & Van Gog, T. (2012). Designing instruction for the contemporary learning landscape. In K. R. Harris, S. Graham, & T. Urdan (Eds.), *APA educational psychology handbook* (Vol. 3, pp. 335–358). Washington, DC: American Psychological Association.
- Rogers, L., & Graham, S. (2008). A meta-analysis of single subject design writing intervention research. *Journal of Educational Psychology, 100*, 879–906.
- Russell, D. (1997). Rethinking genre in school and society: An activity theory analysis. *Written Communication, 14*, 504–554.

- Santangelo, T., & Graham, S. (2016). A comprehensive meta-analysis of handwriting instruction. *Educational Psychology Review*, 28, 225–265.
- Scardamalia, M., & Bereiter, C. (1986). Written composition. In M. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 778–803). New York: Macmillan.
- Sennett, F. (2003). *Teacher of the year*. Chicago: Contemporary Books.
- Shanahan, T. (2016). Relationships between reading and writing development. In C. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (2nd ed., pp. 194–207). New York: Guilford Press.
- Sheils, M. (1975, December 8). Why Johnny can't write. *Newsweek*, p. 58.
- Smyth, J. (1998). Written emotional expression: Effect sizes, outcome types, and moderating variables. *Journal of Consulting and Clinical Psychology*, 66, 174–184.
- Wilcox, K., Jeffrey, J., & Gardner-Bixler, A. (2016). Writing to the Common Core: Teachers' responses to changes in standards and assessments for writing in the elementary schools. *Reading and Writing: An Interdisciplinary Journal*, 29(5), 903–928.
- Yarrow, F., & Topping, K. J. (2001). Collaborative writing: The effects of metacognitive prompting and structured peer interaction. *British Journal of Educational Psychology*, 71, 261–282.
- Zimmerman, B., & Reiserberg, R. (1997). Becoming a self-regulated writer: A social cognitive perspective. *Contemporary Educational Psychology*, 22, 73–101.

## *Part II*

# CREATING A SUPPORTIVE WRITING ENVIRONMENT

# **Chapter 2**

## Setting Up the Writing Classroom

Linda Friedrich

Each year in Columbus, Montana, Casey Olsen's tenth-grade students investigate issues of importance to their communities, culminating in a series of student-written letters to the editor of the *Stillwater County News*. These letters contribute community conversations, even prompting a ballot initiative that funded a rural ambulance district. The design of Olsen's classroom reflects research findings about what supports students in developing the writing, reading, and research skills and dispositions that promote effective writing (Olsen, 2016).

“Writing is inherently a social activity, situated within a specific context” (Graham, 2018, p. 273). This insight guides this chapter's focus on four major considerations as teachers set up their writing classrooms. These considerations are framed around sociocultural understandings of the writing classroom as a community of practice (Holland, Lachiotte, Skinner, & Cain, 1998; Lave & Wenger, 1991; Wenger, 1998). Communities of practice are characterized by mutual engagement among the individuals in the community (students and teachers), work to achieve a joint enterprise (writing and learning to write), and reliance on a shared repertoire (e.g., teaching and learning of writing processes, using common tools such as Google Docs and resources such as mentor texts, disciplinary knowledge, or cognitive strategies; Wenger, 1998). Graham (2018) forwards a conceptualization of writing that integrates sociocultural and cognitive traditions. This conceptualization articulates seven basic components of a



writing community: purpose, members, tools, actions, written product, physical and social environments, and collective history.

This chapter focuses on five of Graham's (2018) writing community components (purpose, members, tools, written product, and physical and social environments) and shapes them around four broad findings from experimental, quasi-experimental, and qualitative research. Many of these studies focus on interventions that attend to the cognitive nature of writing development. As teachers set up their writing classrooms, the research suggests that they consider devoting productive time to writing, building classroom writing communities, accessing and using resources and tools to support writing, and creating opportunities to write for authentic audiences. This chapter draws on insights from both experimental and qualitative research, as well as recommendations from practical literature for educators to consider when establishing the writing classroom. While setting up the classroom implies a beginning of the school year moment, many of the literature's recommendations, especially those related to building classroom writing communities, require sustained focus and attention and may need to be revisited periodically over the course of the year.

## **DEVOTING PRODUCTIVE TIME TO TEACHING WRITING**

Writing continues to be the neglected "R" in elementary and secondary classrooms (National Commission on Writing, 2003). In 2011, Applebee and Langer revisited their classic 1981 study of writing in high school classrooms, expanding it to include middle as well as high school. They found that overall a higher percentage of class time was devoted to writing at least one paragraph in 2011 (7.7%) when compared with the proportion of time spent in 1981 (3.8%). While this reflects a slight increase overall, and a shift in math and science classes to include some rather than no writing, "time devoted to writing remains distressingly low" (Applebee & Langer, 2011, p. 16). Studies of elementary classrooms suggest a similarly limited amount of time devoted

to the teaching of writing (Cutler & Graham, 2008). In addition, even when time is devoted to writing, students have limited opportunities to engage in extended writing. Applebee and Langer found that most secondary writing assignments, regardless of discipline, requested a page or less of writing. Similarly, the Education Trust found that only 9% of middle school assignments that they analyzed called for an extended (i.e., multiparagraph) piece of writing and only 4% called for an extended piece of writing *and* required high levels of cognitive demand (Santelises & Dabrowski, 2015, p. 6).

## **Dedicating Time to Writing in Elementary Classrooms**

In light of the continued slim focus on teaching writing, research emphasizes the importance of devoting instructional time to writing. The What Works Clearinghouse Practice Guide on elementary writing instruction recommends that elementary teachers devote 1 hour to writing instruction daily, with half the time devoted to teaching skills and half the time to students applying what they have learned (Graham et al., 2012). Notably, only a single study that met What Works Clearinghouse design standards tested whether additional instructional time affected writing performance (Berninger et al., 2006). However, the expert panel that developed the practice guide noted that carrying out the remaining recommendations requires significant instructional time. They also cautioned that increasing time spent on writing, absent high-quality instruction, is unlikely to improve writing outcomes.

Similarly, Graham, Harris, and Santangelo (2015) conducted a meta-analysis of true and quasi-experimental studies and meta-synthesis of qualitative studies focused on research-based writing practices for upper elementary and middle school writers. Based on this work, they recommend that teachers create routines that ensure that students write frequently. They found that not only did additional time have a positive impact on writing quality in grades 2–8 (average weighted effect size [ES] = 0.24,  $p < .04$ ), it also had a positive impact on reading comprehension in grades 1–6 (average

weighted ES = 0.35,  $p < .001$ ; Graham, Harris, et al., 2015, p. 508).

Building on research into exemplary teachers' and programs' efforts, contemporary practice literature on the teaching of writing identifies ways to use time to create routine opportunities for teaching writing. Writers' workshops represent a decades-long tradition in the teaching of writing, especially in elementary classrooms (Atwell, 1987; Calkins, 1998; Graves, 1983). Typically writers' workshops, which vary in enactment, include common features: time in the classroom to write, often about personally meaningful topics; instructional mini-lessons on issues such as writing skills and writers' craft; conferences focused on students' writing and writing plans; and opportunities for students to share their writing publicly with other students (Troia, 2011). Troia's study of a Washington state elementary school, which demonstrated positive trends on the state's writing assessment, noted that every teacher set aside 45 minutes 4–5 days per week for writers' workshop over and above the 90-minute literacy block. Each 9-week instructional period was devoted to the study of genre. This approach to writers' workshop emphasized a teacher-led instructional cycle, during which students completed series of processes to develop their writing.

Hamel (2017) draws on his 5-year, qualitative participant-observation study to describe a more student-directed approach to writing workshop. In his collaboration with a fourth-grade teacher, the writing workshop took place for 60–100 minutes once or twice per week for half the school year. This time was in addition to other literacy instruction in the classroom. Within each session, like other iterations of writing workshop, there was an introductory period that included mini-lessons or commentary, independent working time that included opportunity for conferencing with peers and teachers, and 10–15 minutes at the close of the period for public sharing. Hamel emphasizes that the defining feature of this workshop was a “commitment to flexible choice, time, and space—giving students permission to select topics, genres, purposes, as well as self-directed timelines” (p. 19).

## **Dedicating Time to Writing in Secondary Schools: Writing in the Disciplines**

Middle and high school teachers typically see their students only for their own discipline, for 45–90 minutes per class period. The secondary schedule creates constraints about the number of sustained minutes available for writing in any given subject area. Applebee and Langer (2011) point to the increased number of assignments in social studies, science, and mathematics classrooms in their 2010 study compared with their 1980 study. And the What Works Clearinghouse Practice Guide on secondary writing emphasized the critical nature of writing across disciplines and incorporates explicit strategies for teaching writing across the disciplines (Graham et al., 2016). To dedicate time to writing in the disciplines, it is critical that writing is authentic to the core work of disciplines.

The *Next Generation Science Standards* (NGSS Lead States, 2013), for example, identify scientific arguments, including written arguments, as a core practice of the discipline. The National Writing Project facilitated a collaborative project with middle school teachers to generate ideas about how to support students in crafting scientific arguments from scientific evidence (Caspary, Ammah-Tagoe, Cannady, & Greenwald, 2017). In this initiative, teachers worked together to create writing assignments that provided opportunities for students to craft arguments based on scientific evidence. Some teachers created prompts that encouraged students to create criteria-based arguments. For example, one writing prompt asked, “Should kunan be classified as a plant or an animal?” Students were given a description of an organism (euglena, a protist) under the pseudonym “kunan.” Successfully addressing the biological classification task in the prompt required criteria—the characteristics of plant cells versus animal cells—against which students made a decision regarding the type of organism. As students considered the characteristics of plant cells versus animal cells, they also had to prioritize among criteria. Because kunan demonstrate characteristics of both plant and animal cells, students’ reasoning processes inherently included decisions

about how many and which characteristics were most important to classify kulan as either an animal or a plant. The assignment demonstrates the potential complexity of an instructional task that requires students to marshal evidence about how well a set of criteria are met. Teachers also developed explanatory prompts, which required students to draw upon multiple sources of empirical evidence. As one example, an assignment titled “Darwin’s Finches” asked students to answer the prompt “Do variations in beak size make a difference in finch survival and evolution?” Students were expected to draw upon multiple sources of empirical evidence—including teacher-provided data from a study of finches and food sources, and student-generated data from simulations of gathering seeds with different beak sizes in order to explain how the size of a finch’s beak influences its chances for survival. Like other explanatory prompts, adequately arguing the mechanism behind the evolution of Darwin’s finches required different evidence and reasoning to explain a scientific mechanism. These exemplar tasks illustrate approaches to teaching important grade-level appropriate content—classification of species and evolutionary mechanisms—as well as practices related to two types of scientific argumentation.

Teaching scientific argumentation is a complex task. Focus on scientific practices, such as argument writing, represents a significant shift away from a traditional prioritization of science content. NWP’s work suggests that successful integration of new standards into classroom practice depends not only on acceptance of the standards but also on opportunities for teachers to make time for new practices, such as argument writing, and explore how the standards translate into their classroom instruction.

Similarly, in history, teaching students to read, write, and think like historians can represent core disciplinary content. *The College, Career, and Civic Life (C3) Framework for Social Studies Standards* (National Council for the Social Studies, 2013) emphasizes the integral role that writing and reading play in history and other social science disciplines; it also highlights the discipline-specific nature of reading and writing. Monte-Sano, De la Paz, and Felton (2014) outline a series of six investigations designed to engage middle

and high school students in the writing and reading practices of historians. In their work, they draw on Harris and Graham's (1992) scholarship about self-regulated strategy development to advocate for engaging students in cognitive apprenticeships. Their investigations engage students in sourcing, contextualizing, and annotating historical source material; "considering authors' claims and evidence"; and "deliberating about and evaluating evidence" as they engage in reading to develop their written arguments (Monte-Sano et al., 2014, p. 6). As students engage in these reading approaches they also gradually work on writing components of historical essays. These processes are grounded in key historical topics and questions (e.g., "Did the Alien and Sedition Acts violate the U.S. Constitution?") that are subject to debate. As with the scientific argument example, this approach weaves together important historical content and practice. Monte-Sano and colleagues advocate situating these investigations in the context of more traditional textbook-based history teaching so that students also learn the broader context of the historical events.

These two examples, one from middle school science and one from high school history, demonstrate how teachers might think about integrating writing with important disciplinary outcomes. To do this, teachers need to identify opportunities in the content of their curriculum where writing supports not only a deepening understanding of specific content but also supports students' development of skills that are authentic to the discipline. This type of deep integration of writing into the content areas also asks disciplinary teachers to take time for breadth of the subject and to take an inquiry approach to their disciplines rather than one that exclusively emphasizes learning large amounts of factual information.

These two examples illustrate how argumentation can be used in science and history classrooms to extend time devoted to teaching writing. Klein, Haug, and Bildfell ([Chapter 7](#), this volume) elaborate five genres—journal writing, summary/discourse synthesis, argumentation, science-writing heuristic, and multimodal composition—that have been shown through experimental research to support writing to learn in the disciplines. These

genres provide additional approaches to incorporating time for writing in classrooms, while also achieving important learning goals.

## **BUILDING CLASSROOM WRITING COMMUNITIES**

Empirical tests of interventions that include collaboration among writers in a classroom demonstrate that students working together can have a positive impact on writing quality. The importance of collaboration has been tested through experimental and quasi-experimental research for both elementary and secondary learners. Graham and Perin's (2007a, 2007b) meta-analysis and meta-synthesis analyzed research that engaged adolescent students in collaborative writing—that is, creating opportunities for students to work together on their writing at the planning, drafting, revising, and/or editing stages. These studies documented a large ES of 0.75. Similarly strong results emerged in a later meta-analysis of elementary writing, which built on Graham and Perin's (2007a, 2007b) foundational work (Graham, Harris, et al., 2015). The importance of building a community of writers was recognized by the What Works Clearinghouse's Elementary Practice Guide for writing (Graham et al., 2012) in its recommendation to “create an engaged community of writers” (p. 34). This guide explicitly recommends two kinds of joint work for elementary writers: collaborating as writers and giving and receiving peer feedback. These research syntheses point to three considerations for building writing classroom communities: building a positive environment that fosters collaboration; creating specific opportunities to develop and draft writing together; and teaching students to give and receive effective peer feedback.

### **Building a Positive Classroom Environment**

Qualitative research demonstrates the importance of building a supportive and positive environment. In a meta-synthesis, Graham and Perin (2007b)

emphasized the importance of key affective dimensions of creating a classroom writing community: “keeping students . . . engaged in thoughtful activities”; providing enough support while encouraging self-regulation or independence; demonstrating enthusiasm for writing; and creating “a positive environment where students are constantly encouraged to try hard, believe that the skills and strategies they are learning will permit them to write well, and attribute success to effort and the tactics they are learning” (p. 325).

Hamel’s (2017) 5-year study of a fourth-grade writing workshop, where students have broad choice over the content and genre of their writing, attends carefully to the development of social relationships among peers. The writing workshop that Hamel describes emphasizes a high degree of independence and self-regulation, with students charged with seeking out partners for peer response to their writing as well as collaborative work in composing and performance. In this classroom, collaborative interactions among children were structured in part through a process that asked students to engage in a peer conference prior to asking for a conference with an adult. There were also explicit spaces where students could go to work together to generate ideas and the culture of the classroom encouraged students to work together. Hamel and his teaching colleague Sam Allegro developed a positive environment through modeling interactions with students and asking questions, offering guidance in the moment. Hamel retells “a shy student’s” (pp. 70–72; Rebecca) interactions with Mr. Allegro, who through questioning helps her identify a potential partner to conference with and then rehearses how she might reach out to the student, who is deeply engaged in her own work. While much literature offers helpful steps and guidelines for establishing positive interactions, Hamel’s research reminds us of the complexity of social dynamics and the important role that teachers play in modeling for, rehearsing with, and guiding young writers in the moment. Hamel’s research also echoes foundational work on legitimate peripheral participation in communities of practice (Lave & Wenger, 1991; Wenger, 1998) through vivid illustrations about how children’s interactions with their peers and the adults in the classroom support them in gradually becoming



more central and full members of the writing workshop community.

## **Establishing Opportunities to Collaboratively Develop Writing**

In building a productive classroom writing community, teachers have the opportunity to support students in writing both individually and collaboratively. Yarrow and Topping (2001) describe their intervention, paired writing, as a structured approach to collaborative writing through all stages of the writing process that demonstrated positive effects on the quality of independent writing. Paired writing identifies pairs of students and invites students to play the roles of writer and helper. To generate ideas, the helper asks the writer a series of up to 10 questions and takes notes on the responses. The writer uses these notes to start a rough draft and can invite the helper to help in putting words on paper. Once a draft is on paper, the helper and writer each read the draft aloud, which sets the stage for a collaborative process of revision and editing. Over a 6-week period, students internalized this structured collaborative process and were able to apply what they learned to their independent writing.

Hamel's (2017) study describes a more open approach to collaborative writing. One of the resources set up in the writing workshop was an idea station. This physical space signaled young writers' need for time and space to develop ideas for their writing. Here writers can talk with one another or the teacher(s) about their ideas in order to develop them further. The idea station also served as a place where young writers could begin to collaborate on developing a piece of writing. Hamel describes how students work together as writing partners to develop pieces that interest them, such as two girls who wrote a Valentine's story and how a marginalized student attempts to form a partnership with a popular student in developing his Superdog story. Here the adults in the room work alongside students observing and occasionally intervening in collaborative relationships. Likewise, this classroom used a

simple method to structure students' collaborative process around peer response and revision. For each piece of writing, students completed a two-page blue sheet. Prior to securing adult response, students had to document that one peer had responded. Peers were encouraged to first "talk together" about why the author wrote the piece, whether it made sense, and whether there were parts of the piece likely to catch the reader's eye (Hamel, 2017, Fig. 1.2, p. 22). The peer who reviewed the piece then wrote on the blue sheet "some things about this piece that work well" and "one thing that might improve the piece" (p. 22). The crucial dimension of these peer-conference interactions is that they built the writing community by supporting students in articulating and understanding one another's writing goals and then making visible the kinds of questions that a peer reader might wonder about.

In upper elementary, middle, and high school classrooms, academic, discipline-focused writing increasingly takes center stage (National Governors Association Center for Best Practices & Council of Chief State Schools Officers, 2010). As states have adopted new literacy standards, a focus on reading and writing academic arguments has become increasingly important. McCann (2014) builds on the insights about collaborative writing and the role of discussion from meta-analyses of experimental studies (Graham & Perin, 2007a; Hillocks, 1984) as he explores the critical role that discussion can play in building secondary students' capacity to write an argument. McCann draws on a series of structured case studies that show how a structured process of individual preparation, small-group discussion, and whole-group discussion support students in developing the substance of their writing. Drawing on analyses of classroom conversation, representative samples of student writing, and students' written and oral reflections on their writing, McCann concludes, "The interactions among peers help the students to develop knowledge about the substance at the center of their inquiry, and about the procedures for making critical judgments and advancing their own arguments in the face of competing arguments" (p. 104).

McCann (2014) outlines a series of cases that provide source material, outline perspectives, and enumerate substantive guiding questions for

discussions. Students, facilitated by their teacher, work in small groups and then as a class to grapple with complex issues for which there is no right answer. These carefully designed and scaffolded interactions lead to authentic discussions (Newman, Marks, & Gamorn, 1996; Nystrand, 1997). In these discussions, teachers' facilitative moves, or as McCann terms them "dialogic moves" (p. 121), are crucial to moving beyond a simple repetition of information. McCann enumerates the moves that teachers made to ensure meaningful talk: providing context for daily discussion; grouping students to ensure supports and diversity; creating physically comfortable positioning for dialogue; establishing explicit expectations; providing "a tangible and meaningful task"; and monitoring small group discussions to ensure that it would facilitate whole group talk (pp. 122–123). After productive discussion, students write to prompts that build on classroom conversation, students are invited to extend beyond it by drawing in ideas and sources outside the discussion itself, and enumerate audience and expectations for quality. The talk that precedes writing thus is part of the composing process. Both teachers and students reported that the discussion is essential to ideation and to the development of thinking and writing.

## **Teaching Students to Give and Receive Effective Peer Response**

A final component of building an effective classroom community is to design processes and routines that support young people in responding to one another's writing. Formative feedback and assessment both from peers and teachers has been shown to have a positive impact on the quality of students' written work (Graham et al., 2016; Graham, Hebert, & Harris, 2015). Based on a review of studies of secondary writing instruction that meet What Works Clearinghouse standards, Graham and colleagues (2016) recommended engaging "students in evaluating and reflecting upon their own and peers' writing and use of modeled strategies" (p. 23). The value of peer review is also

discussed by MacArthur ([Chapter 12](#), this volume). Teaching students to respond in ways that advance the content and organization of their peers' writing, rather than simply correcting its surface features, is a pedagogical challenge that many teachers articulate.

Establishing elementary or secondary writing centers can serve as a powerful way to deeply develop students' capacities for responding to their peers' writing. Originally modeled after college writing centers where students writing in any discipline can turn for help, writing centers as noted above can offer additional instructional time and reduced paper burden for teachers. Preparing students to serve as writing coaches, however, requires significant instruction in both the content of writing and in establishing positive affective relationships.

### ***Establishing a Writing Center or Setting Up Peer Conferencing in Elementary Grades***

Sanders and Damron (2017) studied fourth and fifth graders working in a writing center at an Oklahoma elementary school in which 57% of students were eligible for free or reduced-price lunch. In this qualitative study, they found that elementary students had the capacity to serve as effective peer tutors, focusing the majority of time interacting with their peers around the substance of the writing (e.g., considering the audience, requesting or brainstorming additional detail, working on organization) or process (e.g., “revision discussions about main idea, word choice, organization, and titles”; debating revisions; reflecting on process; pp. 60–61).

To prepare students for their roles as writing coaches, teachers taught 8 weeks of lessons that were originally developed for the Oklahoma State University graduate student writing tutors and then collaboratively reworked by Damron, Sanders, and their teacher colleagues for fourth- and fifth-grade students (Sanders & Damron, 2017). The lessons are designed for use within a writing workshop framework, but this is not necessary for successful implementation. Sanders and Damron write “What is essential is that

students write regularly, that there is a safe writing community established among students, and that students are able to feel emotionally invested in their writing and personally connected to their pieces” (p. 83). The 8-week sequence flows as follows: Metaphors for the Writing Process; Learning to Peer Tutor with the WRITE Mnemonic; Peer Tutoring Demonstration; Content and Ideas—“Show, Don’t Tell”; Organization, Word Choice and Sentence Fluency; Grammar and Conventions; and Practice Peer Tutoring (Sanders & Damron, 2017, Chap. 8). Notably the sequence of lessons as a whole reflects the experimental literature’s emphasis on teaching writing process (cf. Graham, Harris, et al., 2015; Graham & Perin, 2007a, 2007b), and each lesson sequence follows a gradual release of responsibility (Graham et al., 2012) or model, practice, reflect cycle that is also supported in the experimental literature (Graham et al., 2016).

The lesson sequence both models critical content and it helps to build a respectful writing community around peer response and revision. For example, the WRITE mnemonic, which was developed in the 1980s as part of early writing center work, emphasizes affective norms such as “Respect the student and the student’s paper,” “Involve the student by asking questions,” and “Encourage the student” (Sanders & Damron, 2017, pp. 91–92). Similarly in lesson 3, the teacher models a tutoring session, students are asked to name what they noticed the writer and the tutor are doing and then use the WRITE mnemonic to identify specific questions, and finally, the students practice a short tutoring session and discuss the challenges and success. Sanders and Damron emphasize that teaching upper elementary students to respond to one another could either serve as the foundation for a writing center *or* could be the basis for a more typical peer response within a writing classroom. Further, their research suggests that “setting up” the writing classroom community is not a one-time set of lessons at the beginning of the school year but an ongoing process that builds and reinforces both writing content and norms.

## ***Secondary Writing Centers***

Kent (2017) published a revised edition of his book *A Guide to Creating Student-Staffed Writing Centers: Grades 6–12*. His work builds on decades of experience creating and serving as the faculty director for his high school's writing center, as well as a professor of literacy at the University of Maine. The book synthesizes practical recommendations for establishing a writing center in middle and high schools. Like Sanders and Damron (2017), Kent emphasizes the importance of preparing students for the task of working with their peers in the writing center. Kent both taught elective writing center classes and worked with students over the summer.

In preparing *editors*, Kent's (2017) preferred term, for their work, teachers begin by inviting the students to write about and draw their own writing process and then to share this with other prospective writing center staff. This exercise, along with reading about professional writers' processes, supports students in gaining insight into others' writing processes. Kent also advises helping student writers share their affective responses to sharing a draft with an editor. Key to the preparation process is learning to connect with the writer through preliminary questions that build rapport with the writer and provide context about the writing, encouraging the writer to read the writing aloud and respond with encouragement as well as questions that will allow the writer to further develop the piece, forestalling the correction of errors. And when appropriate helping students identify their own errors and learn how to correct them, and strategizing about how to work with peers who don't yet have a draft. Kent also addresses supporting his students in working with a particular audience member: adults who seek advice, English learners, and students with special needs. What is noteworthy about Kent's approach to secondary writing centers is that it seeks to build mini-writing communities between writers and peer editors, as well as a larger community among the group of students serving as writing center staff.

In addition to building a writing community and students' capacity for peer response, writing centers respond to secondary teachers' most frequently

expressed concern about writing instruction: time to respond to and grade papers. Setting up a writing center can allow classroom teachers to teach and assign writing more frequently, while reducing the amount of time that teachers spend working with young people to develop and revise the content of their writing (Farrell, 1989; Kent, 2017).

### ***Supporting Peer Response and Review through Processes Embedded in Smaller Assignments***

While extensive instructional time is required to prepare young people to become expert at responding to writing in the context of a writing center, this is not the only approach to establishing the routines of peer response. Embedding peer response and review processes in regular writing assignments can also serve as an effective approach to teaching these norms and practices. Yarrow and Topping's (2001) paired writing intervention not only engages elementary students in collaboratively developing the content of a piece but also in collaborative peer editing. After the reading-aloud phase described in the "[Establishing Opportunities to Collaboratively Develop Writing](#)" section above, first the writer and then the helper mark places for improvement beginning with meaning, then move to order, spelling, and punctuation. The writer then produces a best copy and another pair of students evaluates the writing. One critical element of this intervention involves the helper providing praise throughout. In this intervention, elementary writers worked on five distinct pieces of writing over a 6-week period. This process taught students how to respond and revise writing and resulted in an increased quality of writing.

Structured peer feedback can be integrated into middle and high school writing work as well. Casey Olsen, the teacher whose vignette opens this chapter, is a member of the leadership team for the National Writing Project's College, Career, and Community Writers Program. This intervention has been demonstrated to improve the quality of secondary students' academic argument writing use of focused instructional resources and formative

assessment tools, as well as intensive teacher professional development (Gallagher, Arshan, & Woodworth, 2017). Olsen's high school students experience many of the program's instructional resources prior to conducting their own significant, independent research projects. Throughout the process of developing their writing, students responded to one another's work using feedback sheets focused on a series of substantive questions that address issues of quality for this type of writing: "Pretend you're on the opposing side of this issue (in comparison with your peer who wrote the literature review). Would you agree or disagree that this literature review accurately portrayed your viewpoints? Why? Be specific, and help this writer improve his or her objectivity." The norms for peer response and review had been established well before this extended project. Olsen's questions guiding students' response helped deepen students' understanding of important genre features as well as reinforcing norms for civil conversation.

Because writing has both sociocultural and cognitive aspects, it is critical that teachers work to build an effective writing community in their classrooms. These norms and processes can be established through teaching writing process and practices that are both general in nature and specific to particular genres and purposes. The research and practice literature reveals that the process of "setting up" a writing community involves multiple opportunities for students to experience the kinds of collaborative practices that help them grow to be better writers themselves and to respond more effectively to their peers' writing.

## **ACCESSING AND USING RESOURCES AND TOOLS TO SUPPORT WRITING**

Both sociocultural and cognitive approaches to teaching writing emphasize the use of tools to support learning to write. Effective writing classrooms need to be rich in a variety of resources and tools. Three types of resources and tools are especially important for teachers to consider as they set up the



classroom: providing access to a rich array of reading materials, tapping students' existing knowledge and interests, and using a range of technology to support composing and response.

The research literature articulates the ways in which reading and writing are connected learning and cognitive processes and have the potential to reinforce positive outcomes in both domains (cf. Fitzgerald & Shanahan, 2000; Graham & Hebert, 2010; Tierney & Shanahan, 1991). A central recommendation of the recently published What Works Clearinghouse Practice Guide for secondary writing is to “integrate writing and reading to emphasize key writing features” (Graham et al., 2016, p. 31). In particular, using models to highlight key text features to build students' understanding of different genres and inviting students to emulate exemplar texts has positive effects on both writing and reading outcomes (Graham et al., 2012, 2016; Graham, Harris, et al., 2015; Graham & Perin, 2007a, 2007b). The positive relationship between reading and writing outcomes makes certain that students have access to a rich array of texts. In elementary classrooms, establishing rich classroom libraries can support both the development of reading and writing. For example, the Children's Literacy Initiative provides kindergarten through third-grade teachers with book collections for independent reading as well as home lending, and engages teachers in professional development that models integrated approaches to reading and writing instruction. Consistent with findings in meta-analyses of the impact of writing instruction on reading, this program has demonstrated positive impacts on students' reading outcomes (Parkinson, Salinger, Meakin, & Smith, 2015). In secondary classrooms, when students learn to craft source-based informational and argumentative pieces, students and the quality of their writing benefits from analyzing models as well as from accessing preselected sets of sources that incorporate a range of perspectives and background information. For example, the National Writing Project's College, Career, and Community Writers Program, which has demonstrated positive effects on the quality of students' writing, provides sample text sets on contemporary issues and resources on how teachers can build their own

balanced text sets (Gallagher et al., 2017).

Young writers, their families, and their experiences are also rich resources to be tapped for writing. Moll's groundbreaking anthropological work that helps teachers create teaching and learning opportunities to build on "the knowledge and skills of local households" present in Latino households emphasizes that young people already have interests and knowledge that can be tapped for learning (Moll, Amanti, Neff, & Gonzalez, 1992). This insight is particularly important for teachers of writing. Young people's skills, experiences, and passions outside of school can serve as the springboard for imaginative writing as well as research that leads to a range of academic writing. For young writers, drawing represents a powerful literacy resource. For example, the "kid writing" approach builds on kindergarten and first-grade students' ability and interest in drawing and use of oral language to support their development as writers of print text (Feldgus, Cardonik, & Gentry, 2017). Similarly, Hamel (2017) illustrates how allowing fourth graders to start their writing from elaborate drawings based on their knowledge of video games served as a scaffold for developing written text. In middle and high school, engaging students in researching topics about which they are passionate can sustain students' interest in completing long-term complex projects.

Finally, at both the elementary and secondary levels, research demonstrates that teaching students to use 21st-century writing tools can have a positive impact on writing outcomes (Graham, Harris, et al., 2015; Graham & Perin, 2007a, 2007b). For elementary students, use of digital tools for writing resulted in an average positive ES of 0.47 and for secondary students, an ES of 0.55. Digital platforms and tools, such as Google Classroom, have the potential to support the learning of basic skills such as keyboarding and spell checking but also to facilitate the kinds of collaborative writing and peer response outlined in the "[Building Classroom Writing Communities](#)" section. Other types of digital tools support students as they develop their writing. For example, CAST (CAST Science Writer, 2017), which developed the Universal Design for Learning principles, has created a

tool for drafting science reports that incorporates research-based insights about the writing process using cognitive tools such as sentence stems and checklists so that students can self-assess whether their writing meets key criteria for quality science reports (*sciencewriter.cast.org*). Loretto, DeMartino, and Godley (2016) analyze students' uses of an online platform through which students could give and receive peer response to their writing. They report that students found particular features of the SWORD platform to support their development as writers: the anonymity of writers and reviewers, the opportunity to review other students' writing, and feedback from multiple reviewers. Both of these tools require the teacher to consider how platforms and tools can support them in achieving their learning goals for students, the kinds of instruction that will support students in using these tools to supplement their learning, and how to integrate the tools into their overall writing classroom.

## **CREATING OPPORTUNITIES TO WRITE FOR AUTHENTIC AUDIENCES AND PURPOSES**

Students today are also considerably more likely to be asked to share their work with other students. . . . Over half of middle school and 44% of high school English teachers reported frequently or very frequently asking students to share work with other students; in the earlier study, only 16% reported regularly asking students to share their work.

—APPLEBEE AND LANGER (2011, p. 17)

Consistent with the idea that writing is inherently social in nature, the research literature recommends that young people have opportunities for writing for audiences beyond the teacher and for purposes other than fulfilling the requirements of an assignment. As Applebee and Langer (2011) demonstrate, opportunities for students to share their work with one another have increased over the past three decades. The practice literature provides insights into multiple approaches through which students can share their writing.

Classroom-based sharing can provide authentic audiences of other students and provide motivation (Graham et al., 2012). Approaches to writing workshop typically include both physical publication and opportunities to read work aloud to classmates. Hamel's (2017) study identified ways in which students were given a choice over which pieces of writing they wished to polish for publication. Prior to conferencing with an adult, the student rated his or her level of interest in a piece on a scale of 1 ("I feel finished with this piece now") to 5 ("I like this piece a lot. I'll keep working on it for publication"; p. 20). In the classroom that Hamel studied, nearly every writing workshop session ended with an opportunity for volunteers to read from or discuss their work in progress. Such sharing further supported the development of the classroom community by allowing the author to hear and respond to audience members' questions and by making visible to the class options for writing. In addition, students were given opportunities to formally publish their work, which the teacher acknowledged during sharing time. In secondary schools, other types of sharing might take place among students. Kent (2017) identifies options such as setting aside a "reading day" that dedicates a class period for students to share their final products in small and large groups, setting up "class trades" in which teachers have their students trade with a colleague's class and students from the different classes respond to each other, or maintaining a class blog (p. 49).

Writing for authentic audiences and purposes can also extend beyond the classroom or peers. As young people work collaboratively or individually on projects of importance to them, they can direct their writing to adult audiences. For example, students in Oakland Unified School District crafted petitions based on research about issues affecting their communities. One group of students crafted a petition addressed to the superintendent to increase the number of counselors. This petition had a dual audience: the superintendent who would receive it and the students who would need to be motivated to sign it. Casey Olsen's Columbus, Montana, tenth-grade students investigated a wide range of issues of importance to them (a rockslide that

closed a road, the building or renovation of a new city hall, providing additional funding for the band, teen suicide) and published these letters in the county's newspaper. These letters then generated and contributed to authentic community conversations and helped students see the potential impact their research and writing could have in their community.

## **CONCLUSION**

This chapter outlines four key considerations for establishing the writing classroom: time, community, resources, and connection to authentic audiences and purposes. Casey Olsen's classroom illustrates how these four components are integrated in order to support his students in becoming proficient writers both as measured through state tests and as understood through the students' ability to write about significant issues for the adult members of their community. As an English language arts teacher, Olsen dedicates substantial time to the teaching of writing and integrates his instruction with the teaching of reading and achievement of key disciplinary goals—supporting students in gaining the capacity to write academic arguments. At times, he collaborates with colleagues in other disciplines in order to take up topics that require disciplinary knowledge. He builds his classroom community through regular opportunities for collaborative writing, reading, and research, and through scaffolding students' responses to one another's writing. Olsen curates sets of texts that represent diverse viewpoints as his students gain key argument writing skills and then teaches them strategies for collecting diverse perspectives related to their own issues. Olsen invites his students to build on their own interests and backgrounds as they engage in extended research projects. He uses digital tools such as Google Docs for composing and Google Forms to support peer assessment and feedback. And, as illustrated in the opening vignette, Olsen motivates his students to write by negotiating opportunities for students to publish their writing in the local paper.

As teachers across grade levels and disciplines design and set up their writing classrooms, research suggests that they consider the following questions:

- “What opportunities does my curriculum present for making authentic connections between reading, learning disciplinary knowledge, and writing? How can I work with my colleagues to increase the amount of time that we spend on writing?”
- “How will I build a positive writing environment in my classroom and teach students to work collaboratively and supportively with one another on all phases of the writing process?”
- “What resources—reading, students’ own knowledge and interests, and technology—can I marshal to enhance and expand writing instruction?”
- “What opportunities can I create for students to write for someone other than me?”

## REFERENCES

- Applebee, A. N., & Langer, J. A. (2011). A snapshot of writing instruction in middle schools and high schools. *English Journal*, 100(6), 14–27.
- Atwell, N. (1987). *In the middle: Writing, reading, and learning with adolescents*. Portsmouth, NH: Boynton/Cook.
- Berninger, V., Rutberg, J., Abbott, R., Garcia, N., Anderson-Youngstrom, M., Brooks, A., et al. (2006). Tier 1 and tier 2 early intervention for handwriting and composing. *Journal of School Psychology*, 44(1), 3–30.
- Calkins, L. M. (1998). *The art of teaching writing* (2nd ed.). Portsmouth, NH: Heinemann.
- Caspary, K., Ammah-Tagoe, N., Cannady, M., & Greenwald, E. (2017). *Developing protocols to support collaborative teacher reflection and professional learning for science argument writing*. Menlo Park, CA: SRI International.
- CAST Science Writer. (2017). Retrieved November 30, 2017, from <http://sciencewriter.cast.org/welcome;jsessionid=02B6412A0E94EAACA4A451AA6AD501BF>.
- Cutler, L., & Graham, S. (2008). Primary grade writing instruction: A national survey. *Journal of Educational Psychology*, 100(4), 907–919.
- Farrell, P. (1989). *The high school writing center: Establishing and maintaining one*. Urbana, IL: National Council of Teachers of English.
- Feldgus, E., Cardonik, I., & Gentry, J. R. (2017). *Kid writing in the twenty-first century: A systematic approach to phonics, spelling, and writing workshop*. Los Angeles: Hameray.

- Fitzgerald, J., & Shanahan, T. (2000). Reading and writing relations and their development. *Educational Psychologist*, 35(1), 39–50.
- Gallagher, H. A., Arshan, N., & Woodworth, K. (2017). Impact of the National Writing Project's College-Ready Writers Program in high-need rural districts. *Journal of Research on Educational Effectiveness*, 10(3), 570–595.
- Graham, S. (2018). A writer(s) within community model of writing. In C. Bazerman, V. Berninger, D. Brandt, S. Graham, J. Langer, S. Murphy, et al. (Eds.), *The lifespan development of writing* (pp. 271–325). Urbana, IL: National Council of Teachers of English.
- Graham, S., Bollinger, A., Booth Olson, C., D'Aoust, C., MacArthur, C., McCutchen, D., et al. (2012). *Teaching elementary school students to be effective writers: A practice guide* (NCEE 2012-4058). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from [http://ies.ed.gov/ncee/wwc/publications\\_reviews.aspx#pubsearch](http://ies.ed.gov/ncee/wwc/publications_reviews.aspx#pubsearch).
- Graham, S., Bruch, J., Fitzgerald, J., Friedrich, L., Furgeson, J., Greene, K., et al. (2016). *Teaching secondary students to write effectively* (NCEE 2017-4002). Washington, DC: National Center for Education Evaluation and Regional Assistance (NCEE), Institute of Education Sciences, U.S. Department of Education. Retrieved from <http://whatworks.ed.gov>.
- Graham, S., Harris, K. R., & Santangelo, T. (2015). Research-based writing practices and the Common Core. *Elementary School Journal*, 115(4), 498–522.
- Graham, S., & Hebert, M. A. (2010). *Writing to read: Evidence for how writing can improve reading: A Carnegie Corporation Time to Act Report*. Washington, DC: Alliance for Excellent Education.
- Graham, S., Hebert, M. A., & Harris, K. R. (2015). Formative assessment and writing: A meta-analysis. *Elementary School Journal*, 115(4), 879–896.
- Graham, S., & Perin, D. (2007a). A meta-analysis of writing instruction for adolescent students. *Journal of Educational Psychology*, 99(3), 445–476.
- Graham, S., & Perin, D. (2007b). What we know, what we still need to know: Teaching adolescents to write. *Scientific Studies of Reading*, 11(4), 313–335.
- Graves, D. H. (1983). *Writing: Teachers and children at work*. Portsmouth, NH: Heinemann.
- Hamel, F. L. (2017). *Choice and agency in the writing workshop: Developing engaged writers, grades 4–6*. New York: Teachers College Press.
- Harris, K. R., & Graham, S. (1992). Self-regulated strategy development: A part of the writing process. In M. Pressley, K. R. Harris, & J. T. Guthrie (Eds.), *Promoting academic competence and literacy in school* (pp. 277–309). San Diego, CA: Academic Press.
- Hillocks, G. (1984). What works in teaching composition: A meta-analysis of experimental treatment studies. *American Journal of Education*, 93(1), 133–170.
- Holland, D., Lachiotte, W., Skinner, D., & Cain, C. (1998). *Identity and agency in cultural worlds*. Cambridge, MA: Harvard University Press.
- Kent, R. (2017). *A guide to creating student-staffed writing centers: Grades 6–12*. New York: Peter Lang.
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge, UK: Cambridge University Press.
- Loretto, A., DeMartino, S., & Godley, A. (2016). Secondary students' perceptions of peer review and writing. *Research in the Teaching of English*, 51(2), 134–161.
- McCann, T. M. (2014). *Transforming talk into text: Argument writing, inquiry, and discussion, grades 6–*

12. New York: Teachers College Press.
- Moll, L., Amanti, C., Neff, D., & Gonzalez, N. (1992, Spring). Funds of knowledge for teaching: Using a qualitative approach to connect home and classrooms. *Theory into Practice*, 31(2), 132–141.
- Monte-Sano, C., De la Paz, S., & Felton, M. (2014). *Reading, thinking, and writing about history: Teaching argument writing to diverse learners in the Common Core classroom, grades 6–12*. New York: Teachers College Press.
- National Commission on Writing. (2003). *The neglected “R”: The need for a writing revolution*. New York: College Entrance Examination Board.
- National Council for the Social Studies. (2013). *The college, career, and civic life (C3) framework for social studies standards*. Silver Spring, MD: Author.
- National Governors Association Center for Best Practices & Council of Chief State School Officers. (2010). *Common Core State Standards for English language arts and literacy in history/social studies, science, and technical subjects*. Washington, DC: Authors.
- Newman, F. M., Marks, H. M., & Gamorn, A. (1996, August). Authentic pedagogy and student performance. *American Journal of Education*, 104, 280–312.
- NGSS Lead States. (2013). *Next Generation Science Standards: For states, by states*. Washington, DC: National Academies Press.
- Nystrand, M. (1997). *Opening dialogue: Understanding the dynamics of language and learning in the English classroom*. New York: Teachers College Press.
- Olsen, C. (2016, July 12). Argumentative writing helps students become participants in the real world [blog post] featured on Teaching Ahead: Roundtable. Retrieved from [http://blogs.edweek.org/teachers/teaching\\_ahead/2016/07/writing\\_arguments.html](http://blogs.edweek.org/teachers/teaching_ahead/2016/07/writing_arguments.html).
- Parkinson, J., Salinger, T., Meakin, J., & Smith, D. (2015). *Results from a three-year i3 impact evaluation of the Children’s Literacy Initiative (CLI): Implementation and impact findings of an intensive professional development and coaching program*. Washington, DC: American Institutes of Research. Retrieved from [www.cli.org/wp-content/uploads/2015/09/CLI-i3-Impact-Report-July-2015.pdf](http://www.cli.org/wp-content/uploads/2015/09/CLI-i3-Impact-Report-July-2015.pdf).
- Sanders, J., & Damron, R. L. (2017). *They’re all writers: Teaching peer tutoring in the elementary writing center*. New York: Teachers College Press.
- Santelises, S., & Dabrowski, J. (2015, September). *Checking in: Do classroom assignments reflect today’s higher standards?* Washington, DC: Education Trust. Retrieved from <https://edtrust.org/resource/classroomassignments>.
- Tierney, R., & Shanahan, T. (1991). Research on the reading–writing relationship: Interactions, transactions, and outcomes. In R. Barr, M. Kamil, P. Mosenthal, & P. D. Pearson (Eds.), *The handbook of reading research* (Vol. 2, pp. 246–280). New York: Longman.
- Troia, G. A. (2011). A year in the writing workshop: Linking writing instruction practices and teachers’ epistemologies and beliefs about writing instruction. *Elementary School Journal*, 112(1), 155–182.
- Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge, UK: Cambridge University Press.
- Yarrow, F., & Topping, K. J. (2001). Collaborative writing: The effects of metacognitive prompting and structured peer interaction. *British Journal of Educational Psychology*, 71(Pt. 2), 261–282.



## ***Chapter 3***

# Motivating Writers

Pietro Boscolo  
Carmen Gelati

**W**riting teachers often complain about students' low, or lack of, motivation to write at school. From the upper grades of primary school onward, many students express high concern but low enthusiasm for writing compositions. Although they may not dare express their opinion to teachers, they seem to view writing as an incumbent but scarcely interesting or useful discipline. The diffusion of digital technology, which allows messages to be composed and sent easily and quickly, certainly contributes to reducing interest and strengthening the perception of scarce usefulness. On the one hand, the importance of writing as a basic expression and communication tool is emphasized at school, while on the other, many students experience every day that writing on a smartphone is easier and more enjoyable for expressing and communicating feelings and ideas, without having to be concerned with teacher evaluation.

Of course, lack of motivation to write at school does not only depend on the diffusion of digital literacies. It is, in fact, an age-old problem, well-known to students and teachers long before the beginning of the digital age. This chapter has two objectives. The first is to analyze, in the light of recent conceptualizations, the meaning of motivation and lack of motivation to

write (Bernacki, Nokes-Malach, Richey, & Belenky, 2016; Boscolo & Gelati, 2008; Bruning & Kauffman, 2016; Hidi & Boscolo, 2007; MacArthur, Philippakos, & Graham, 2016). The second is to outline and illustrate with examples some guidelines for instructional practice aimed at fostering student motivation to write at school.

## **THE MULTIPLE MEANINGS OF MOTIVATION FOR WRITING**

The phrase *motivation to write* sums up the meanings of two complex concepts. Let's consider motivation first. In the language of instruction, the word *motivation* is used to describe a student's relatively stable and unitary attitude toward learning curricular disciplines, usually the most demanding ones such as mathematics and writing. According to this meaning, a student is considered motivated when he or she appears to be engaged in the tasks and activities of the discipline, and unmotivated when trying to avoid these tasks and activities, or carrying them out unwillingly. Motivation tends to be viewed by teachers and parents as a characteristic of the student, like intelligence or readiness. Lack of motivation, on the other hand, is seen to be the cause when the unmotivated student appears to be able, but unwilling, to achieve. Moreover, motivation is viewed from a "quantitative" perspective—that is, a student is considered very, little, or not motivated at all, regardless of what aspects of the discipline he or she likes or dislikes, and why.

The low engagement a student shows when carrying out any school activity is only the surface of motivation—the aspect that is seen by teachers and parents. Recent conceptualization of motivation has highlighted that three main factors influence a student's attitude toward school learning (Brophy, 2008; Kaplan & Patrick, 2016). The first factor is the value a student places on a learning activity—that is, the reason(s) he or she is more or less willing to engage in that activity or discipline. The reason may be interest in the discipline or its specific topics, the perception of its importance in the

curriculum, or extrinsic factors such as the will to get a good grade or avoid a bad one. The second factor regards the student's expectations and concern about his or her competence in a discipline and the possible outcomes that can be achieved—in other words, the degree to which the student feels able to successfully carry out the tasks of that discipline.

However, motivation is not only “inside” the student, it is also “situated” in the social environment in which learning takes place and includes parents and peers. In the classroom, it also includes the teacher and classmates. When learning a discipline, the student also learns a set of beliefs from his or her social context. Many of these are implicit and regard learning and the functions and role of that discipline in instruction, its importance in the curriculum, and for future study and life—the third factor. In the classroom, the teacher's view of learning as a process that can be improved, or as an outcome that shows a student's strength or weakness, may be particularly influential in creating and consolidating a student's stance toward a discipline and, subsequently, his or her achievement goals. Thus, motivation to learn is to be viewed as an attitude created and influenced by various elements internal and external to the student.

When related to writing, the first motivational factor regards how a student values it. Writing a text may be viewed by the student as a boring or scarcely important task, or as an attractive one. The second factor is the student's perception of his or her competence in writing and, subsequently, his or her expectancy about being successful or failing when writing at school. This last factor is closely linked to teacher evaluation. A task may be viewed as the opportunity to get a good evaluation from the teacher and appraisal from schoolmates. Alternatively, it may be seen as a probable occasion for poor achievement and subsequent negative evaluation. Regarding the third factor—the beliefs about writing—many students construe school writing as a strictly individual activity that demonstrates to the teacher what they have learned. This depends on the types of writing tasks given in the classroom, and, again, on the students' perceptions of how their teachers evaluate “good” writing.

The three factors are not to be considered separately from one another. When assigned a complex writing task, such as a composition, a student views it as more or less interesting, but also more or less difficult and demanding, and his or her attitude to the task is usually influenced more by the perception of difficulty than by interest in the topic. Moreover, perception of the task in terms of difficulty and interest is overwhelmed by the meaning the student gives to school writing and to him- or herself as a writer. Is an interesting topic an occasion for successful writing, or for expressing one's ideas? Is a difficult topic viewed as a challenge or a threat?

If motivation is a complex concept, writing is by no means a simple one. Although writing at school is usually viewed as a single ability, it is in fact a very complex activity in which various elements, phases, and processes can be distinguished, as emphasized in this thoughtful definition by Graham, Gillespie, and McKeown (2013): "A goal directed and self-sustained cognitive activity requiring the skillful management of (a) the writing environment; (b) the constraints imposed by the writing topic; (c) the intentions of the writer(s); and (d) the processes, knowledge, and skills involved in composing" (p. 4). These sources of complexity can be summarized in two basic elements: purposefulness—that is, writing as an activity aimed at reaching a goal—and the "skillful management" of numerous elements, internal and external to the writer, through which the goal is achieved.

Although motivation is not mentioned in this definition, the two basic elements have a strong motivational valence. The goal of writing—which is to elaborate, inform, communicate feelings or ideas, or simply to carry out a task assigned by the teacher—may be perceived by a student as more or less interesting or attractive, which implies a different value of the goal itself and a different self-perception on the part of the writer. Moreover, writing at school, particularly primary school, involves the use of various genres that can be more or less attractive to the students and perceived as more or less difficult. Management is closely related to the writer's self-regulation, a motivational construct that refers "to the processes whereby learners personally activate and sustain cognitions, affects, and behaviors that are

systematically oriented toward the attainment of personal goals” (Zimmerman & Schunk, 2011, p. 1). As a self-sustained, self-regulated activity, writing at school requires careful attention and prolonged effort that students, in particular low achievers, may be unable to sustain. If the goal of writing is a relevant one for the writer, as it usually is at school, management will be charged with positive or less positive emotions, in particular, high or low self-efficacy and related anxiety about the quality of the ideas, formal correctness, and the final result.

Thus, the various elements of purpose and management listed in the definition have different implications for students’ motivation. They may be perceived as more or less interesting or more or less demanding, more or less necessary for a good outcome, and therefore more or less “risky.” Consistent with these conceptualizations of motivation and writing, in this chapter, we argue that motivation to write is an attitude toward, or view of, writing. It is based on the set of beliefs that students develop through writing activities—that is, through the various situations and tasks in which they are asked to write and use their written productions.

So far, in analyzing the motivational aspects of writing, our emphasis has been on the lack of motivation rather than motivation for writing. If motivation is an attitude, what features of this attitude characterize a motivated student? A motivated student can be defined as one who values writing and is willing to use it as a flexible means of expression, communication, and elaboration. Moreover, a motivated student is realistically self-confident about his or her ability to use writing successfully, and this sense of competence is a condition and source for feeling satisfied when writing.

This concept of motivation to write is different from the concept of intrinsic motivation to write supported by some scholars (e.g., Moè, 2016). According to the self-determination theory in which intrinsic motivation has been conceptualized (Deci & Ryan, 1985), behavior is intrinsically motivated when an individual carries out an activity he or she finds interesting and enjoyable, and through which basic psychological needs for competence,

autonomy, and relatedness can be satisfied. Instead, a behavior is extrinsically motivated if carried out with the promise of a reward or the threat of punishment. A child is often intrinsically motivated to write in early schooling, but unsuccessful writing experiences due to the increasing complexity of writing with increasing school grade levels may transform his or her original “will to write” to extrinsic motivation—that is, concerned with teacher evaluation rather than with the process of writing.

In featuring the motivated student, we use the word *value*, highlighted in recent years in another theory of motivation: the expectancy–value model (Wigfield & Eccles, 2000; Wigfield, Tonks, & Klauda, 2016). According to this theory, the task value is the force with which an activity or task attracts an individual. There are different components of value that are not mutually exclusive. The intrinsic value is the enjoyment one gains from carrying out a task, and this meaning of value is clearly reminiscent of the concept of intrinsic motivation. Utility value refers to how a task fits into an individual’s future plans. For example, writing may be valued for its importance in all degrees of instruction. The attainment value is the value a person gives to an activity or task through which he or she can express him- or herself, and writing may be viewed as a way to express oneself. Thanks to this range of meanings, the term *value* seems to fit a student’s attitude toward writing, and generally any school discipline, better than the intrinsic–extrinsic distinction.

## **GOOD PRACTICES FOR FOSTERING MOTIVATION TO WRITE**

The complexity of motivation to write has to be taken into account when good practices for making students willing to write are devised and proposed. What should the basic features of good practice be? The most frequent reply to this question would probably be “An attractive topic to write about”—that is, according to the terminology of the definition of writing, an attractive goal. Of course, an attractive goal is a favorable condition for facilitating a student’s

approach to writing, but it is not sufficient, unfortunately, for creating and consolidating a positive attitude toward writing. The goals of instructional activities (writing as well as other disciplines) cannot always be attractive. More importantly, the management of writing skills represents the “other side” of any writing task, and may have a negative influence on the motivation to write. We think that good practices for fostering motivation to write should not only address task attractiveness but also the management of writing skills and contribute to creating the value of writing in the student. Therefore, in this chapter, practices aimed at making writing attractive, and those that facilitate management, are illustrated. Regarding attractiveness, three examples of writing tasks are presented in the next section. As for management, two main functions of school writing are addressed: composition, for which a facilitating device is presented, and the use of writing as a learning tool.

Before describing the tasks, the different meanings of *attractive*, when related to writing tasks, are briefly analyzed.

## **Making the Writing Task Attractive**

Several adjectives—such as *authentic*, *interesting*, and *challenging*—are often used to describe the attractiveness of a writing task. Although these adjectives are often used as synonyms, they have, in fact, partially different meanings. Authentic is used to indicate tasks with a real expressive or communicative goal, which students view as important, and this importance is underlined by the written form. Giving authentic writing tasks has often been recommended as the best way to involve students in writing (e.g., Behizadeh, 2014; Rodesiler & Kelley, 2017). A writing task is considered authentic if it involves children in immediate uses of literacy for enjoyment and communication—for example, as described later, primary and middle school students writing the rules for group formation in the classroom. Instead, unauthentic tasks are those in which writing is an exercise practiced for some undefined future use.

While agreeing about the importance of involving students in meaningful writing tasks, we wish to add a few comments about the meaning of the adjective *authentic*, which is slightly ambiguous when applied to school tasks. Authenticity in writing is no synonym for *practical relevance*. Of course, writing in a classroom may be relevant in that students are faced with a real problem that can be solved using writing, such as composing a petition or identifying the rules for forming classroom groups. Authentic writing, however, is not only aimed at achieving a practical goal. A writing task in which a student can express a personal point of view or feeling—the so-called writer’s voice—should also be considered authentic. One of the prominent aspects of the process approach has been the emphasis on the importance of expressing one’s thoughts and feelings through writing. Writing about an involving event may be an occasion for helping students to express their voices and become aware of a new and authentic function of writing. The written texts might be used a few weeks later, to allow students to elaborate their previous thoughts and feelings in rereading their work. This may contribute to creating a “literate community” in the classroom (Nolen, 2007; Nolen, Horn, & Ward, 2015). From this community, we would expect students to develop positive attitudes toward writing—that is, their willingness to view and use writing as a real communicative, elaborative, and expressive tool. This implies using the attractive features of a situation as a regular, rather than an exceptional strategy, on the one hand, and helping each student search and develop a personal meaning of writing through classroom activities, on the other.

The written expression of personal voices is now facilitated by “everyday youth literacies,” according to the title of a recent volume that presents authentic writings using digital technology by young people around the world (Sanford, Rogers, & Kendrick, 2014). Of course, as mentioned at the beginning of the chapter, the use of these literacies may make students view school literacy—and writing in particular—as unauthentic. A text message is authentic as it is a quick way to communicate, while a composition may be perceived as unauthentic since its purpose is to evaluate a student’s ability to



write. A classroom discussion, in which students can freely express and compare their views—and beliefs—about literacy tools used in school and out, can help them understand that any writing task can be authentic. Even a composition, which students may view as authentic since they can express personal thoughts about a topic in clear and readable prose, may be authentic as a document for subsequent reading and discussion with the teacher and schoolmates. Thus, both academic and everyday writing can be used fruitfully to make students aware of the different ways in which thoughts and feelings can be authentically expressed.

Another adjective frequently used in relation to writing tasks is *interesting*. The meaning of interesting, unlike authentic, has been analyzed in depth in psychological and educational studies on interest over the past three decades (see Renninger & Hidi, 2016, for a review). From these studies a basic distinction between two types of interest has emerged: situational and individual (or personal). Situational interest is generated by particular conditions and/or objects in the environment that attract attention because of their novelty. This type of interest is usually transitory, as is the situation from which it arises. Individual or personal interest is a relatively enduring disposition to attend to objects and events and to reengage in certain activities over time. Both types of interest are related to writing in school: interesting topics may include students' personal experiences (e.g., sport, games, TV, problems of adolescence), which they are presumed to have a lot to write about. The situational interest emerging from a lesson, reading, movie, or debate may also be a resource in the teaching of writing.

In relation to writing tasks, interesting is used more often than authentic, and more generically. Many teachers think that giving students interesting topics for compositions, or allowing them to choose their own topics, is a useful way to promote motivation to write. This instructional practice is based on the unwarranted assumption that the interestingness of a topic can be transferred to writing on that topic. In fact, being interested in, say, baseball, does not necessarily mean being interested in writing about baseball. An interesting topic that students have discussed enthusiastically with their

teacher in the classroom may immediately become boring if the same students are asked to write about it. The reasons for the boredom can be found in the students' perception of composition as an inadequate and difficult way to express that interest. The problem is not finding an *interesting topic* or event for students to write about, but *making writing interesting*. An interesting topic may be a good starting point, but what can motivate students to write is the awareness that writing on that topic is worthwhile. For instance, writing an account of an interesting event may be aimed at collecting and comparing the different ways in which the students in a class have perceived and construed that event. In this case, writing represents a first instance that might be followed by students' analysis of their own and classmates' narratives and a discussion of the differences and similarities in narrating, and then compared with an external narration (e.g., a newspaper).

However, an interesting topic seems to be a necessary, although not always sufficient, requisite for motivated writing. In a study conducted with primary and middle school students, Gelati (2012) found that interest in an event positively affects writing personal accounts. In the study, two events were planned to provide contrasting kinds of experience: one more interesting to boys (soccer), and the other to girls (dance). The topics of dance and soccer had been previously rated for interest by girls and boys. All students participated in both experiences and wrote a personal account. Results showed that, independent of gender, students produced more complete texts, and enriched texts with more personal and higher-quality evaluations, when they wrote about the experience they found more interesting. An increased interest in writing was also found.

The third adjective is *challenging*. A task can be considered challenging to the degree that it stimulates a student's cognitive involvement in a collaborative context (Miller, 2003). A challenging task requires students to assume increasingly higher levels of responsibility for learning—that is, autonomy in carrying out a task as well as elaboration, not only retrieval of prior knowledge. A collaborative context facilitates and stimulates students' involvement in a task and participation in the challenge (Carr & Walton,

2014). A challenging task is perceived as slightly difficult—this difficulty is not threatening but makes the task more attractive. The use of challenging tasks may contribute to motivating students to write if they feel able to manage them and the results are pleasing. Thus, the meaning of challenging includes interest and complexity. A challenging task is an interesting one that presents a certain degree of complexity that a student feels able to face and overcome: “It is hard, but I can succeed!”

One example of authentic and two examples of challenging writing tasks for the upper primary grades and for middle school are illustrated below: writing the rules for forming classroom groups, “playing” with genres, and preparing a guide for visitors to the town where students live.

### **An Authentic Task: Writing the Rules for Group Formation in the Classroom**

An example of an authentic task appropriate to primary and middle school students is writing the criteria for forming classroom groups. The problem may start with a classroom discussion and analysis of the difficulties experienced by students when working in groups, where the teacher underlines the need to identify rules that must be followed by the teacher and students, as an important aspect of classroom life. The students are then invited to express their own ideas about the problem. This discussion offers the opportunity to use and value writing as a tool to “keep” ideas. As the discussion must be well organized, students are invited to write down the ideas they want to express while waiting for their turn, and the ones expressed by their classmates that they think are relevant. The teacher makes it clear that these notes will be useful for the final discussion and choice of criteria, but also for writing a summary of the discussion as an introduction to the rules. The work is carried out in groups of four to five students. The students use their notes to recall the previous points and to guide the discussion. In this phase, writing is used as a tool for regulating turn taking (“While waiting,

write your ideas on a piece of paper so you will not forget them”), as an informal tool for recording ideas expressed by other students and one’s own, for determining the most important points during the discussion, and for summarizing the results of the discussion. The children are encouraged to formulate their first conclusions and use their informally written ideas to order the points of agreement about the criteria of group formation to the teacher, who writes them on the board.

After gathering their ideas, children discuss the collected ideas in small groups, using their notes to recall the previous points and guide the discussion. This phase ends with the construction of the first draft of a text in small groups. Last, for the production of the text, the work of each group is read to the whole class, and a composition is written collaboratively. For each group, a child reads the draft, soliciting comments and requests for clarification from the other children, while other members of the group note suggestions for how to improve the text, as well as informal comments and reflections. The drafts of each group are then used for the collective composition. The children discuss and select the best criteria, formulate them orally with the teacher’s help, and then write them in their notebooks. The work is concluded when the agreed-upon criteria are written on a poster that will be hung in the classroom.

This is an authentic task in that writing the rules is not an exercise in good writing, but the rules are considered to be very important to classroom life by the students and the teacher. However, “authentic” does not mean that the rules can be written carelessly. The final formulation of the criteria should offer the teacher the opportunity to underline that a document must have features that make it understandable to everybody, even if they are not part of the classroom—for instance, a short introduction and a clear formulation and careful sequence of items. After writing, students should be asked to critically read the text they have written and to ask themselves whether it is clear and whether there is anything to be corrected or added. Thus, authentic writing can—and should—help students understand and apply the basic principles of school writing.

## A Challenging Task: Playing with Genres

To what extent can play make writing challenging? Teaching genres is a problem that has led to heated debate for decades. Through various reading and writing experiences, students get to know genres. A possible challenging task is rewriting a text (e.g., a poem that students know, a story, a fairy tale), changing some elements (e.g., the protagonist, the setting, or the conclusion of a story), and then rewriting it. Rewriting is seldom an enjoyable task but, in this case, it may be enjoyable if the objective is to invent a new story or a new poem. Two conditions must be satisfied: first, to respect the structure of the original text, and second, to introduce new elements (e.g., a character, or a different setting) that must be consistently integrated into the whole composition. In the classroom, this work can be carried out in small groups, each involved in producing the best new text.

In primary school, “playing” with writing is an activity students are willing to engage in. Playing means, for instance, manipulating stories by changing characters, motives, or the sequence of episodes to obtain new, more amusing or curious endings, albeit within the constraints of text coherence. It may mean rewriting a short text and avoiding certain word categories, or composing a meaningful short text (a “cento”) by using words taken from titles of newspaper articles and reading passages, or creating images and metaphors with colors to describe the seasons, for example. This writing is called “creative” because it is aimed at creating “new” meanings—that is, having children discover novel uses of language (Boscolo, Gelati, & Galvan, 2012). This may also be children’s first contact with intertextuality, where they realize that new meanings are usually constructed through old words and phrases. Children not only enjoy practicing it but also test and increase their linguistic competence, obviously under the teacher’s guidance. Moreover, their efforts may produce texts that merit being collected in a classroom *portfolio*.

Later, in high school, this type of play may become a fruitful tool for de-composing and analyzing (no longer for fun) when reading literary texts in greater depth. Similar to the previous example of authentic writing, we underline an aspect of playing with genres that can contribute to giving students a different perspective of writing regarding the writing–reading relationship. Reading and writing, although closely connected in the concept of literacy, are very often quite separate in school practice. Playing with genres does not only require inventing and rewriting but also reading carefully. Readers must pay attention to the vividness of the description of setting and characters, and to the plausibility of a complicating event and a solution. Playing with genres also means reading to write better. A story can be rewritten with different characters, but can also be improved. Improving a story is a good example of a challenging writing task as children must consider the criterion that might make a rewritten story better than the original one. Students may also consider whether the criteria for evaluating a story could be the same as applied by the teacher when evaluating their own writing: identifying and discussing in the classroom the teacher’s evaluation criteria may be an enjoyable aspect of the task.

## **A Second Challenging Task: Preparing a Guide to a Town**

Upper primary school and middle school students are invited to prepare a guide to the town where they live (Greguol, 2013). A good moment to propose this task may be after a geography lesson, where the importance of knowing one’s hometown in depth has been discussed. Often people do not know well the place where they were born and have been living for years. The task starts with the presentation of a video showing some aspects of the town and students are invited to take notes while watching. Then they are invited to work with their classmates (in groups of four to five students) to write a guide to persuade girls and boys of their own age from a different school and

another town, region, or state to visit the place where they live. Students are told that a guide should help tourists orient themselves in an unknown place.

The members of each group have to:

- Decide what aspects are the most interesting.
- Organize the collected ideas.
- Add new information if needed.
- Summarize the texts produced by each member.

To what extent is this a challenging task? Obviously, the students know that they do not have to write a real guide, but rather an informational text for visitors to the sites in the town where they live that would be interesting to visit. The first challenge is simply the attempt to describe a well-known place with “new eyes,” such as those of a person coming to the town for the first time. This requires selecting sites on the grounds of their possible attractiveness to a tourist. The second challenge concerns the writing. This task is quite different from the types of texts students usually write, and the goal is not to elaborate knowledge in written form, like in a composition, but to show the best aspects of a well-known place in a reasonable sequence, not according to a simple list. A third source of difficulty, and a challenge, is the need to integrate different languages. A guide should contain drawings and photographs as well as written text. If composed on a computer screen rather than on paper, the guide can be an example of a multimodal text (Ganapathy & Seetharam, 2016; Kress, 2010) in which verbal language, drawings, and images, and even music, contribute to creating new ways of expression and communication. The multimodal writing of a guide, or any text in which different expressive tools can produce an important message, can effectively contribute to making students experience the flexibility and productivity of writing.

The role of collaboration is relevant in this task, too. The task should be carried out by groups of four to five students where collaboration regards both choosing the places to be visited and preparing the guide. While

watching the video, students are invited to take notes that will be useful for the discussion about the choice and, later, while writing. The students soon realize that selecting the places worth visiting is only one aspect of a larger task where the crucial point is presenting them in the most appropriate form.

These two challenging writing tasks can also be considered authentic even though they are fun. Authenticity is present in the use of writing as a creative tool in the case of genres, and is a tool for expressing and communicating the interesting sites in a town in the case of a guide. In other words, any writing task can be perceived as authentic if the writer realizes that writing does not only mean reproducing what one knows or remembers but also means finding new meanings and instruments for knowledge. Therefore, the meaning of the two adjectives should be viewed as complementary.

Before considering the management of writing skills, we would like to underline an aspect common to the three tasks: student collaboration. Collaborative writing does not necessarily mean writing together, or involving the whole class in the same writing. There are several occasions for students' collaborative writing in a classroom that the well-known Hayes and Flower (1980) model of writing helps to exemplify. In the model, the cognitive processes involved in writing are grouped in three phases: *planning*—that is, generating, collecting, and selecting ideas; *translating*—that is, writing down the generated ideas on paper or a computer; and *revising* what has been written, and what one is writing. The three phases of writing as highlighted in this model lend themselves to different types of collaboration that the examples of writing tasks just presented effectively exemplify.

In the playing-with-genres task, the first step is reading the text to be modified, and highlighting the specific changes to be introduced. Collaboration is also important in the management of writing: introducing changes to a character or the setting means controlling the entire text for coherence. Last, collaborative revision of the new text is another important moment of management that all the students involved in the task should contribute to.

In the case of group formation, collaboration is important for identifying



and discussing the criteria, and also for writing the rules, where careful reading and revising are necessary. Writing a guide requires a joint effort to identify the places that are worth visiting and to “accompany” visitors through the town. In these collaborative moments, the teacher acts as a facilitator and helps students decide what elements to change and how, and suggests how to avoid incoherence, and how to improve the new text. Collaboration is not always easy, and the teacher’s role is to coordinate the students’ expression of ideas, and also to pay attention when students seem to lose their enthusiasm. The collaborative generation of ideas, for instance, is the moment when individual differences in producing ideas emerge, and the teacher should carefully distribute encouragement, stimulation, and criticism when needed.

Writing is often an individual behavior through which a student can demonstrate what he or she has learned for later evaluation by the teacher. Over the past two and a half decades, the social dimension of writing has been stressed. This approach emphasizes that writing is a social activity not only because what one writes can be read by somebody else (in the classroom, usually the teacher) but also because writing can be performed in an interactive context. The social dimension of writing is clearly related to reading. The two literacy practices are closely related when co-constructing a text, as in a classroom collaboration, and in sharing written ideas and thoughts with classmates. When the production of a text is aimed at achieving a common objective (e.g., preparing a brochure for an exhibition organized by the school, or a playbill for a school performance) the planning, writing, and revising of this text can be done in collaboration.

Also, individual writing may be important for communicating—for example, when students take notes during a classroom discussion or lecture to prepare a report, or simply record some concepts emerging from the discussion that impressed them. These forms of writing may turn out to be useful in subsequent classroom discussions, as elements for giving students a first idea of a community of discourse. Showing that individual writing, such as note taking, also has an interactive component, may help them understand

the close connections between writing and classroom activities. We will come back to this subject shortly.

The classrooms in which literacy activities establish and maintain the relationship between individuals have been called “literate communities” (Nolen, 2007). Literate communities have social norms that facilitate the development of interest in literacy by establishing the group’s shared identity as readers and writers. In these classrooms, reading and writing provide opportunities to experience writing as a tool for self-expression and communication, whereas in traditional classrooms writing is basically an individual activity. Writers and readers switch roles frequently, and the resulting communication of feedback and ideas provides multiple opportunities for interest development. In contrast, traditional writing instruction focuses more on teaching the skills of writing, and the main purpose for becoming literate is that it is an important school subject. In literate communities, students develop their identities as writers through writing activities where they are involved with teachers in producing worthwhile (authentic) material or expressing and sharing their own ideas with schoolmates.

## **MANAGING WRITING SKILLS: THE NINE STEPS OF COMPOSITION**

If an attractive task is a good starting point for fostering motivation to write, teachers should not forget that the motivating effect of a writing task is usually limited to the task itself. Moreover, as all teachers know, learning to write implies exercise, attention, and careful revision. The “management” highlighted in the definition above, often scarcely attractive for students, is a necessary element of writing instruction. Therefore, students should also be able to overcome the difficulties that an attractive task implies, and gain from the task the confirmation that writing is a powerful tool of expression, elaboration, and communication.

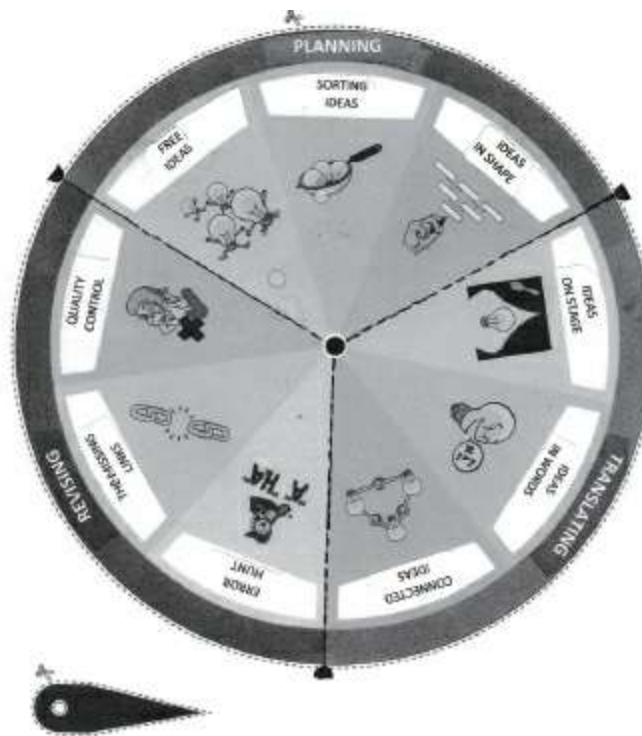
A good practice is not only one that has an immediate effect on a student's attitude toward a task but it should also contribute to creating his or her attitude toward writing in particular. The role and possible effects of teacher evaluation should be considered. Although a student may be willing to write about a topic he or she is interested in and has ideas about, the student must also feel able to overcome the numerous difficulties of this task. As highlighted at the beginning of the chapter, a second, not less important, component of motivation regards students' self-perception of competence. Even if writing about an interesting topic, a task that is perceived as too difficult will not be attractive to a student. The perception of task difficulty is clearly related to a student's positive or negative experiences with that type of task. However, the quality of experiences and the perception of difficulty may change if the student is given the opportunity to be successful—that is, if he or she learns to regulate his or her writing performance and avoid the shortcomings usually related to classroom composition. We now present a few strategies (“steps”) aimed at improving school writing.

As underlined when introducing the definition of writing by Graham et al. (2013), the complex cognitive and linguistic activity of managing writing requires continuous monitoring and intervention, which exceeds metacognition and involves the student's ability to manage writing and evaluate him- or herself as a writer. This amounts to self-regulation. In the examples of challenging tasks, the management of writing skills, particularly in the phases of generating and revising ideas, may be enjoyable for students if carried out collaboratively. However, management is usually less enjoyable in individual writing where the student is aware of the obstacles that composing a text entails, and is concerned with the difficulty of overcoming all.

Often, the difficulty of management is due to its “hidden” nature. The continuous monitoring that is implied when writing a complex text, such as a composition, is often too difficult for a student, who struggles with expressing an idea but when writing it forgets to check the linguistic rules underlying text composition. Attention to the management of writing skills is not a

novelty in writing research, and the importance of teaching self-regulation strategies to students of different writing abilities has been adequately underlined (Harris, Graham, MacArthur, Reid, & Mason, 2011; Harris, Graham, & Mason, 2006).

Here we present a recent Italian composition writing curriculum for primary and middle schools, in which the difficulties students frequently face when writing are considered (Cisotto & Gruppo RDL, 2015). The multiple sources of difficulty are analyzed and summarized graphically in a “nine-steps compass,” as shown in Figure 3.1.



**FIGURE 3.1.** The nine-steps compass.

The compass is reproduced graphically as a circle and is given to each student or student group with the instruction “Build the compass to write the texts in nine steps; cut the needle of the compass and fasten it to the center of the circle.” At the external edge of the circle, nine steps are drawn and represented by simple and fun drawings: three steps of planning, three of

translation, and three of revising, according to the phases of the Hayes and Flower (1980) model. The compass can be applied to any writing task, but is particularly useful for demanding tasks, such as composition, where students have to demonstrate their ability to express personal ideas in a coherent and formally correct text. Here are the steps:

### ***Planning***

1. *Free ideas* (represented as light bulbs). The student is invited to self-question: “What do I already know about this topic? Where can I find other information?” The ideas are written on Post-it notes, without any concern with wording and phrasing.
2. *Sorting ideas*. The student thinks of the possible readers of the text, and chooses the ideas he or she consider most appropriate for exposition.
3. *Ideas in shape*. The most important ideas are chosen and organized in a schema or map or storyboard (in the case of a narrative text). A first draft is constructed in this way.

### ***Translating***

4. *Ideas on stage*. An appropriate introduction to the text is found.
5. *Ideas in words*. Words are chosen to “dress” the ideas. This is the moment when consulting a dictionary or, even better, asking the teacher, appear as appropriate strategies.
6. *Connected ideas*. Laying down the structure of the text and connecting its parts. This step requires the use of connectives and punctuation.

### ***Revising***

7. *Error hunt*. This is the phase of self-questioning for revising and correcting mistakes.
8. *The missing links*. Checking cohesion and coherence through self-questioning: “Is the text clear? Are there missing links? Is any important information missing?”
9. *Quality control*. Rereading and evaluating the global text.

The motivating valence of the “nine-steps compass” regards students’ self-efficacy for writing a correct text.

The compass can be used individually, as an aid for overcoming difficulty, and collaboratively when students compose a text together and have to check for correctness as in the examples above. It is certainly more enjoyable when used in collaboration, because the nine points stimulate students’ search and evaluation of proposed solutions.

## **TOWARD A COMPREHENSIVE VIEW OF WRITING**

Motivation to write is an attitude that changes through the school levels. Primary school students learn to use writing in different genres—for instance, to express their feelings, to narrate episodes of their family life, to comment on what happens in the classroom, and to set rules for classroom life. There are basically two problems for a teacher who wants to foster motivation to write. The first is to provide students with writing tasks that they can perceive as meaningful in that they are related to classroom activities in which writing has a real function, or that are challenging. The second problem is helping students manage their writing, and viewing management as a resource, rather than a means to avoid a bad grade. In sum, to motivate primary school students to write basically means to provide them with opportunities to use writing in attractive and useful ways, and feeling efficacious in this use.

Instead, high school students are, or should be, aware of the potentialities of writing for personal expression and interpersonal communication, particularly outside school. They already know that through writing they can express their ideas and organize their knowledge of subject matters and should have no, or few, problems with the management of writing skills. In high school, too, meaningful writing tasks are, of course, necessary and allow students to view writing as closely connected to relevant classroom activities. However, they also need to find other “meanings” in the academic writing they are having to deal with over such a long time. Motivating high school

students to write means helping them realize the relevance and usefulness of academic writing as a way to express and communicate ideas, on the one hand, and as a powerful instrument through which learning can become more personal and effective, on the other—that is, writing becomes a tool for learning. In other words, motivating high school students to write also means making them aware of the conceptual valence of writing.

The use of writing as a learning tool has already been shown in the examples of authentic and challenging writing. To compose and rewrite texts, students have to use strategies suggested by the teacher, in particular, note taking, which helps them keep their own and their classmates' ideas. This becomes an occasion to discover and reflect on a function of writing that is quite different from composition. For example, the usefulness of writing does not only regard the production of a text, such as rules, that can be used in the classroom. There is another, less obvious form of usefulness that regards writing as a tool for learning. In recent years, the elaborative function of writing has been highlighted (e.g., MacArthur, 2014), although there are very few studies on the motivational aspects of writing to learn.

We now briefly report on two studies conducted with high school students. In one, writing was used to help high school students learn both oral and written argumentation; in the other, they learned to analyze literary texts.

Del Longo and Cisotto (2014) have used the expression *provisional writings* to refer to written representations that can be helpful in structuring thoughts that demonstrate and support complex cognitive processes. The authors tested the positive effect of writing tools on the production of oral and written argumentations. The results showed an improved performance in both oral and written argumentation for the students trained to use the strategies, and although the motivational aspects were not considered, we underline here the motivational effects of the workshops. Throughout the intervention, students were guided in keeping a writing journal, in which some questions were posed (p. 27):

- “What have I learned in today’s workshop?”

- “Have I encountered difficulties? When? Why? How can I overcome them?”
- “Why is it useful to take notes?”
- “When is it useful to annotate possible objections?”

First, the improvement of students’ ability to argue has a motivational valence. Teaching students to “help” themselves using appropriate strategies makes them more able and more willing to write. Since “students who are given strategic writing support are likely to succeed in writing more informative, cohesive, and organized essays” (Del Longo & Cisotto, 2014, pp. 35–36), this training may have a dual effect: improving the production of argumentative texts and subsequently self-efficacy, and helping students appreciate a wider perspective of writing, including writing as achievement of a goal (in this case, arguing pro or con in a thesis) and writing as a management tool.

The results of this study can be compared to an older one, conducted with ninth-grade classes over 1 school year, in which two ways of teaching literature were compared (Boscolo & Carotti, 2003). The “traditional” class used writing for composition on various topics, including literary ones, while the “writing-oriented” class used writing as a tool for understanding literary texts. Both groups used several forms of writing, but the traditional one focused mainly on composition and writing for note taking, schematizing, and summarizing, while the writing-oriented class also used writing as a tool for understanding literature better.

There are many writing activities that can be carried out while teaching/learning literature. Some activities are traditionally used in school for the different disciplines—for example, summarizing, schematizing, or taking notes. Other activities are carried out when students “work” on the text, such as analyzing the text structure, paraphrasing, recording personal comments or reflections, and commenting on an author’s thoughts in written form. As in primary school, writing can also be manipulation—for instance, changing the tone of a literary text, or rewriting a story from a different



character's perspective, as exemplified in this chapter with reference to the playing-with-genres activity. However, text manipulation has different functions in the two activities. For younger students it is a way to discover the productivity of writing, while for older students it is a tool for understanding and appreciating literature.

First, the teacher asked the class to read a novel or story as homework. A deadline was agreed upon and the teacher periodically reminded students. Students read literary texts at school only when they have to focus on aspects emerging from classroom discussion. On the set date, students expressed a first appreciation of the text they had read. It was an occasion for pointing out the difference between *understanding* and *enjoying* a literary text, a difference that is not easy for ninth graders. This difference can be considered in greater depth over several years (from grades 9 to 12), as it includes reflection and discussion about reading and comparisons between texts (intertextuality). Thus, the instructional intervention described in this chapter should be viewed as part of a longer one taking place over the 4 years of high school.

Writing was used in various ways as a tool for literary comprehension (see [Table 3.1](#)):

- 1.** The students were invited to express and justify their reactions to reading a literary text assigned as individual homework. The reactions were usually expressed orally during classroom conversations, but sometimes the students themselves preferred to write them down. Students noted their own impressions and reflections during literature reading in the classroom and the teacher's comments, so that they could recall their "response" to literary texts in future discussions and elaborations. The notes were discussed and integrated with new teacher comments. For homework, students were asked to organize these notes and to put them in order according to different criteria: emotional reaction, conceptual understanding, reference to other literary texts, points to be clarified in further classroom discussions, and so on.

2. The students were invited to find significant key words to describe characters or places and events in the text they were reading. This was a type of “card indexing” that required students to elaborate a text personally.

3. Text analysis was usually followed by a task where students were asked to synthesize the text. Synthesizing is quite different from summarizing. Whereas a summary is aimed at “objectively” identifying the most important ideas or events in a text, a synthesis reflects reading aimed at highlighting specific aspects of a literary text, which also emerge from the teacher’s explanation and students’ discussion.

4. The students wrote the “minutes” of some particularly interesting lesson by organizing their notes.

5. The students wrote a final report of their work, which was discussed in the classroom.

6. Some of the tools used for text analysis (e.g., the role of irony in the author’s voice) were “transferred” to a new literary text where students were asked to use the concepts they had learned. This was also an occasion for raising students’ awareness of the elaborative function of writing.

**TABLE 3.1.** The Use of Writing as a Tool for Literary Comprehension

---

- Expressing and justifying own reactions to reading
  - Finding significant key words
  - Synthesizing
  - Organizing own notes for writing the “minutes” of the lesson
  - Writing a final report
  - “Transferring” some tools used for text analysis to a new literary text
- 

Students participated in a series of traditional and innovative writing activities and were asked to rate each of them for liking (“Do you like . . . ?”), self-perception of competence (“How able are you to . . . ?”), and perception of usefulness before and after the intervention. We think that the writing

activities used in the study of literature could be used as self-evaluation tools for students and as a basis for discussion after classroom work on literature. In general, the activities emphasized writing aimed at text analysis and also comments on text, and to a lesser degree, text manipulation (e.g., rewriting a passage adopting the perspective of another character), all of which are types of writing closely related to the study of literature. Most students mentioned the uses of writing that they experienced in their literature class as novel, such as changing the register of a narration or the perspective of a description. In their comments at the end of the intervention, they wrote that they had learned to use academic writing (including composition on literature) more consciously. From a motivational point of view, it is interesting to note that in response to the question of whether writing is an interesting activity or a “duty,” students underlined the dual aspect of writing in school as both a “duty” or mandatory activity, and a possible source of interest. Few students mentioned personal and relaxing types of writing. Some students’ responses follow:

“I think that if a writer is a person—and therefore has ideas—writing is a duty because ideas and opinions cannot be forgotten and must be communicated.”

“Writing is unavoidable as well as useful. It is interesting for me to study various types of writing, which help us express ourselves better, also orally. Writing is a way of expressing yourself, and everybody uses the way which is more appropriate to him/herself.”

Several responses underlined the role of writing in expanding and integrating knowledge. A female student wrote:

“Taking notes when reading and elaborating them later is very important for me, because these activities also help me if I have to do a quick review before an oral test. The integration of notes taken in the classroom with homework is even more productive for learning.”

And a male student:

“Writing can help a student report on a scientific topic or explain a mathematics or physics problem, but above all it is a person’s wealth.”

The two examples of writing as a tool for learning presented in this section are clearly different from each other. The former was aimed at helping students to argue better, while the latter was aimed at improving students’ approach to literature. However, in our opinion, what should be underlined in both interventions, and also in others that could be conducted in classrooms at different grade levels, is the flexibility of writing, and the use of writing for multiple elaboration goals.

## **THE ROLE OF THE TEACHER IN PROMOTING MOTIVATION TO WRITE**

In this chapter, we have underlined that motivation to write is an attitude, rather than an obligation. Unlike a task, it has different sources and aspects. Over the many years that they are asked to write, students learn to give a positive or negative value to writing, to view it as an important tool or a boring and difficult school subject, and themselves as good or poor writers. Therefore, promoting motivation to write means helping students create a positive, and/or modify a negative, attitude toward writing. Helping students create a positive attitude toward writing and allowing them to feel able to write is the result of the strategies a teacher adopts. The teacher of language skills should try to create a “writing laboratory” in the classroom, where writing is not viewed as a discipline or a skill, but a multipurpose tool through which different communication, expression, and elaboration goals can be achieved, and where students can experience writing as a flexible tool they are able to manage. Helping students value writing requires several teacher “moves” or strategies that have been presented throughout the chapter and are now summarized (see [Table 3.2](#)).

**TABLE 3.2.** The Role of the Teacher in Promoting Motivation to Write

The role of the teacher	The teacher should . . .
Proposing meaningful opportunities to write	Propose meaningful experiences and activities in which writing has a role and a purpose (importance of students' involvement as well as an exercise).
Promoting opportunities of comparing literacies in and out of school	Propose a good balance between digital and school writing (importance of the discussion).
Facilitating the management of writing skills	Suggest exercises and revision strategies.
Checking students' motivation to write	Push students to analyze their beliefs about schoolwork, the difficulty of disciplines, and good and bad results.
Balancing individual and collaborative writing	Adopt collaborative and individual writing.
Evaluating students' writing	Analyze task difficulty, students' levels of ability, and self-perceptions of competence (importance of the portfolio).

**1.** *Proposing meaningful opportunities to write.* In the previous pages we discussed authentic and challenging tasks. We are aware that writing tasks cannot always be challenging or authentic, as writing is not always aimed at inventing meanings or expressing feelings or communicating—exercise is also necessary to improve students' writing. Thus, a good strategy is to propose classroom activities in which writing has a role, such as a scientific activity that must be concluded with a report, or the text of a play to be performed in the classroom or with other classes. A good strategy is to also invite students themselves to formulate the writing tasks related to classroom activities or to events outside the classroom that students know about. Writing tasks cannot always be novel or interesting, or aimed at successfully achieving tangible results. However, exercise is an important component of a laboratory, and students can make it relatively easy if they view it as a means, not an end in itself. Becoming a competent writer requires a student's involvement as well as exercise. It is a type of balance between more involving moments, when writing appears novel and interesting, and less involving

ones, when a student organizes his or her learning experiences through writing. We think that while students view writing in the classroom as consisting of meaningful experiences, they may also view less challenging tasks as important and not necessarily boring stages of their becoming writers.

**2. *Promoting opportunities of comparing literacies in and out of school, and clarifying the different characteristics of both.*** From classroom discussions about the different ways of writing it would probably emerge that students do not really “hate” writing. Simply, they are usually concerned with demonstrating to the teacher that they are able to write correctly. A good strategy could be to have students of different schools and from different countries, if possible, communicate through blogs or other computer means about various topics. Later, summarizing the outcomes of this type of communication could be a valid way to “discover” the merits and shortcomings of the different writings. Digital writing is for an audience of peers, and is more authentic but also more superficial, while school writing is for the teacher—that is, a judging audience—and if the student has a good relationship with the teacher, he or she can feel free to express deep thoughts.

**3. *Facilitating the management of writing skills.*** All teachers know that writing requires many complex cognitive and linguistic skills, which students often view as “dangers” disseminated through their writing. In this chapter, a fun “compass” to check and prevent possible errors in written composition was presented. Here we suggest that management of writing can be facilitated not only through exercise but also revision. Revision is an important aspect of writing and reading, and is often neglected at school. In fact, revision is reading aimed at checking the quality of a text, and may be carried out at school. The type of revision we suggest here is different from the one presented when playing with genres. Here we propose revision as an exercise aimed at making students pay attention to the correctness of their writing.

**4. *Checking students' motivation to write.*** Teachers are rarely willing to discuss with students their motivation to learn the subject they teach. On the one hand, they often blame themselves for not being able to engage students, while on the other, as we mentioned at the beginning of the chapter, they often have a simplified view of motivation and blame students for not being engaged. Checking motivation to write implies a reciprocal and sincere attitude on the part of teachers and students. For each school subject—not only writing—there should be a time during class when students analyze their beliefs about schoolwork, the difficulty of disciplines, and evaluate good and bad results. We mentioned this type of classroom discussion when we presented challenging tasks where students write collaboratively with the teacher's help.

**5. *Balancing individual and collaborative writing.*** The examples of good practices in this chapter all regard collaborative writing. We view collaborative writing as an essential element for leading students to appreciate and enjoy writing as a process and product. However, collaborative and individual writing should be viewed and adopted in a complementary way. Opportunities for collaborative writing may be those where ideas are generated, written texts are compared and revised, and a common product is achieved and evaluated. Individual writing, on the other hand, is the moment when students express thoughts and voice, being aware that a collaborative experience of reading and writing converge in their writing, and that what one writes individually may be the source of other collaborative experiences with classmates.

**6. *Evaluating students' writing.*** The evaluation of student writing is also related to the individual–collaborative dimension of writing in the classroom. We do not ignore that poor evaluation may be unavoidable in a class and may lower students' self-efficacy beliefs and undermine their will to write. A writing portfolio, through which students may become aware of their advancement in writing, is now a self-evaluation method adopted in schools.

It documents the development of writing competence, as well as motivation to write, through students' narration and description of their involvement, and their satisfaction—and also frustration—with the various writing experiences (Lam, 2016). We think that by learning to view writing as a meaningful activity, students should also be helped to recognize and tackle its complexity. Being motivated to write also means being able to manage the challenges and difficulties of writing, and giving students the necessary tools to face the challenge requires the teacher to carefully analyze task difficulty and also students' levels of ability and self-perceptions of competence.

## **CONCLUDING REMARKS**

This chapter was based on two main assumptions. The first was that motivation to write is not a “will,” but an attitude toward writing that students construe through their school experiences, starting from early schooling. This attitude includes the value students give to writing, and the perception of themselves as competent in writing. Attitude is permeated by beliefs about writing and learning to write that students receive from their family and school contexts. The second assumption was that fostering motivation to write requires interventions by the teacher on many fronts. These include aiming to make students write more willingly, and also leading them to view writing not simply as a school subject, but as a flexible tool that allows them to express and communicate feelings, thoughts, and facilitates the acquisition of knowledge and its diffusion, as well as the creation of new knowledge and meanings.

In defining the motivated student, valuing writing was emphasized as well as the willingness to use writing as a worthwhile means of expression, communication, and elaboration. Obviously, constructing a positive attitude toward writing in a student is not an easy outcome to reach, but a goal to be pursued through different teaching strategies, in particular, by creating multiple and plausible opportunities to write in the classroom. These



opportunities include writing to note new ideas that emerge from classroom discussion and seem worth elaborating later; synthesizing the conclusion of a discussion in which the whole class has participated; expressing a sudden and personal emotion (in the case of a single student); and collecting and organizing the results of work related to the activity students are involved in and activities that are appropriate to the class level. For instance, a “discovery” while reading an unusual phrase may be a fun opportunity to use this phrase in a different manner, as a short and amusing way of learning to use a new expression.

Often at school students are asked to elaborate in writing what they have learned from school lessons and study, and this writing is often blamed for its limited communicative power. In fact, when trying to highlight the multiple functions of writing, the teacher should not forget to show students that writing can be used not only to communicate information, thoughts, emotions, and feelings but also to “keep” them. These occasions to write are more or less plausible and appropriate according to the activity in which they are inserted. It should also be clear that the construction of this attitude or view of writing is neither quick nor easy, and during the long apprenticeship of learning to write, students and their teachers may find several occasions for disappointment. Teachers, in particular, should be aware that the development of beliefs may not be linear, and that students should be supported in their efforts to become competent and motivated writers. The meaningful writing activities that a teacher organizes to stimulate and sustain students’ motivation to write may be isolated moments of classroom life for students, interesting and enjoyable but not sufficient to create an enduring attitude toward writing. It is up to the teacher to create continuity between these moments—for example, by reminding of, and underlining the individual student’s contributions, outlining the value of the results attained, and inviting students to find new and challenging writing tasks.

Making students experience and appreciate at least some uses of writing as a tool should be the goal of writing instruction.

## REFERENCES

- Behizadeh, N. (2014). Adolescent perspectives on authentic writing instruction. *Journal of Language and Literacy Education*, 10(1), 27–44.
- Bernacki, M., Nokes-Malach, T., Richey, E., & Belenky, D. M. (2016). Science diaries: A brief writing intervention to improve motivation to learn science. *Educational Psychology*, 36, 26–46.
- Boscolo, P., & Carotti, L. (2003). Does writing contribute to improving high school students' approach to literature? *L1—Educational Studies in Language and Literature*, 3, 197–224.
- Boscolo, P., & Gelati, C. (2008). Motivating reluctant students to write: Suggestions and caveats. *Insights on Learning Disabilities: From Prevailing Theories to Validated Practices*, 5(2), 61–74.
- Boscolo, P., Gelati, C., & Galvan, N. (2012). Teaching elementary school students to play with meanings and genre. *Reading and Writing Quarterly: Overcoming Learning Difficulties*, 28(1), 29–50.
- Brophy, G. (2008). Developing students' appreciation for what is taught in school. *Educational Psychologist*, 43, 132–141.
- Bruning, R. H., & Kauffman, D. F. (2016). Self-efficacy beliefs and motivation in writing development. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (2nd ed., pp. 160–173). New York: Guilford Press.
- Carr, P. B., & Walton, G. M. (2014). Cues of working together fuel intrinsic motivation. *Journal of Experimental Social Psychology*, 53, 169–184.
- Cisotto, L., & Gruppo RDL. (2015). *Scrivere testi in 9 mosse [Writing texts in 9 steps]*. Trento, Italy: Erickson.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.
- Del Longo, S., & Cisotto, L. (2014). Writing to argue: Writing as a tool for oral and written argumentation. In P. D. Klein, P. Boscolo, L. C. Kirkpatrick, & C. Gelati (Eds.), *Writing as a learning activity* (pp. 15–43). Leiden, the Netherlands: Brill.
- Ganapathy, M., & Seetharam, S. (2016). The effects of using multimodal approaches in meaning-making of 21st century literacy texts among ESL students in a private school in Malaysia. *Advances in Language and Literary Studies*, 7(2), 143–155.
- Gelati, C. (2012). Female superiority and gender similarity effects and interest factors in writing. In V. W. Berninger (Ed.), *Past, present, and future contributions of cognitive writing research to cognitive psychology* (pp. 153–174). New York: Psychology Press.
- Graham, S., Gillespie, A., & McKeown, D. (2013). Writing: Importance, development, and instruction. *Reading and Writing*, 26(1), 1–15.
- Greguol, S. (2013). *La motivazione a scrivere: Il fattore sfida [Motivation to write: The challenge factor]*. Master's dissertation, Department of Philosophy, Sociology, Education, and Applied Psychology, University of Padova, Italy.
- Harris, K. R., Graham, S., MacArthur, C. A., Reid, R., & Mason, L. H. (2011). Self-regulated learning processes and children's writing. In B. J. Zimmerman & D. H. Schunk (Eds.), *Handbook of self-regulation of learning and performance* (pp. 187–202). New York: Routledge.
- Harris, K. R., Graham, S., & Mason, L. H. (2006). Improving the writing, knowledge, and motivation of struggling young writers: Effects of self-regulated strategy development with and without peer support. *American Educational Research Journal*, 43, 295–340.

- Hayes, J. R., & Flower, L. S. (1980). Identifying the organization of writing processes. In L. W. Gregg & E. R. Steinberg (Eds.), *Cognitive processes in writing* (pp. 3–30). Hillsdale, NJ: Erlbaum.
- Hidi, S., & Boscolo, P. (Eds.). (2007). *Writing and motivation*. Oxford, UK: Elsevier.
- Kaplan, A., & Patrick, H. (2016). Learning environments and motivation. In K. R. Wentzel & D. B. Miele (Eds.), *Handbook of motivation at school* (2nd ed., pp. 251–274). New York: Routledge.
- Kress, G. (2010). *Multimodality: A social semiotic approach to contemporary communication*. New York: Routledge.
- Lam, R. (2016). Assessment as learning: Examining a cycle of teaching, learning, and assessment of writing in the portfolio-based classroom. *Studies in Higher Education*, 41(11), 1900–1917.
- MacArthur, C. A. (2014). Strategy instruction in academic disciplines. In P. D. Klein, P. Boscolo, L. C. Kirkpatrick, & C. Gelati (Eds.), *Writing as a learning activity* (pp. 149–168). Leiden, the Netherlands: Brill.
- MacArthur, C. A., Philippakos, Z. A., & Graham, S. (2016). Multicomponent measure of writing motivation with basic college writers. *Learning Disability Quarterly*, 39, 31–43.
- Miller, S. D. (2003). How high- and low-challenge tasks affect motivation and learning: Implications for struggling learners. *Reading & Writing Quarterly*, 19, 39–57.
- Moè, A. (2016). Does displayed enthusiasm favour recall, intrinsic motivation and time estimation? *Cognition and Emotion*, 30, 1361–1369.
- Nolen, S. (2007). The role of literate communities in the development of children’s interest in writing. In S. Hidi & P. Boscolo (Eds.), *Writing and motivation* (pp. 241–255). Oxford, UK: Elsevier.
- Nolen, S. B., Horn, I. S., & Ward, C. J. (2015). Situating motivation. *Educational Psychologist*, 50, 234–247.
- Renninger, K. A., & Hidi, S. (2016). *The power of interest for motivation and learning*. New York: Routledge.
- Rodesiler, L., & Kelley, B. (2017). Toward a readership of “real” people: A case for authentic writing opportunities. *English Journal*, 106(6), 22–28.
- Sanford, K., Rogers, T., & Kendrick, M. (Eds.). (2014). *Everyday youth literacies*. New York: Springer.
- Wigfield, A., & Eccles, J. S. (2000). Expectancy–value theory of motivation. *Contemporary Educational Psychology*, 25, 68–81.
- Wigfield, A., Tonks, S. M., & Klauda, S. L. (2016). Expectancy–value theory. In K. R. Wentzel & D. B. Miele (Eds.), *Handbook of motivation at school* (pp. 55–74). New York: Routledge.
- Zimmerman, B. J., & Schunk, D. H. (2011). Self-regulated learning and performance: An introduction and an overview. In B. J. Zimmerman & D. H. Schunk (Eds.), *Handbook of self-regulation of learning and performance* (pp. 1–12). New York: Routledge.

## *Part III*

# WRITING FOR DIFFERENT PURPOSES

# ***Chapter 4***

## **Narrative Writing**

Carol Booth Olson  
Lauren Godfrey

### **WHAT ARE NARRATIVES, AND WHY PRIORITIZE THEM IN YOUR CLASSROOM?**

Narratives represent shared understandings of human experience. They are a culture’s “coin and currency” (Bruner, 2003, p. 15) and use such techniques as dialogue and interior monologue, rich sensory detail, and well-structured event sequences that highlight and dramatize significant events (Common Core State Standards [CCSS], Appendix C; National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010) to make stories—both fiction and nonfiction—come alive for readers. Thus, narratives are essential not only for communicating the actual realities of human existence, but also for imagining human possibilities. They provide “various angles of vision to examine thoughts, beliefs, and actions” (Langer, 1995, p. 5) and, as such, act as avenues for self-reflection and individual growth. Affectively, engaging with narrative texts builds students’ capacity for compassion, develops their social skills, and enhances perspective taking. In fact, cognitive psychologist Keith Oatley (2011) points out that the “process of entering imagined worlds of fiction,” while it might seem like a solitary act, is

actually “an exercise in human interaction” that can strengthen one’s “social brain” (p. 1). Thus, perhaps most importantly, narratives humanize; they promote empathy and insight into the lives of those whose backgrounds and experiences may be vastly different from our own and, at the same time, they encourage self-discovery and the realization of the individual potential residing within each of us.

These altruistic benefits, alone, demonstrate why narrative writing should be prioritized in the classroom; however, another key reason for teaching narrative writing is that it benefits students cognitively. When students write rich narrative texts, they develop a unique kind of knowledge Langer (2011) terms *horizons of possibility thinking*, where the goal is to discover, imagine, gain perspective, ponder, and develop deep understanding. Langer contrasts this with the kind of “point-of-reference” thinking that is generated when one writes an expository text and the aim is to come away with specific knowledge about a topic. While both types of knowledge are necessary and useful, the more literary “horizons of possibility thinking” is “an important cognitive piece in the development of deeper thinkers” (Gallagher, 2015, p. 102). Other cognitive benefits of narrative writing include that it fosters the development of vocabulary, morphology, sentence structure, and cohesive devices such as complex noun phrases, descriptive clauses, phrases and words, and verb tenses (Labov & Waletzky, 1967). Narrative writing is also essential to students’ progress in developing other types of writing (Fredricksen, Wilhelm, & Smith, 2012). For example, the purpose of narratives is not simply to engage and entertain; they can also be used to inform, instruct, persuade, or present a call to action, often simultaneously. Narrative writing also helps students to develop voice, audience awareness, organizational skills, and the ability to select and use specific concrete details, all of which are essential to reading and writing informative and argumentative texts.

Another reason for prioritizing narrative writing is that it builds upon students’ existing knowledge of genres and text structures, previous experience, and linguistic resources. All students have ideas for stories that they have gained through their own life experiences and they are able to

utilize their prior knowledge to understand and develop narratives. As a number of researchers have pointed out, most students in the United States are already familiar with narratives when they arrive in kindergarten and are able to link real events to stories they have heard (Heath, 1986). By the time they reach adolescence, students have gained a variety of narrative skills from reading, from writing, and from oral discussions and storytelling both in school and in everyday communicative environments (Snow & Beals, 2006).

Finally, narrative writing plays a pivotal role in motivating students and building their confidence. As Ziergiebel (2013) points out, “Whether stories are read or written in school or out of school, students become engaged and motivated by just a turn of a phrase, a voice, an image, or a character, conflict, setting, or theme” (p. 140). Teenagers, especially, use narratives to explore their own identities, the way they see themselves. Consequently, they are highly motivated to read young adult literature and to write stories about their own lives.

In sum, despite the CCSS’s and other state standards’ tendency to minimize the importance of narrative writing as students progress up the grade levels, we believe the teaching of narrative writing is central to the development of writing ability.

## **THE LANGUAGE DEMANDS OF NARRATIVE TEXTS**

Narrative texts tend to have the following structural features or story elements:

- Exposition—the portion of the story that introduces the setting, character or characters, and important background information such as events occurring before the main plot.
- Inciting incident—an event that signals the beginning of the conflict.
- Rising action—includes a series of events that build toward a point of greatest interest.

- Climax or turning point—the moment of greatest tension.
- Falling action—contains events that result from the climax.
- Resolution—the character solves the main problem/conflict or it is resolved for him or her.
- Denouement or conclusion—any remaining secrets, questions, or mysteries are solved by the character or explained by the author and the theme may be revealed or implied.

Preparation for writing narrative texts and familiarity with narrative text structure begins at home. Studies show that the frequency of parent–child shared book reading and the quality of those reading episodes are related to children’s literacy achievement (Yaden, Rowe, & MacGillivray, 2000). Students who have more exposure to narrative texts at home tend to arrive at school with an internalized story grammar or set of expectations readers and writers have for story structures. Many students who do not have a strong sense of story grammar struggle as writers (Asaro-Saddler, 2016). Hence, explicit instruction in story elements can improve the quality of children’s written narratives (Fitzgerald & Teasley, 1986). With age and ongoing experience writing narratives, students’ repertoires of organizational patterns will increase and they will be able to demonstrate greater cohesion and coherence (Langer, 1986; Spiegel & Fitzgerald, 1990).

In addition to the challenge narrative text structure can pose for writers who have not internalized story grammar, it is difficult to fully understand or create narratives without adequate word knowledge. In other words, grasping or expressing the nuances of emotions, desires, and reactions requires a considerable vocabulary. Children whose emotional range is restricted to words and concepts like *happy*, *sad*, *mad*, and *glad* will need instruction to help them comprehend and express more complex emotions like *surprise*, *guilt*, or *jealousy* or to explore point of view by delving into characters’ cognitive states (what they believe, know, or are thinking about). Interior monologue, for example, can require a degree of maturity of writers in order to create a character’s inner speech. The conventions of dialogue and the



sometimes unconventional forms of dialect present yet other hurdles for students who are still developing their skill sets.

Rich narrative texts also follow the principle of showing, not telling. For younger readers and writers, mastering the art of showing, not telling entails learning to understand and produce a variety of complex sentence structures, especially those with participles, prepositional phrases, and gerunds; switching between verb tenses; establishing cohesion (e.g., through transition words and other more subtle linguistic features like sentence complexity and pronouns); incorporating noun modifiers (especially phrases and clauses) to convey precise details; maintaining pronoun consistency; and using vivid and specific vocabulary, and fixed expressions (including phrases like *all of a sudden*, *to jump to a conclusion*, *as a result of*, *in the final analysis*, etc.; Olson, Scarcella, & Matuchniak, 2015).

According to Gurney, Gersten, Dimino, and Carnine (1990), even at the high school level, theme is the most difficult of the story elements for students to grasp, and it requires more extensive teacher modeling and direct explanation than the other components. To identify a theme, the student must be able to read between the lines and to make inferences, form interpretations, reflect and relate, and evaluate—all higher-order cognitive strategies. Students who cannot access these deeper comprehension strategies by third grade will fall further and further behind their peers (Block & Pressley, 2002). Composing a narrative that conveys a theme through showing and not telling not only requires critical thinking but sophisticated writing skills.

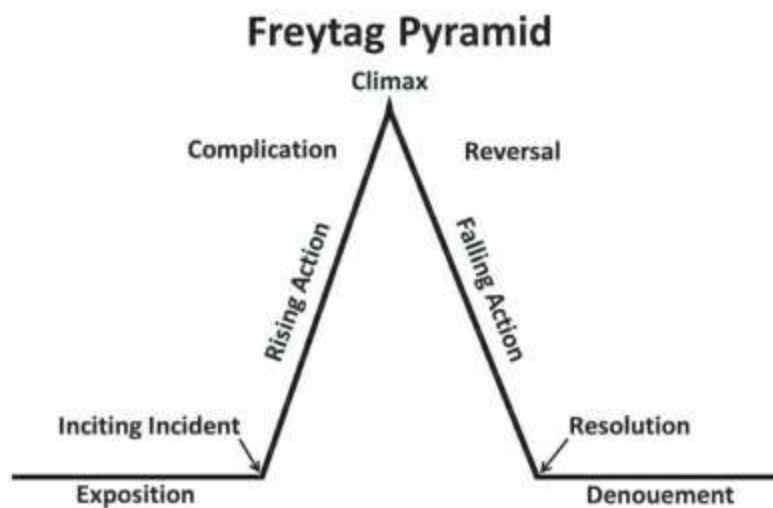
## **HELPING STUDENTS MEET LANGUAGE DEMANDS: LESSONS THAT TEACH THE ELEMENTS OF NARRATIVE**

Students need explicit instruction in the elements of narrative texts in order to help them meet the language demands and improve the quality of their

narrative writing (Harris, Graham, & Mason, 2006). Outlined below are five mini-lessons designed to help students master the following elements of narrative writing: (1) plot structure; (2) point of view; (3) dialogue; (4) showing, not telling; and (5) theme.

## Plot Structure

One way to introduce plot structure is with the frequently used plot diagram, the Freytag pyramid, shown in [Figure 4.1](#). To appeal to younger students, teachers can redraw this diagram as a story mountain with various peaks and valleys representing the plot points.



**FIGURE 4.1.** Freytag pyramid.

Before asking students to create their own narratives, it may be helpful to first scaffold the process by guiding students in analyzing the plot structure of a model text they are already reading. For example, teachers may want to engage students in creating a book wheel, a visual aid that students can use to reconstruct the sequence of events in a narrative and to identify the plot's structural elements (the exposition, inciting incident, rising action, climax, falling action, resolution, and denouement). To create a book wheel, students

must review the story's plot, determining what key events represent the plot's structural elements and what visual might depict or symbolize each event. Then, students use a pattern to cut out two circles from pieces of hard card stock or construction paper. The bottom circle should be divided into sections like a pie, with each of these sections representing one of the plot's structural elements with a brief summary, pictures, and key quotes. Once the bottom of the book wheel is completed, the student should cut a pie-shaped section out of the top circle to create a window through which one can see the lower circle. Both circles are then connected with a brad fastener, as in the teacher model for *Seabiscuit* by Lauren Hillenbrand (2001) in [Figure 4.2](#). Once completed, students can use their book wheels to present a book talk for their classmates and review the structural elements of plot.



**FIGURE 4.2.** Seabiscuit book wheel. Source: Carol Booth Olson. Reprinted with permission.

Once students are comfortable with identifying the structural elements of plot in the literature being read in class, they are more likely to be successful

in writing a fictional story of their own choosing. One stimulus for such a story is *The Mysteries of Harris Burdick* by Chris Van Allsburg (1984). The book consists of a series of provocative pictures, a title, and a single sentence caption. For example, one of the pictures, titled “Under the Rug,” depicts a frightened-looking man holding a chair above his head, about to strike a suspicious, moving lump rising up from beneath his carpet. Beneath the picture is the caption “Two weeks passed and it happened again.” *The Mysteries of Harris Burdick* can be purchased in a portfolio edition where each of the drawings is reproduced in separate poster-sized sheets. Teachers can post these around the room and students can participate in a gallery walk in which they rotate from poster to poster, taking notes and deciding which posters pique their interest. Working in groups, pairs, or independently, students can then create a Freytag pyramid to brainstorm the plot points for their stories.

In her eighth-grade classroom, Brianna Breault’s students actually sketched the *Harris Burdick* drawing they selected before writing about it. The work of twin students Alison and Evelyn is depicted in [Figure 4.3](#), including their drawing of “Just Desert” along with the caption “She lowered the knife and it grew even brighter,” as well as an excerpt from their exposition, the opening scene.



*She has eyes the color of amber on a cold day, eyes filled with nothing but a desire, a desire to go home. Her eyes are the blankness of a tall stone cliff worn away by a raging gray sea. Her triangular pupils could suck out a person's happiness if they looked directly at them, but no one ever does . . .*

*With hands so thin her skin is stretched over her bones, she draws the curtain shut, depriving the house of any further light and sound. A small noise like needles grating makes her start, but she relaxes when she realizes it's only the cat standing terrified on the table, next to a pumpkin made of ancient stone.*

**FIGURE 4.3.** *The Mysteries of Harris Burdick* drawing and exposition scene. Source: Alison and Evelyn Cao. Reprinted with permission.

## Point of View

Exploring different points of view is at the heart of how narrative writing can promote empathy and understanding in the classroom. Teaching point of

view through an existing piece of literature being read in class lays the foundation for students to later write from their own unique points of view; it emphasizes to students that a writer's point of view can impact not only *what* is written (what the speaker says, thinks, or decides to reveal to the reader) but also *how* it is written (how the writer creates the speaker's persona through author's craft). Moreover, writing from the different points of view of characters that do not already have a prominent voice in a text can be a fun classroom activity to inspire students' narrative writing and enable them to adopt an alignment with a character (Tierney & Pearson, 1983).

In his ninth-grade classroom, Jorge Zatarain used Sandra Cisneros's (1984) *The House on Mango Street* as the basis for a powerful lesson in which he asked students to explore the point of view of Esperanza, the novella's young protagonist, and the potential points of view of the more minor characters that Esperanza describes, but whose voices aren't necessarily featured. To begin the lesson, Jorge read aloud the vignette "Minerva Writes Poems," in which Esperanza portrays the character of Minerva, a young mother and victim of domestic abuse. Esperanza describes how Minerva repeatedly forgives her husband for his wrongs, allowing him back into their home with their young children, and how Minerva's only source of hope seems to be the poems she writes on "little pieces of paper that smell like a dime" (p. 84). The vignette ends with the following passage:

One day she is through and lets him know enough is enough. Out the door he goes. Clothes, records, shoes. Out the window and the door locked. But that night he comes back and sends a big rock through the window. Then he is sorry and she opens the door again. Same story.

Next week she comes over black and blue and asks what can she do? Minerva. I don't know which way she'll go. There is nothing *I* can do. (p. 85)






After reading the vignette aloud, Jorge asked his students to read the vignette again silently on their own, and then to share with a partner the different conflicts Minerva is facing and how Esperanza perceives the character of Minerva. As pairs of students shared their responses with the class, they were able to identify that Minerva faces two conflicts: the external conflict of her abusive husband, and the internal conflict of whether she

should seek help or continue to allow her husband back into the house with her and her children. Moreover, students recognized that Esperanza's unique point of view as a young Latina girl impacted both what is said ("There is nothing *I* can do," says Esperanza, implying Minerva needs to help herself) and how it is said (short, simple, fragmented prose).

After discussing Esperanza's point of view, Jorge asked students to again work in pairs, thinking about the unique points of view of two other characters featured, but not explicitly heard in the vignette: Minerva and Minerva's children. To support students in adopting an alignment with these characters, Jorge provided students with the graphic organizer shown in [Figure 4.4](#) to help them organize their ideas and posed the following questions:

- Actions: "What is the character doing?"
- Conflicts: "What problem does the character face?"
- Emotions: "How does the character feel?"
- Thoughts/dialogue: "What does the character think? What does the character say?"
- Fears: "What does the character fear?"
- Dreams: "What does the character hope?"

Character:

 Actions	 Conflicts (Internal/External)
 Emotions	 Thoughts/Dialogue
 Greatest Fear	 Dreams/Aspirations

1. How will the character respond to the situation he/she is in?
2. If you could ask the character anything about his/her situation, what would you ask?

**FIGURE 4.4.** Point-of-view character analysis graphic organizer. Source: Jorge Zatarain. Reprinted with permission.

Once students completed the graphic organizer and had brainstormed ideas, they then did quick writes, writing short vignettes that expressed the points of view of Minerva and her children.

Writing these vignettes enabled Jorge's students to become engaged authors, wrestling with complex dilemmas through thoughtful narrative writing. In fact, this lesson was so successful that Jorge created a summative narrative writing assignment in which students were asked to write vignettes



giving voice to additional minor characters in the novella, such as Geraldo (an undocumented immigrant who is the victim of a hit-and-run accident), Alicia (a young girl who works hard to balance family responsibilities with her own desire to go to college), and Mamacita (a mother who misses her home country and cries when her baby boy sings the Pepsi commercial on TV). Jorge found that not only did his lesson push students to explore point of view and develop empathy and compassion for the experiences of others, but another unintended consequence of this lesson was that students were eager to rewrite the course of the different characters' lives. For instance, students wrote vignettes in which Minerva finally shut the door on her husband for good, or in which Minerva's children decided they needed to seek help from a trusted teacher or adult. In other words, through exploring the points of view of the different characters, Jorge's narrative writing lesson also achieved the equally worthy goal of allowing students to explore possible selves and how they could be empowered, despite challenges they might encounter in life. Students were writing narratives that conveyed they had achieved a deeper purpose for reading and were engaging in what Kenneth Burke describes as "imaginative rehearsals for the real world" (Gallagher, 2009, p. 66).

## Dialogue

The best way to teach students how to write dialogue is to provide a page from a narrative text containing dialogue that is appropriate for the students' grade level and to use this as a model text. For example, the teacher could present the following dialogue from "Eleven" by Sandra Cisneros (1991):

"Whose is this?" Mrs. Price says, and she holds the red sweater up in the air for all the class to see.

"Whose? It's been sitting in the coat rack for a month."

"Not mine," says everybody. "Not me."

"It has to belong to somebody," Mrs. Price keeps saying, but nobody can remember.

As students read the above excerpt, the teacher can ask students to work

in pairs to make a list of what they observe, asking them what they notice about how dialogue appears on the page, how it is punctuated, and how the author signals who is speaking. After students have generated their lists, the teacher can call on pairs of students to share their responses and then use these student-generated responses to create a class anchor chart listing rules for dialogue, such as those described below.

### ***Rules for Dialogue***

- Indent a new paragraph for each speaker.
- Use quotation marks around speech.
- Inside the quotation marks, characters usually speak in the present tense.
- Commas and periods go inside quotation marks. Semicolons and colons go outside.
- Question marks go inside if the speaker is asking the question.
- Dialogue may be introduced with narration or completed with narration. The narration often identifies the speaker or adds descriptive detail. Example: “Whose is this?” Mrs. Price says, and she holds the red sweater up in the air for the class to see.
- In general, use a comma to set off narrative that either introduces or follows the dialogue.

Once an anchor chart of rules for writing dialogue has been created, the teacher can give students another passage from the text that is not in dialogue form. Students can then practice the rules for writing dialogue by applying the rules from their anchor chart to correctly indent and punctuate the passage, as in the example below:

That’s not, I don’t, you’re not . . . Not mine I finally say in a little voice that was maybe mine when I was four. Of course it’s yours Mrs. Price says I remember you wearing it once.

In his book *Write What Matters*, Tom Romano (2015) also provides a model text for examining how to write dialogue in his description of the

verbal jousting he happened to overhear between a 10-year-old girl and her mother who were waiting in line at Dunkin' Donuts. As the line inched along, the daughter, becoming restless, began to sigh. Romano captures their battle of wills as follows:

“Don't be impatient. The line's moving fast.”

“It's not moving at all,” said the girl. “I don't even *want* a doughnut.”

“It's too late now. Look how many people are behind us.”

The girl rose up on her tiptoes and looked past her mother, over my shoulder. I stepped to the side.

“We could go to Starbucks,” said the girl.

“You can't get breakfast at Starbucks.”

“What?” The girl's eyes widened. “You can't?”

“Not really. It's for coffee.”

The girl pulled off one red mitten. Her forefinger shot straight up, and she began counting: “One, we could get a scone. Two, chocolate marble pound cake. Three, a banana nut muffin. Four, a croissant—”

“That's not breakfast,” Mom said, fluttering her eyelids.

The girl pounced. “But a doughnut is?”

“I just want coffee,” said Mom. “We're already in line.”

“And I want a Starbucks hot chocolate.”

Mom rolled her eyes, checked her watch again. “All right, but it'll take longer. I don't want to hear any complaints.” (p. 60)






Students will notice that in Tom Romano's overheard dialogue, he doesn't always identify the speaker when it is clear who is speaking. Further, he uses the verb *pounced* on one occasion instead of *said*. Students can be asked to become polite eavesdroppers themselves and to write remembered dialogue. Also, one way to get students to expand their vocabulary for attribution is to create a tombstone that says “Said Is Dead,” similar to that found in [Figure 4.5](#), and to make a list of words “Said” is survived by. This might include *asserted*, *chirped*, *exclaimed*, *fumed*, *mumbled*, *replied*, *retorted*, *shrieked*, *wailed*, and so on.



**FIGURE 4.5.** “Said Is Dead” tombstone. Source: Olson, Scarcella, and Matuchniak (2015). Reprinted with permission of Teachers College Press.

## Showing, Not Telling

Sensory/descriptive writing is based on concrete details. Writers gather information through all five senses and use those details to present a word picture of a person, place, object, or event. The goal is to choose precise words to enable the reader to visualize what is being described. One way to begin developing sensory descriptive language is to create a vocabulary of the senses word wall in the classroom, as shown in [Figure 4.6](#).

 See	 Hear	 Smell	 Taste	 Touch
--------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------

Darkened	Bawl	Fragrant	Appetizing	Cuddly
Gloomy	Groan	Fresh	Spicy	Greasy
Dingy	Mumble	Pungent	Stale	Scratchy
Attractive	Screech	Stuffy	Yummy	Slimy

**FIGURE 4.6.** Vocabulary of the senses word wall. Source: Olson, Scarcella, and Matuchniak (2015). Reprinted with permission of Teachers College Press.

The teacher might begin with a sensory experience, such as popping popcorn, where students can see the hard kernels transformed into fluffy white puffs, hear the sizzling of the oil and the tiny explosions of kernels popping, smell the aroma of melted butter, and feel the crunchiness of each morsel as they happily munch on the delicious snack. As the students read narratives in class, they can add “juicy” descriptive words to the word wall. When they compose narratives, they can select vocabulary words from the different sense categories to make their writing more precise. Beginning writers tend to rely most heavily on the sense of sight, so the teacher should encourage them to include the other senses in their writing as well.

Once students are familiar with sensory descriptive language, the teacher can introduce the concept of showing, not telling. The teacher might begin by saying the following: “When writers show and don’t just tell in their writing,

they use rich, descriptive language to dramatize what is happening and provide concrete details that paint pictures in readers' minds.”

Here are two examples, one of telling writing and one of showing writing:

#### CONTEXT

In Gary Soto's (1990) story "Seventh Grade," Victor enrolls in French class because he wants to impress Teresa, the girl he has a crush on. When Mr. Bueller, the teacher, asks if anyone in class knows how to speak French, Victor raises his hand, even though he doesn't really know how to speak the language. So, Mr. Bueller says something to Victor in French. Now, Victor is really in a tight spot.

Gary Soto could have just told us how Victor felt. He might have written a few telling sentences like this:

#### TELLING

Victor was really embarrassed. He knew he was going to look stupid. But he was stuck. So, he uttered a few pretend words in French.

Here's the showing description that Soto actually wrote:

#### SHOWING

"Great rose bushes of red bloomed on Victor's cheeks. A river of nervous sweat ran down his palms. He felt awful. Teresa sat a few desks away, no doubt thinking he was a fool. Without looking at Mr. Bueller, Victor mumbled, 'Frenchie oh wewe gee in September.' "

This shows us that Victor was embarrassed without directly telling us. It is much easier to picture in our minds how he looked and felt when Mr. Bueller put him on the spot.

After providing this example, the teacher might ask students what words or expressions they could use to dramatize the word *nervous* in the sentence "The student was nervous before the test." They might say *hands shaking*, *twisting a lock of hair*, *biting bottom lip*, *feeling butterflies in the stomach*, *swallowing hard*, and so on. Writing in front of the class, the teacher could compose a sentence showing "The student was nervous before the test." For example:

Chewing on the end of his pencil, staring down at his test booklet, the student felt butterflies begin to take flight in his stomach, and he swallowed hard.

For writing warm-ups, the teacher could put a telling sentence up on the board for the students to work on, reminding them not to use the *telling* word in the sentence. For example:

The teenager was bored.

The birthday party was fun.

She was very happy when the boy gave her a Valentine.

The students could also consult the showing, not telling your emotions chart in [Figure 4.7](#) as they create a paragraph showing the telling sentences.

<p><u>Afraid</u> Hands shaking Knees like rubber Covering mouth with hand Breathing fast Biting nails Whimpering</p>	<p><u>Nervous</u> Hands shaking Biting bottom lip Butterflies in stomach Stuttering Swallowing hard Pacing</p>	<p><u>Shy</u> Blushing Looking down Speaking softly Arms crossed Standing back from the group</p>	<p><u>Angry</u> Red in the face Hands on hips Glaring Hands in fists Jaw clenched Veins popping</p>
<p><u>Bored</u> Yawning Rolling eyes Fidgeting Nodding off Doodling</p>	<p><u>Happy</u> Grin a mile wide Eyes open wide Clasping hands together Jumping up and down A warm feeling inside</p>	<p><u>Shocked</u> Mouth wide open Eyes popping open Hand covering mouth Gasp Stepping back</p>	<p><u>Embarrassed</u> Blushing Hanging head Holding back tears Rolling eyes Stomach flips Hiding face</p>
<p><u>Sad</u> Tears in eyes Trembling lips Hanging head Shoulders drooped Dragging feet Crying</p>	<p><u>Depressed</u> Vacant look in eyes Curled up in a ball Disheveled (matted hair, food stain on clothes, etc.) Signs of neglect (dead plants, clutter, piled-up newspapers, etc.)</p>	<p><u>Tired</u> Droopy eyes Yawning Stretching Slouching Rubbing eyes</p>	<p><u>Excited</u> Mouth wide open Heart pounding Eyes wide open Hands clasped Jumping Clapping</p>

**FIGURE 4.7.** Showing, not telling your emotions chart. Source: Carol Booth Olson. Reprinted with permission.

As students become more fluent and at ease with showing, not telling, they can form groups and compose telling sentences for other classmates to dramatize. Additionally, they can act these out in front of the class.

## Theme

Narrative writing often conveys a central theme, a deeper message the writer hopes to express through his or her work. Themes may be connected to the author's purpose for writing and they can unify the details of a narrative into a cohesive whole. For instance, when an author makes decisions about how to develop plot, characters, and dialogue, or how to craft sentences that *show, don't tell*, he or she will think about how these elements of the story will support the narrative's theme, or larger message. As mentioned previously, students often have the most difficult time identifying, analyzing, and forming interpretations about theme. This is because themes require that students dig deeper than literal interpretations and tend not to be explicitly stated in texts. Students also often fail to differentiate between topic and theme. As students begin to think about the potential themes in their own narratives, it is helpful to clarify the difference between a topic and theme with the following explanation:

### HOW IS TOPIC DIFFERENT FROM THEME?

A story's theme is different from its topic or subject. The topic is simply what it's about. The theme is the author's point about a topic. However, to identify a theme, sometimes it helps to generate a list of topics or big ideas in a story. Common topics for themes that you'll find in stories are usually abstract nouns that deal with human relationships and include terms like *alienation, belonging, courage, family, friendship, hope, identity, prejudice, respect, revenge, trust*, and so forth. Think of a topic as the *What* of the story and the theme as the *So what?* Therefore, a theme statement must be a complete



sentence (with at least a subject and a verb) that states the author’s message about life or about human relationships. A good theme statement applies to people in general, not just to the specific characters in the story. Here are some examples of theme statements:

Prejudice is a destructive force in our society.

Growing up means taking responsibility for yourself.

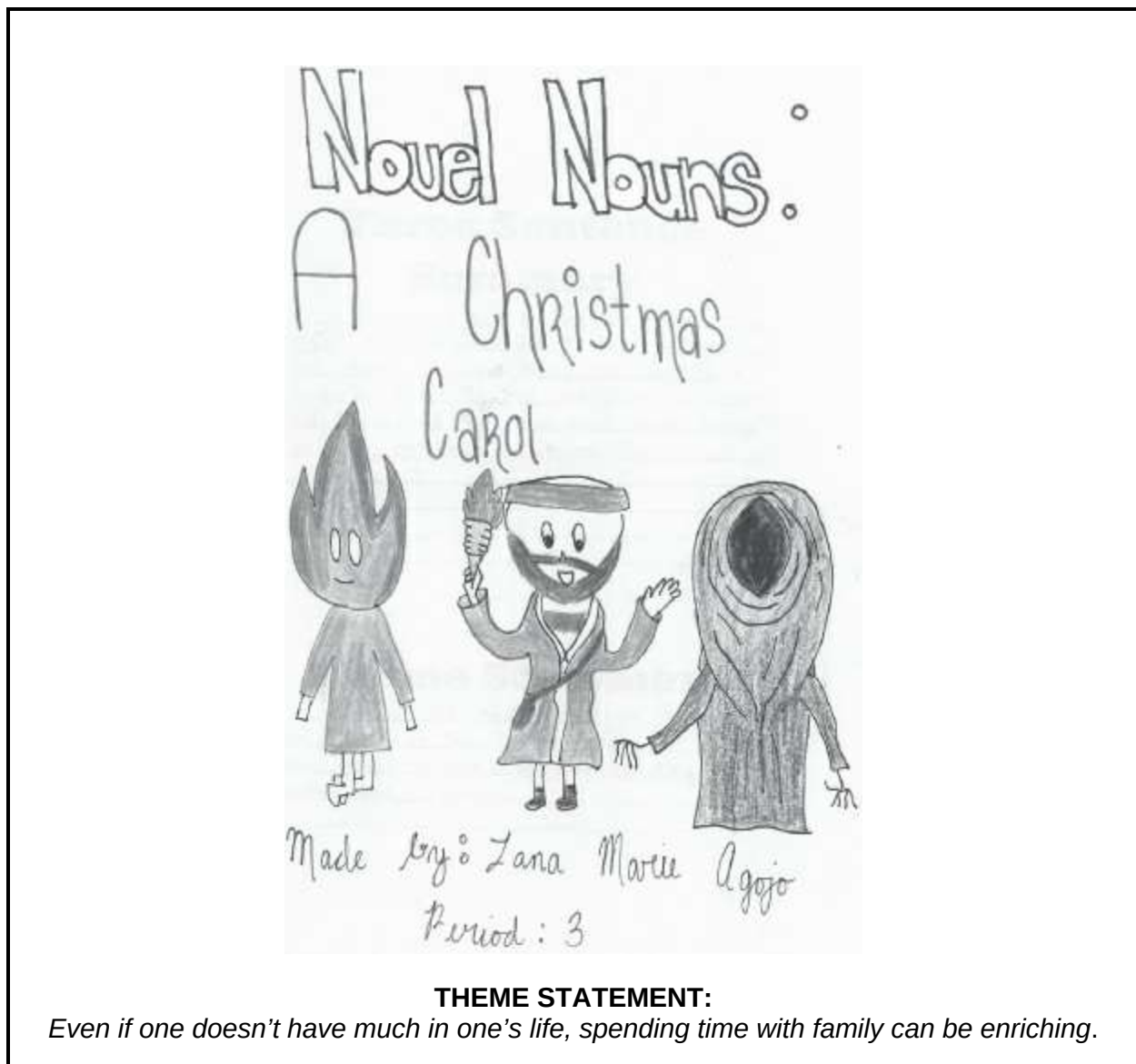
It is important to accept people for what they are on the inside and not the outside.

Considering that theme is typically the most difficult of the elements of narrative writing to teach, we recommend first asking students to identify and analyze themes within the literature being read in class before asking students to craft themes within their own narratives. For example, one way to reinforce for students how a writer can use character, setting, plot, and figurative language to convey a theme is by creating novel nouns booklets. In his seventh-grade classroom, Joey Nargazian was teaching *A Christmas Carol* by Charles Dickens (1843). He asked his students to create a booklet that included the following:

- An illustrated cover page
- Three-sentence summary
- Theme statement
- Person paragraph and illustration
- Place paragraph and illustration
- Thing paragraph and illustration
- Idea paragraph and illustration

Joey’s students began by writing the three-sentence summary and then created a paragraph analyzing the person (character) and place (setting). Next, Joey taught a mini-lesson about symbolism before students chose a symbol such as a heart to represent love, chains to represent the sins of the past, a dollar sign to represent greed, and so on, and wrote about its significance. Students then generated theme statements like “What truly

generates happiness is kindness toward others, not money” and “Greed can blind us to what really matters, and that is family,” and elaborated on their interpretation of theme in their idea paragraph. Students’ novel nouns booklets were not an end in themselves as they become the basis for class discussion. The booklets rotated around the class as students read their classmates’ reflections and wrote down golden lines and big ideas they got from others. [Figure 4.8](#) includes the novel nouns booklet cover of one of Joey’s students, Lana, and her theme statement “Even if one doesn’t have much in one’s life, spending time with family can be enriching.”



**FIGURE 4.8.** Novel nouns booklet. Source: Lana Marie Agojo. Reprinted with permission.

## **BRINGING THE ELEMENTS OF NARRATIVE WRITING TOGETHER**

With a firm grasp of the elements of narrative and a repertoire of writing strategies at their disposal, students are ready to create their own narratives. However, many may struggle with what to write about. Here is one activity to get their creative juices flowing:

### **The “I Remember” Poem**

The “I Remember” poem is based on Larry Fagin’s (1995) book *The List Poem*. Developed by tenth-grade teacher Susan Leming, this strategy for brainstorming topics for personal narratives has been widely used by teachers across grade levels. In the third-grade Young Writers’ Project, teacher Angie Balius asked students to think about memories they have of birthdays, special events like the 4th of July, favorite pets, injuries and scars, firsts (soccer goal, day at school, time you learned to ride a bike, etc.), family trips, and so forth. Students then clustered all of the memories they could think of. Angie modeled how to write an “I remember” sentence:

I remember when I tripped over the bar and fell on the rocks and hurt my knee!

The students hurried back to their desks and eagerly began to write. After 20 minutes, students shared their 10 I remember sentences with a partner who provided feedback on which sentence he or she wanted to know more about. Students then wrote their favorite I remember sentence on a 3” × 5” card to hand in for the creation of a class poem. But first, Angie showed them how to revise their sentence with sensory detail and showing, not telling, to make their sentence more exciting:

I remember on a sweltering hot day at the beach how I stumbled over a bar, fell in

slow motion on the sharp, jagged rocks, and sliced open my knee.

After students engaged in a whip-around to read their I remember sentence aloud, they created a narrative, expanding their sentence into a paragraph or more. They were also encouraged to return to their I remember list throughout the next 3 weeks to mine it for other memories to write about.

## **The Memory Snapshot Paper**

The memory snapshot paper is an open-ended autobiographical incident paper. Developed by Olson (2011), this paper is based on the notion of snapshots (zooming in on a moment to show, not tell) and thought shots (interior monologue) from Lane's (1993) book *After the End*. It involves students in visualizing, analyzing author's craft, and reflecting and relating as they focus on a photograph that is associated with a vivid memory of something that made a lasting impression on them. The memory snapshot paper is designed to move students away from what is often called the bed-to-bed narrative style of narration— . . . *First this happened . . . and then . . . and then . . . and then*—to a more dramatic, more sensory/descriptive rendering that creates a “You are there” feeling in the reader. Students are asked to not only include snapshots and thought shots, but they must also think about how to incorporate these narrative writing moves so that they provide the reader with a glimpse of the big picture and theme—the *So what?* of the overall experience.

Students can be given the following prompt before selecting a photograph to write about:

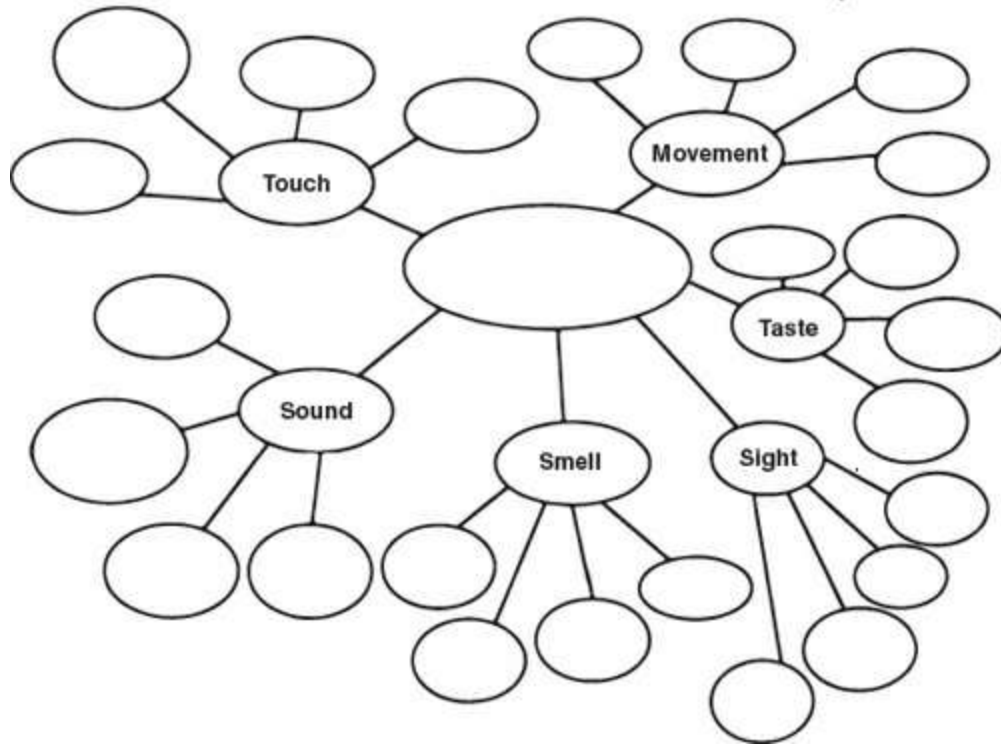
“Select a photograph that you associate with a significant memory. Think about why you chose your snapshot—tangible and/or mental. How and why did the experience it depicts make a lasting impression on you?

“Your task will be to create a written mental snapshot that captures your photograph in words and creates a ‘You are there’ feeling in the

reader. Use the magic camera of your pen to zoom in on your subject and pinpoint rich sensory details (sight, sound, smell, taste, touch, and movement). Remember that you can make your snapshot a ‘moving picture’ by adding action and dialogue. Also, give the reader more panoramic views of thoughts, feelings, and big ideas to create a frame for your specific details.

“You will be writing an autobiographical incident account about your memory snapshot. An autobiographical incident focuses on a specific time period and a particular event that directly involves you. Your goal is not to tell about your event but to show what happened by dramatizing the event.”

Students can use their “I Remember” poem or peruse their smartphones, computers, or photo albums for a photo to write about. As a planning strategy, students can use the sensory clustering graphic organizer in [Figure 4.9](#) and consult the vocabulary of the senses word wall ([Figure 4.6](#)) to generate descriptive words for their snapshots. They can then brainstorm their thoughts and feelings by drawing symbols, including emotion words and writing interior thoughts, using a graphic organizer similar to the one used for the point-of-view character analysis ([Figure 4.4](#)).



**FIGURE 4.9.** Sensory cluster graphic organizer. Source: Carol Booth Olson. Reprinted with permission.

Finally, to celebrate the finished product, students can frame their memory snapshot papers by mounting them on brightly colored construction paper, decorating them with glitter, stickers, tissue paper, and so on, and then hang them around the room, as if they were in an art gallery. Students can then roam around the room with sticky notes and post “kind” comments on several of their peers’ papers. [Figure 4.10](#) includes Eric’s memory snapshot “Death by Tree” paper from Pauline Vuong’s seventh-grade classroom.



### Death by Tree

It was a cold, dark, winter night. And I was dying. Slowly and painfully dying. I was around 7 years old and I had been skiing. I thought that this would be a fun, exciting experience, but I was wrong. SO wrong. Right off the bat, it was bad. There was an insanely long line right in front of us to get our equipment. We stood there for an hour, two hours, maybe three hours, but we finally got our equipment and left.

It was chillingly cold. My face was getting frostbite, and it was horrible. It was my first time skiing, so I had to take a class to learn how to ski. There were three things that I learned during that class. One, you made a “pizza” if you wanted to stop. Two, you made a “French fry” when you wanted to go forward. And three, the class was incredibly boring.

After about an hour of practice, we finally started to do actual skiing. We first did a test run, where we had to make sure that we knew how to “pizza” and “French fry.” I thought that it would be pretty easy. I was wrong. When it was my turn to start going down the hill to test, I tried to “pizza” so that I could stop and pass. But when I did, it didn’t work. I kept on going. Maybe I was going too fast, or maybe I wasn’t doing it correctly, but either way, I was going down way too far. I zoomed past the finish line (not through the finish line) and kept on going. In the distance, I could see trees coming quickly. I tried to stop or fall, but it was like my feet were fixated to the snow. I dodged a tree and sighed. But when I looked forward again, I could see a tree coming straight towards me. I braced myself for the hit. But it never happened.

A man had noticed me and ran to stop me. I ran into him instead of dying of tree. I was saved! I thanked him, and we trudged back up the hill. I was so happy when I got back up, and I took off my equipment and took a good, long break. And from then on, I hated skiing with all my heart.

—Eric, Period 1/2, February 2, 2017

**FIGURE 4.10.** Eric’s memory snapshot paper. Source: Eric Wang. Reprinted with permission.

## **Blending Genres in the Saturation Research Paper**

Developed by UCI Writing Project codirector Catherine D'Aoust, the saturation research paper takes an alternative approach to the traditional research paper. Although students are required to conduct research before writing, the paper enables students to practice blending genres as they create a historical narrative capturing an important incident in the life of a famous person. The goal is to dramatize this incident in a historical fiction paper, written in the first-person voice of that individual, and it encourages students to again explore point of view and adopt an alignment with the person they have researched.

To explain the assignment, provide students with the following prompt:

“Choose a historical figure who you can saturate yourself in through library research (and firsthand sources, if available). Select one significant event in that person’s life, and dramatize it either by becoming the person and speaking through his or her voice or by becoming a witness to the event. Weave together factual information with fictional narrative techniques, and use your best speculative and reflective thinking to bring history to life. Your goal is to create a ‘You are there’ feeling in the reader.”

The most effective saturation research papers will:

- Demonstrate that the writer has genuinely “saturated” him- or herself in the historical figure and highlight an event in that person’s life that is clearly significant.
- Capture the event as if it were happening now, using the present tense, or as a recollection, using the past tense.
- Display insight into and critical thinking about the person and convey judgments and opinions about the person through showing rather than telling.
- Weave accurate, factual information derived from library research



together with sensory/descriptive details about setting, characterization, and plot.

- Reveal the person's thoughts and feelings through such techniques as dialogue; interior monologue; use of showing, not telling description; use of symbolism; and other fictional/cinematic techniques, such as flashback. (*Note.* Middle and high school teachers may want to require a Works Cited page.)

One good way to help students identify a famous historical figure who is of genuine interest to them is to ask students to gather the names of people they can recall from their history classes, from independent reading, from current events, or from conversations with friends, and then cluster the names they come up with. These activities often help students not only to recall names of historical figures but also to get in touch with their own values and preoccupations. It is important to note that, for students, Taylor Swift, for example, may be a more “famous historical person” than Abraham Lincoln. Since choice is an important ingredient in the success of this paper, the teacher may want to allow students a certain amount of leeway.

Once students have selected a person to write about, they will need to conduct printed text and online research in the school library or at home. We have found the following websites particularly useful for students doing online searches: [dogpile.com](http://dogpile.com), [Congress.gov](http://Congress.gov), and [Biography.com](http://Biography.com). Students who are accustomed to writing impersonal expository reports may find historical fiction to be unfamiliar territory. To get into the persona of their character and to strategize about how to get started can be challenging and may involve several preliminary attempts. Having students use the graphic organizer from the point of view lesson (see [Figure 4.4](#)) and then complete a quick write in the character's voice can help students who are struggling to adopt an alignment. It may also be helpful to have students draft and share their opening scene with a partner and to receive feedback prior to writing a complete rough draft.

Students can use the feedback they received from their peer partners to

revise their draft. Additionally, ask them to look for places in their texts where they can insert dialogue or convert telling into showing. Students have a tendency to report what their characters said to one another rather than to let their characters speak directly for themselves. [Figure 4.11](#) contains an excerpt of a saturation research paper on Anne Frank by Hailey from Joanna Peters’s eighth-grade English language arts class.

**Anne Frank: A Voice Etched in Ink**

“ . . . I keep trying to find a way to become what I’d like to be and what I could be,”<sup>1</sup> I write, while my eyes read over the words of my red plaid diary. I gingerly tuck curly wisps of brown hair behind my ear as I reread my work. I inhale. I exhale. *Finally, my entry is finished.* My weary hand, gripped with tension and sweat, discreetly sets down my ballpoint pen, rolling down my wooden desk. I leaf through the pages of my diary, my voice etched in ink. A plethora of intricate, neat cursive blurs before my eyes as I read the date of today’s entry: August 1, 1944.

Soft yet audible snores croon from narrow rooms of the cramped annex. A hinged wooden bookcase, replete with books of all textures and sizes, masks the entrance. Enveloped in pale yellow wallpaper, is my compartmentalized room, lined with a bright green door, window, and trim. My asymmetrical wooden desk, accompanying my books, a silver lamp, and diary, is positioned beside my floral bed.<sup>2</sup> I stare fondly at my long-lost relatives’ pictures on the yellow wall. I feel something clench deep in my stomach when I look at them; not quite sadness, not quite longing, but a cross between both. I stare; a stare of sorrow and guilt, reminding me that I am still alive, even in a world where nothing is fair and just. I know some things; I am not alone, that I have friends, that I am in love. I know where I came from. I don’t want to die—and that’s something more than I could have said two years ago.

---

<sup>1</sup>“Anne Frank arrested 70 years ago today: Read her last diary extract. . . .” (2014, August 4). Retrieved May 17, 2017, from [www.independent.co.uk/news/people/anne-frank-arrested-70-years-ago-today-read-her-last-diary-extract-9646390.html](http://www.independent.co.uk/news/people/anne-frank-arrested-70-years-ago-today-read-her-last-diary-extract-9646390.html).

<sup>2</sup>“Anne Frank Museum Amsterdam—the official Anne Frank House website.” Retrieved May 17, 2017, from [www.annefrank.org](http://www.annefrank.org).

**FIGURE 4.11.** Excerpt from Hailey’s saturation research paper. Source: Hailey Nguyen. Reprinted with permission.

## TO SUM UP

Narrative writing is a genre used to convey experience, either real or

imagined, and serves many purposes, such as to inform, to instruct, to entertain, and to persuade. It serves as a gateway to learning other types of writing and it helps students to develop audience awareness, organizational skills, and the ability to select and use specific and concrete details. Prioritizing narrative in the classroom also allows students to build their confidence as writers by allowing them to write about meaningful experiences, reflect on these experiences, and bring them into perspective. Although there are many language demands embedded in writing narrative texts, teachers can support students to successfully meet these demands through the explicit instruction of the elements of narrative. Given the many affective and cognitive benefits of engaging in narrative writing, we agree with Gallagher (2015) that writing narrative texts “is not a school skill, it is a life skill, and as such, should be given greater, not less, emphasis” (p. 102).

## REFERENCES

- Asaro-Saddler, K. (2016). Using evidence-based practices to teach writing to children with autism spectrum disorders. *Preventing School Failure, 60*(1), 79–85.
- Block, C. C., & Pressley, M. (Eds.). (2002). *Comprehension instruction: Research-based practices*. New York: Guilford Press.
- Bruner, J. S. (2003). *Making stories: Law, literature, life*. Cambridge, MA: Harvard University Press.
- Cisneros, S. (1984). *The house on Mango Street*. New York: Vintage Books.
- Cisneros, S. (1991). *Woman hollering creek*. New York: Vintage Books.
- Dickens, C. (1843). *A Christmas carol*. London: Chapman and Hall.
- Fagin, L. (1995). *The list poem: A guide to teaching and writing catalogue verse*. New York: Teachers and Writers Collaborative.
- Fitzgerald, J., & Teasley, A. B. (1986). Effects of instruction in narrative structure on children’s writing. *Journal of Educational Psychology, 78*(6), 424–432.
- Fredricksen, J. E., Wilhelm, J. D., & Smith, M. W. (2012). *So, what’s the story?: Teaching narrative to understand ourselves, others, and the world*. Portsmouth, NH: Heinemann.
- Gallagher, K. (2009). *Readicide: How schools are killing reading and what you can do about it*. Portland, ME: Stenhouse.
- Gallagher, K. (2015). *In the best interest of students: Staying true to what works in the ELA classroom*. Portland, ME: Stenhouse.
- Gurney, D., Gersten, R., Dimino, J., & Carnine, D. (1990). Story grammar: Effective literature instruction for high school students with learning disabilities. *Journal of Learning Disabilities, 23*(6), 335–348.

- Harris, K. R., Graham, S., & Mason, L. H. (2006). Improving the writing, knowledge, and motivation of struggling young writers: Effects of self-regulated strategy development with and without peer support. *American Educational Research Journal*, 43(2), 295–337.
- Heath, S. B. (1986). Taking a cross-cultural look at narratives. *Topics in Language Disorders*, 7(1), 84.
- Hillenbrand, L. (2001). *Seabiscuit*. New York: Random House.
- Labov, W., & Waletzky, J. (1967). Narrative analysis: Oral versions of personal experience. In J. Helm (Ed.), *Essays on the verbal and visual arts* (pp. 12–24). Seattle: Washington University Press.
- Lane, B. (1993). *After the end: Teaching and learning creative revision*. Portsmouth, NH: Heinemann.
- Langer, J. A. (1986). *Children reading and writing: Structures and strategies*. Norwood, NJ: Ablex.
- Langer, J. A. (1995). *Envisioning literature: Literary understanding and literature instruction*. New York: Teachers College Press.
- Langer, J. A. (2011). *Envisioning knowledge: Building literacy in the academic disciplines*. New York: Teachers College Press.
- National Governors Association Center for Best Practices & Council of Chief State School Officers. (2010). *Common Core State Standards for English language arts and literacy in history/social studies, science, and technical subjects*. Washington, DC: Authors. Available at [www.corestandards.org/ELA-Literacy](http://www.corestandards.org/ELA-Literacy).
- Oatley, K. (2011). In the minds of others. *Scientific American Mind*, 22(5).
- Olson, C. B. (2011). *The reading/writing connection: Strategies for teaching and learning in the secondary classroom* (3rd ed.). New York: Pearson Education.
- Olson, C. B., Scarcella, R. C., & Matuchiniak, T. (2015). *Helping English learners to write: Meeting Common Core Standards, grades 6–12*. New York: Teachers College Press.
- Romano, T. (2015). *Write what matters: For yourself, for others*. Bristol, UK: Zigzag.
- Snow, C. E., & Beals, D. E. (2006, Spring). Mealtime talk that supports literacy development. *New Directions for Child and Adolescent Development*, 111, 51–66.
- Soto, G. (1990). *Baseball in April and other stories*. New York: Houghton Mifflin Harcourt.
- Spiegel, D. L., & Fitzgerald, J. (1990). Textual cohesion and coherence in children's writing. *Research in the Teaching of English*, 24, 48–66.
- Tierney, R. J., & Pearson, P. D. (1983). Toward a composing model of reading. *Language Arts*, 60(5), 568–580.
- Van Allsburg, C. (1984). *The mysteries of Harris Burdick*. Boston: Houghton Mifflin.
- Yaden, D., Rowe, D., & MacGillivray, L. (2000). Emergent literacy: A matter (polyphony) of perspectives. In M. Kamil, P. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. 3, pp. 425–454). Mahwah, NJ: Erlbaum.
- Ziergiebel, A. M. (2013). Digital literacy in practice: Achieving a cosmopolitan orientation. In J. Ippolito, J. F. Lawrence, & C. Zaller (Eds.), *Adolescent literacy in the era of the Common Core: From research into practice* (pp. 131–142). Cambridge, MA: Harvard Education Press.

## Chapter 5

# Writing from Source Material

Michael Hebert

All written composition can be considered *writing from sources* (Spivey, 1991). Whether indirectly or directly, ideas for writing are drawn from experiences, background knowledge, collaboration, interviews, observations, or other texts. The ways source material can be used is broad, and sources may be used in different ways across different genres. When writing a story, for example, students may draw on their experiences and background knowledge to develop plot points. When writing to persuade, politicians might use the stories and experiences of others to bolster their arguments. When writing historical fiction, authors are likely to use sources to ensure their historical accounts of the time period are accurate. Quite literally, anything written can be considered to be derived from a source, depending on how the word *source* is defined.

While philosophically appealing, such a broad consideration of sources is not necessarily helpful for teachers who turn to this chapter to find instructional practices for their students and classrooms. It forces the discussion to be theoretical and offers few practical advantages. Therefore, it is important to begin this chapter by narrowing the discussion of sources in ways that will make the discussion more tangible and useful for teachers. To this end, I narrow the discussion of writing from source material in three

ways: (1) type of source, (2) how the sources are used, and (3) the genre of the sources and activities.

First, I constrain the discussion of the *type of source* material in this chapter to *text sources*. Hayes (1996) argued that we commonly think of text as a primary source of content for writers, and that reading is a central process in writing. Additionally, Hayes pointed out that much depends on the competence of readers to understand and use those sources—that is, reading text sources before using them in writing requires a set of skills that are arguably more cognitively complex than drawing from experiences or background knowledge. When using text as sources, writers must decode the text, comprehend the text, decide which ideas or words are important for their own writing, synthesize the information with that from other sources or their own ideas, and refrain from plagiarizing. Despite these challenges, using text as a source has an advantage, as it is a permanent product that can be referred back to multiple times. As such, teachers can evaluate students' interpretation and use of the source material in ways that may be more challenging (or even impossible) when students use background knowledge or experiences as sources. Therefore, limiting the discussion of sources to *text sources* provides educational advantages for teaching and assessment.

The second way I constrain the discussion is around *how* writers (and their teachers) might use sources in the classroom. There is a wide range of educational purposes for using informational sources in the classroom. Teachers may have students write about informational text sources to facilitate content learning, improve reading comprehension, develop critical thinking skills, to teach writing skills, or for a combination of these reasons. Objectives of writing lessons may include teaching students to identify and record information, to reorganize ideas, to analyze ideas, to make interpretations, to synthesize ideas, or to inform others. Moreover, one type of writing may be used for a range of purposes, depending on the objectives of the teacher. When teaching note taking, for example, teachers may ask students to take notes to:

- Identify and record specific facts from a text to study for a test.
- Show relationships among ideas by reorganizing notes in a graphic organizer.
- Analyze or interpret ideas from text (such as when writing comments about information from the text using Cornell notes).
- Paraphrase and transform ideas when writing an original text.

The flexibility in the use of sources applies to other types of writing, as well, making it difficult to cover all of the potential uses of sources in this chapter alone. Therefore, I organize the uses of text sources in this chapter into two overarching categories of instructional activities:

1. Teaching students to write about text sources.
2. Teaching students to use text sources as resources to support writing original text.

As the reader may note, there is considerable overlap between these two categories of activities. For example, when writing about text sources, students may be creating something original, such as a summary of the source with their own commentary and inferences. Conversely, when writing original informational text, students may intersperse summaries of some of their sources to provide background. Despite these potential overlaps, however, making a distinction between these types of activities can help teachers consider how to design instruction to meet their instructional objectives.

The third way I constrain the discussion of sources in this chapter is by limiting the genre and activities to use *informational* text sources and writing original *informational* text. Such informational text sources may include content-area texts in science or social studies, historical texts, biographical or nonfiction narrative texts, newspapers, or other sources that are intended to convey factual information to a reader. It is important to note that many of the evidence-based practices described in this chapter can be used with many

types of text sources. However, the use of *informational text sources* for writing may be especially challenging. Informational text usually includes a dense set of facts, content-specific vocabulary, unfamiliar topics, and organizational text structures that are different from more familiar narrative/story texts (Anderson & Nagy, 1991; Snow, 2002). Students are less likely to be familiar with expository text before entering school, and have few opportunities to work with informational text in their early school years (Duke, 2000). Consequently, using text sources for writing is arguably more challenging than using other types of source material, and if students learn strategies for using text as source material for writing, they may also be able to apply those skills to using other types of sources. For these reasons, when discussing writing about text sources, I use informational text examples and resources wherever possible.

Similarly, I frame the discussion of teaching students to write original text around informational text writing. Although source material can be used to support writing original text in just about any genre, this best-practices volume already contains strong chapters on writing narrative and persuasive texts. The chapter on persuasion, in particular, contains an in-depth discussion about using source material to develop persuasive texts (see Ferretti & Lewis, [Chapter 6](#), this volume). Based on this, I avoid overlapping with those genres. Additionally, the previously described considerations about students' lack of experience with informational text, and the unique features of informational text, warrant specific consideration of practices around teaching students to use sources when writing in this genre. Coupled with the use of informational text sources for examples in the section on writing about text, the focus on informational text writing also helps bring a more cohesive theme to this chapter.

With that theme, I also provide a short discussion about the potential benefits of using informational text sources to develop writing skills exercises. Many writing skills are taught in isolation, using general vocabulary and language that might be found in narrative text. However, there may be benefits to using informational text sources and content-specific vocabulary



when developing exercises for building writing skills, not the least of which is simply providing students with more exposure to informational text.

The rest of this chapter is organized into five sections. First, I provide an overview of the general benefits of writing with source material. Second, I discuss *writing about sources*, and provide examples of evidence-based instructional activities, with a focus on informational text examples. Third, I discuss instructional practices and considerations for teaching students to *write original informational* text. Fourth, I discuss the potential benefits of *using informational source text materials to improve basic writing skills*. Finally, I provide an overall summary and conclusions with additional recommendations.

## **GENERAL BENEFITS OF WRITING WITH SOURCE MATERIAL**

A primary reason for having students write with sources is to improve their understanding of the ideas within those sources. Writing has been shown to be an effective tool for improving reading (Graham & Hebert, 2011) and content-area learning (Bangert-Drowns, Hurley, & Wilkinson, 2004). Writing can facilitate learning in four ways (Klein, 1999). First, it fosters explicitness. When students write about text, they must choose which ideas to include. Second, writing results in a permanent product that can be reviewed and changed. When writing about text, the writer may compare his or her written product to the text for accuracy, or add notes about his or her thoughts and questions about specific aspects of the text. Third, writing requires the author to construct relationships among ideas. When taking notes about informational text, for example, students may outline their notes to show a hierarchical relationship among the ideas. Fourth, writing about content forces the writer to generate and revise goals for an absent audience. When writing about text for purposes of studying or learning, the absent audience is often the writers themselves, who must use metacognitive skills to think

about what they know and do not know, and the ways that writing might help them improve their knowledge.

The type of learning that occurs may depend on the writing task (Hebert, Graham, Rigby-Wills, & Ganson, 2014) and the writer's goals. For example, when taking notes on facts, the student's goal may be to remember those facts for a test. On the other hand, when synthesizing information from multiple sources, the writer may have a goal to integrate facts from those sources to provide a more complete overview of the topic for his or her reader. Therefore, when teaching or asking students to write about or with sources, it is important for teachers to consider the desired learning objectives. Regardless of the activity, when writing about text sources, students are required to integrate reading and writing skills to meet specific learning goals (Graham et al., 2017). Despite this integration, teachers may have a primary focus skill in mind for the student(s), with other skills being secondary.

When teachers ask students *to write about informational text*, their primary objective is often to improve student reading outcomes (or to have students demonstrate learning from reading). Because they are asking students to write *about* the text, the students' focus is primarily on the ideas contained within that text, or ideas immediately related to those within the text. The secondary objective may be to improve writing skills, such as improving summary writing or note-taking skills. However, I classify this as secondary, because the improvement of those skills is often aimed at improving students' ability to use those skills to improve reading outcomes.

On the other hand, when teachers instruct students in how to use informational text sources *to write original informational text* (including synthesizing information across sources), the primary objective may be to improve writing outcomes, including helping students understand how to write to inform others or to help them synthesize information across multiple sources. When doing so, the teachers often have secondary goals of helping students learn how informational texts are constructed and organized, or to help them transform knowledge in order to develop a deeper understanding of a topic. However, I classify these as secondary goals, because even when the

history teacher's focus is on teaching students something about the American Revolution through writing about sources, the larger goal is likely to help students learn to write using historical sources more broadly—that is, the primary intent is often to improve writing skills by learning ways in which primary source texts can be used to provide verification, develop background information, offer additional resources, or provide credit to another author. Additionally, students might use source texts as a model for how to organize and construct ideas. In these cases, the informational text source material is deconstructed for organization and tone, and the students use the effective components of the model when writing their own material. In all of these cases, the focus is primarily on improving writing skills.

## **WRITING ABOUT (INFORMATIONAL) TEXT SOURCES**

A meta-analysis by Graham and Hebert (2011) showed that students' reading comprehension improves when they take notes, write summaries, answer questions in writing, generate written questions about text, and analyze and interpret text. Some activities may be designed to help students record and remember information, such as taking notes or writing a summary. Others may be designed to help students transform knowledge, such as writing to analyze or interpret information in the source text. Either may result in simple learning and memory of facts, or it may result in students transforming knowledge as they reorganize facts and connect them in different ways.

It may be that learning is facilitated in all of these ways or only a subset of them, for any individual writing task. Regardless, activities for writing about informational text can be classified into two types: (1) selecting and reframing/reorganizing information from source text, and (2) analyzing or interpreting information from source text. Both require students to think about and interact with ideas from sources in ways that can be compared to the knowledge-transforming model identified by Bereiter and Scardamalia

(1987)—that is, students must interact with the source material in a way that requires them to build a representation of their understanding and thought processes. This may be especially beneficial when using informational text sources, which often include unfamiliar content.

## **Selecting and Reframing/Reorganizing Information from Source Text**

To select and reframe information from source text, a writer needs to read the text and determine which information to record and how much of the information to select and write (single words, full sentences, etc.). This decision depends on the task (e.g., taking written notes, answering explicit questions about the text, writing summaries of the text). When taking written notes, students usually only need to include enough words to represent and remember the ideas, which can sometimes mean writing only single words or short phrases. Note taking can also involve using graphic organizers or other organizational techniques (e.g., outlining) to represent the relationships among ideas. Similarly, answering explicit questions can take the form of writing single words and phrases. However, some questions require students to write longer responses, such as writing their answer “in the form of a complete sentence” or “in paragraph form.” Summarizing is more complex still, as the writer is expected to capture the important information while being economical in the number of words used. These tasks are familiar to teachers and students, but there are some specific considerations to keep in mind when teaching students to complete these tasks with informational text.

### ***Taking Notes***

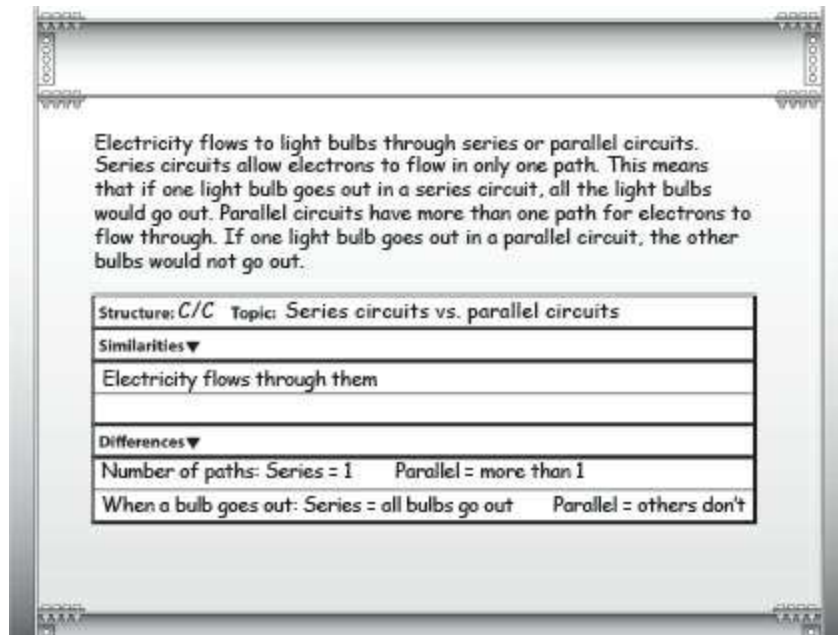
Taking notes allows the writer to make decisions about which information to record, as well as to construct relationships among those ideas. Taking notes about text has been shown to be more effective for improving text

comprehension than reading and rereading text, reading and studying text, or reading text and underlining important information (Graham & Hebert, 2010, 2011). One effective approach for taking notes is to use concept mapping (e.g., Chang, Chen, & Sung, 2002). To use this approach, students must first read the text and decide which ideas are important. Next, they write these ideas within circles in a way that shows the importance of the ideas. For example, they may place an important idea in a center circle with less important ideas surrounding it, or they may place ideas with more importance at the top of the page, with less important ideas below them. Finally, students can link the concepts using lines and words. Students can be taught how to develop concept maps by first filling in concept maps that have been partially completed by an expert (the teacher), and then move toward developing their own concept maps. Essentially, students generate their own graphic organizer to show the relationships among ideas.

There are several alternatives to using graphic organizers for note taking, including taking unstructured notes, outlining, or using note frames (Roehling, Hebert, Nelson, & Bohaty, 2017), to name a few. Having students take unstructured notes involves simply asking students to take notes on the important ideas from the text without providing direction on how to do so (see Graham & Hebert, 2011), while outlining is a relatively ubiquitous strategy involving taking notes based on the macrostructure of the text. Therefore, it is not necessary to describe these strategies in detail.

Use of note frames, on the other hand, is an emerging strategy for informational text that is paired with text structure instruction. Note frames provide an alternative to using a graphic organizer, while still focusing on the relationships among ideas (Bohaty, Hebert, Nelson, & Roehling, 2016). To demonstrate the utility of note frames, it is useful to compare them to one of the most common graphic organizers: the Venn diagram. Although commonly used by teachers, students may have trouble creating and using their own Venn diagrams. They sometimes draw the overlapping space too small for taking notes, or have difficulty connecting related differences on the nonoverlapping spaces on the outside of the circles, due to the differences

being separated by similarities in the middle of the diagram. Note frames function similarly to Venn diagrams, but simplify the note-taking process by using a framework that can be re-created easily, but still highlights the important features of text. [Figure 5.1](#) shows a note frame that can be used in lieu of a Venn diagram. Note that the frame includes an area for identifying the topics being compared and contrasted, and the spaces for similarities and differences. This makes the notes easier to read and study later.



**FIGURE 5.1.** Note frame for comparing and contrasting informational text topics.

### ***Summary Writing***

Writing a summary requires students to consider the entire text, or portion of the text (e.g., paragraph), and boil it down to its core ideas. Summary writing can be done in many ways, including (1) writing one-sentence restatements of each paragraph in the text (e.g., Doctrow, Wittrock, & Marks, 1978; Jenkins, Heliotis, & Stein, 1987); (2) outlining text and then writing a summary from the outline (e.g., Taylor & Beach, 1984); and (3) telling the most important who or what, and then saying the main idea in 10 words or

less (see Fuchs, Fuchs, & Burish, 2010), among others. Each of these is effective and can be used with informational text sources.

One classic approach that has been shown to be effective with informational text is the use of macro rules for summarizing (e.g., Rinehart, Stahl, & Erickson, 1986; Weisberg & Balajthy, 1990). Weisberg and Balajthy taught students to read through the informational text and then complete the following steps for writing: (1) delete material that is unimportant; (2) delete material that is redundant; (3) collapse lists—substitute a superordinate term for subordinate ones; (4) select a topic sentence; or (5) if there is no topic sentence, invent one. The researchers modeled using the strategy and provided explanations for each step. [Figure 5.2](#) provides an illustration of how this strategy might be employed.

Step	Passage/Summary
Read the passage.	Nomadic Plains Indians used a travois to move their tipis. A dog or horse pulled the travois. A travois was made of two poles. One end of the poles was tied together. When the dog or horse pulled the travois, the other ends dragged on the ground behind the animal. A wooden platform or netting was placed on the poles. The platform was used to hold the tipi cover, food, or tools. Sometimes, even little children might ride on a travois.
Delete unimportant information.	<del>Nomadic</del> Plains Indians used a travois to move their tipis. A dog or horse pulled the travois. A travois was made of two poles. <del>One end of the poles was tied together.</del> When the dog or horse pulled the travois, the other ends dragged <del>on the ground</del> behind the animal. A <del>wooden</del> platform or netting was placed on the poles. The platform was used to hold the tipi cover, food, or tools. <del>Sometimes, even little children might ride on a travois.</del>
Delete redundant information.	Plains Indians used a travois to move <del>their tipis</del> . A dog or horse pulled the <del>travois</del> . A travois was made of two poles. <del>When the dog or horse pulled the travois,</del> the other ends dragged <del>behind the animal</del> . A platform <del>or netting</del> was placed <del>on the poles</del> . The platform was used to hold the tipi cover, food, or tools.
Collapse lists.	Plains Indians used a travois to move . . . A dog or horse (animal) pulled . . . made of two poles . . . the other ends dragged . . . A platform was placed on . . . was used to hold the tipi cover, food, or tools (supplies).
Write a topic sentence.	Plains Indians used a travois made of two poles and a platform to move supplies.
Complete the	Plains Indians used a travois made of two poles and a platform to move

summary.

supplies. It was dragged by an animal.

**FIGURE 5.2.** Example of summarizing text using rules from Weisberg and Balajthy (1990).

## **Generating or Answering Questions about Informational Text Sources in Writing**

Another way students might write about source text is to answer questions about it. Teachers report having students write answers to questions quite often, and research has shown that having students write answers to questions is more effective than asking students to answer questions orally (Graham & Hebert, 2010, 2011). This has been specifically demonstrated in studies using informational text sources material with students in middle school (e.g., Berkowitz, 1986; Taylor & Beach, 1984; Taylor & Berkowitz, 1980). Writing may be more effective than orally answering questions because writing provides an additional opportunity to rehearse the answer (Graham & Hebert, 2010) and provides a permanent product for review and reconstruction (Emig, 1977). Additionally, oral questions often afford the opportunity for only one student to respond at a time, while all of the students can respond in writing. Thus, writing answers to questions can increase students' opportunities to respond.

Just as effective is the strategy of question generation. When students generate written questions about text, it forces them to choose which ideas are relevant and important, as well as the relationships about information in the questions and their intended answer from the text. In one example study, this technique was shown to be effective for improving the reading comprehension of high school students who were taught to identify the main idea of an informational text, generate three questions about it, and draw conclusions, as compared with students who read and discussed the text (Bean, Singer, Sorter, & Frazee, 1983).

## **Analyzing and Interpreting Source Text**



While recording information by writing notes, summaries, or answering questions does require some decision making on the part of the reader, these tasks fall somewhere shy of analyzing or interpreting text. Analysis and interpretation tasks often require students to write an extended response about text to apply concepts, develop hypotheses, or use evidence from the text to support a theory (Graham & Hebert, 2010, 2011). Langer and Applebee (1987) indicate that such writing experiences lead to a newer and better understanding of the material. Additionally, reading the analyses and interpretations of students may help teachers evaluate students' understanding of new content material and concepts presented in informational text sources.

Licata (1993) used extended writing activities to enhance high school students' learning from informational text in science class using two types of essays. After reading a passage about gas law relations (including concepts of pressure, volume, and temperature), students in one treatment condition wrote analytical essays to compare and contrast pressure–volume and volume–temperature relationships. Students in a second treatment condition wrote essays to apply information from the source text to a situation in which a balloon of gas was subjected to varying conditions. Students in both writing conditions outperformed students who simply read and studied text.

Klein, Haug, and Bildfell ([Chapter 7](#), this volume) provide an in-depth examination of five other writing-to-learn activities that can be classified as analysis or interpretation writing. Although these activities are not discussed in terms of writing about source text specifically, all of the activities can be applied to writing about informational source texts. The activities include (1) the journal writing protocol, (2) discourse synthesis, (3) argumentation as writing to learn, (4) the science-writing heuristic, and (5) composing to learn with multimodal representations. For each of these activities, Klein, Haug, and Bildfell ([Chapter 7](#), this volume) provide examples for implementing these activities with informational text, specifically. Therefore, it is not necessary to describe additional activities here, and instead I refer interested readers to their chapter.

## Guiding Principles for Writing about Informational Text Sources

There are endless possibilities for teachers to choose from when asking students to write about informational text sources. This can be somewhat daunting and can make it difficult to get started. Teachers may be wondering whether to require one type of writing over another, or where to include the writing activities. At this point, research has not identified whether one writing strategy is more effective than another in the long run, or whether there is a particular combination of writing strategies that works best when taught in a particular order. (If I had to bet, there is not.) Therefore, the best advice is to flexibly use a combination of writing tasks such as note taking, generating questions, answering questions, summary writing, and extended responses when having students write about informational text source material. These tasks serve different purposes and their effectiveness may be impacted by the goals of the learner and teacher (Graham & Hebert, 2010; Klein, Haug, & Bildfell, [Chapter 7](#), this volume). For example, a teacher might have students write answers to explicit questions about the text to bring students' attention to specific information. On the other hand, a teacher might have students generate written questions about text in order to encourage students to think critically about the information they believe is important. Different still, a teacher might give students an assignment to write a summary of an informational text passage to require students to condense the information into the key points made across the entire passage. In each of the situations, the teacher should think about what his or her goal is for student learning and try to choose an appropriate writing activity that will align with that goal.

Another recommendation is to explicitly teach students *strategies* for completing writing-to-read tasks with informational text. Graham and Hebert (2011) found that the impact of writing on reading comprehension

was stronger when students were taught how to take notes about text, rather than simply assigning students to take notes (although simply assigning students to take notes was also effective). In other words, students will learn more from text when they use an organizational structure, such as outlining (e.g., Taylor & Beach, 1984), a graphic organizer (e.g., Williams, Stafford, Lauer, Hall, & Pollini, 2009), or concept maps (e.g., Chang et al., 2002). This is likely to apply to other types of writing-to-read tasks involving informational text sources as well. Teaching students to use strategies such as TWA + PLANS (see Mason, 2013), POW + TIDE (see Ciullo & Mason, 2017), or PLAN and WRITE (see Reynolds & Perin, 2009) can help students stay focused on their purpose and goals for reading the informational text source, identify key ideas from text, write about the main ideas and details from the text that relate to their goals, and evaluate their writing to determine whether they met their goals.

Teachers can also pair informational text writing activities with instruction in informational text structures. Meyer (1975, 1985) identified five text structures commonly used in informational text: (1) description, (2) sequence, (3) compare and contrast, (4) cause–effect, and (5) problem–solution. A recent meta-analysis showed that instruction in text structures improves reading comprehension, with larger effects for instruction that involves writing (Hebert, Bohaty, Nelson, & Brown, 2016). In other words, teaching students to write about text using text structures is effective for improving comprehension and learning. Text structures can be paired with graphic organizer use, summary writing, asking guided questions, and note frames (see Roehling et al., 2017). Roehling and colleagues provide descriptions, examples (including graphics), and resources that can assist teachers in developing curriculum for teachers.

Last, some of the same instructional techniques for writing about source text can be combined, or even used when teaching students to use informational sources for writing original source text—that is, students can be taught to take notes before summarizing. Students might take notes on a passage to identify and select the most important information, and then use

their paraphrased notes to write their summary. Or students might write notes or summaries of multiple source texts prior to using those materials when writing an original source text.

## WRITING ORIGINAL INFORMATIONAL TEXT

As I described previously, I distinguish “analyzing and interpreting informational text” from “writing original informational text.” Although there is considerable overlap in the skills needed for both of these activities, the use of the source material can differ considerably. For one, the purpose of writing an extended response to text is (often) for individual learning, while the purpose of writing an original informational text may be to improve writing skills or to inform others. To explain further, I feel somewhat compelled to borrow the term *knowledge crafting* from Kellogg (2008) to distinguish *writing original informational text* from *writing about informational text*, although Kellogg uses the term somewhat differently. Extending the theories of the “knowledge-telling” and “knowledge-transforming” stages of writing development (Bereiter & Scardamalia, 1987), Kellogg suggests the last stage of writing development as “knowledge crafting,” or the writer crafting what he or she knows for the benefit of the reader. Kellogg contends that only experts ever get to the knowledge-crafting stage of writing development, and indicates that authors at this stage understand their content so well that they are able to anticipate the needs of an audience seeking to develop expertise in the same area. However, framing knowledge crafting as a purpose for using source material, instead of as a stage of instruction, provides a nice framework for examining how to teach students to use informational sources when writing to inform—that is, how does an author go about crafting knowledge for the benefit of others?

Take this chapter, for example. When beginning to write this chapter, my purpose was not my own learning (though I did learn things) but to instead create a resource for others. My goals were to describe the ways informational

source text could be used, provide an organized structure to help readers use the chapter, and to provide resources and examples that teachers could use to generate ideas for using informational text sources in their instruction and classroom writing activities. To accomplish this, I was not simply analyzing and interpreting other source text (although I did have to do some of that with my sources). Instead, I needed to use multiple informational source texts to (1) provide credit to others for ideas that informed my own, (2) provide evidence or examples for my recommendations, and (3) lead my readers to additional resources. Throughout this chapter, I cite sources that provide foundational theories (e.g., Bereiter & Scardamalia, 1987; Hayes, 1996; Kellogg, 2008; Klein, 1999); sources that provide evidence for some strategies presented, such as reports and meta-analyses (e.g., Graham & Hebert, 2011; Mason, 2013); and sources that provide examples or tools (e.g., Klein, Haug, & Bildfell, [Chapter 7](#), this volume; *Quill.org*; Roehling et al., 2017).

In addition to these considerations for using sources, I also used informational text sources as models. I read chapters designed for similar purposes to examine their organization, tone, style, and structure. I also examined the types of sources they used, and the types of features included in the chapters, such as examples and visuals. In some cases, I even incorporated a writing feature or trick that I felt was successfully employed by another author. For example, Saddler ([Chapter 10](#), this volume) discusses his process for writing a sentence to illustrate the complexities of sentence writing, similar to the way I am describing my use of sources to illustrate the complexities of using model text. This is not an accident.

Based on the primary ways authors might use source material, this section primarily focuses on (1) how to use source text as models; and (2) how to teach students to use sources to provide examples, provide evidence, and credit others for their ideas. In addition, I describe a way to scaffold the development of skills for producing original informational text by simplifying the task and providing students with information.

## Sources as Models or Mentor Text

When learning to write informational text, it may be helpful for students to examine models. Models can help students understand and emulate the use of critical elements of informational text (Graham & Perin, 2007). For informational text, this might include how to introduce content vocabulary, use headings, write facts using formal language, provide evidence, and use tables and graphs to show information, among other features. The study of expert models has been shown to be an effective approach to improving writing in general (Graham, Harris, & Chambers, 2016; Graham & Perin, 2007; Hillocks, 1986).

In one experiment, having students examine model informational text sources prior to writing was shown to be more effective than teaching them criteria and scales for informational text (Knudson, 1989). That said, models are often incorporated into a more comprehensive approach to writing instruction. For example, the use of models is an integral component of self-regulated strategy development (SRSD) instruction, where the instructors use the models to provide examples of the writing and find the elements of informational text prior to modeling how to employ the writing strategy (e.g., De La Paz, 1997; Reynolds & Perin, 2009). Shen and Troia (2017) used this approach when teaching students to use a strategy for writing compare-and-contrast essays using a strategy called TREE BRANCH. During the first stage of instruction (prior to modeling) the researchers provided students with two models essays to show students how the elements of the compare-and-contrast essays are aligned with the strategy they are going to learn. This set the stage for modeling how to incorporate the elements into their own writing, using the TREE BRANCH mnemonic. The results of the study showed increases in the number of elements used and text quality of the students' writing. It is not possible to tease out the specific effects for the use of models in this study, but this example illustrates how models are used as a critical component of the instruction.

When teaching students to use model text, one must consider whether the

text chosen will be a mentor text written by an expert, or a model of good student writing. Using good student models may be helpful because the texts are accessible to students and approximate the writing they are expected to do, while expert models may provide insights and tricks for presenting information in better or more organized ways. Pytash and Morgan (2014) provide a nice set of recommendations and resources for teachers seeking to use models for science and social studies writing in their article in *The Reading Teacher*, including ideas and suggested resources for selecting model texts, how to help students examine structure and word choice, and how to provide support for students as they learn to use model texts.

## **Avoiding Plagiarism, Crediting Sources, and Paraphrasing**

In addition to learning to use text as models, students need to learn how to use information from source text in their own writing, including learning how to access, use, and credit source material. One of the major challenges with this is to teach students how to use sources without plagiarizing. A recent search of plagiarism in Google Scholar resulted in more than 426,000 articles and resources related to plagiarism, including articles about the prevalence, detection, and issues around preventing it. While intentional plagiarism is a significant issue, many instances of plagiarism are unintentional, and may be the result of “patchwriting,” where students who intend to paraphrase use too much of the original source material (Jamieson, 2016). In other words, one reason for plagiarism may simply be that students do not know how to use sources appropriately.

Wan and Scott (2016) argue that providing students with education about plagiarism beginning in elementary school may work better than enforcing rules against it. The authors provide a description and overview of multiple online resources for incorporating antiplagiarism into the classroom, including an overview of classroom uses, self-learning features, interactive

features, and resources for curriculum integration. Wan and Scott argue in *Handbook of Academic Integrity* that education about antiplagiarism will help to create a culture where students value intellectual property.

In addition to directly teaching students about academic integrity, it may be helpful to teach students paraphrasing and summarization skills, and how to use those skills when using sources to write informational text. Jamieson (2016) indicates that students sometimes unintentionally plagiarize, even when they are attempting to credit their sources, due to poor paraphrasing skills. As stated earlier, some of the same instructional techniques on summarization and note taking introduced in the previous section on writing about source text can be used when teaching students to use informational sources for writing original source text—that is, students can be taught to take notes, summarize, and paraphrase prior to writing their original informational text, and then use that writing as a bridge before summarizing, as a way to avoid plagiarism.

However, it is important to directly teach students how to paraphrase in conjunction with using their paraphrased material for other writing purposes. Keck (2006) identified four types of paraphrasing (i.e., near copy, minimal revision, moderate revision, and substantial revision) and indicated that language proficiency may be a factor in how well students are able to paraphrase effectively. This suggests that students' ability to paraphrase effectively may be developmental.

### **Scaffolding Informational Text Writing by Providing Students with Source Information: An Emerging Approach to Skill Development**

One difficulty in teaching students to write original informational text from source material is that they may lack the skills necessary to find the information from the sources. Hayes (1996) indicates that students with reading difficulties may face particular challenges when reading source



material, such as oversimplifying or misunderstanding the source text, having difficulty identifying the main points of the source text, or difficulties in evaluating the validity of source material.

Writing from source material is a complex task that requires many steps. Students need to (1) identify potential sources, (2) read and interpret the sources, (3) choose ideas and facts from the source to include in their own writing, (4) paraphrase the ideas in note form, (5) make a plan for organizing and incorporating the ideas within their own text, (6) write their original text, and (7) credit the sources actually used. This multistep process is challenging, especially for students with or at risk for reading and writing disabilities. Moreover, many of the steps are time-consuming and occur before students ever put pen to paper, limiting the number of writing opportunities they have in the genre. Thus, it may be beneficial to find ways to provide students with more opportunities to organize and write informational text by scaffolding the use of source material.

An emerging informational text-writing approach with research evidence from one experimental study has been developed by Hebert, Bohaty, Nelson, and Roehling (2018). In this approach, students are taught to write informational text using five text structures (simple description, compare–contrast, sequence, cause–effect, and problem–solution). To increase the number of writing opportunities, we reduce the task demands by providing source material for the students to include in their writing using information frames (see [Figure 5.3](#)). Teachers use a slide-based presentation to model how to write informational text using the source information provided. This eliminates the time spent finding, vetting, and choosing information to include from source material, increasing the number of opportunities to practice organizing and writing the text.



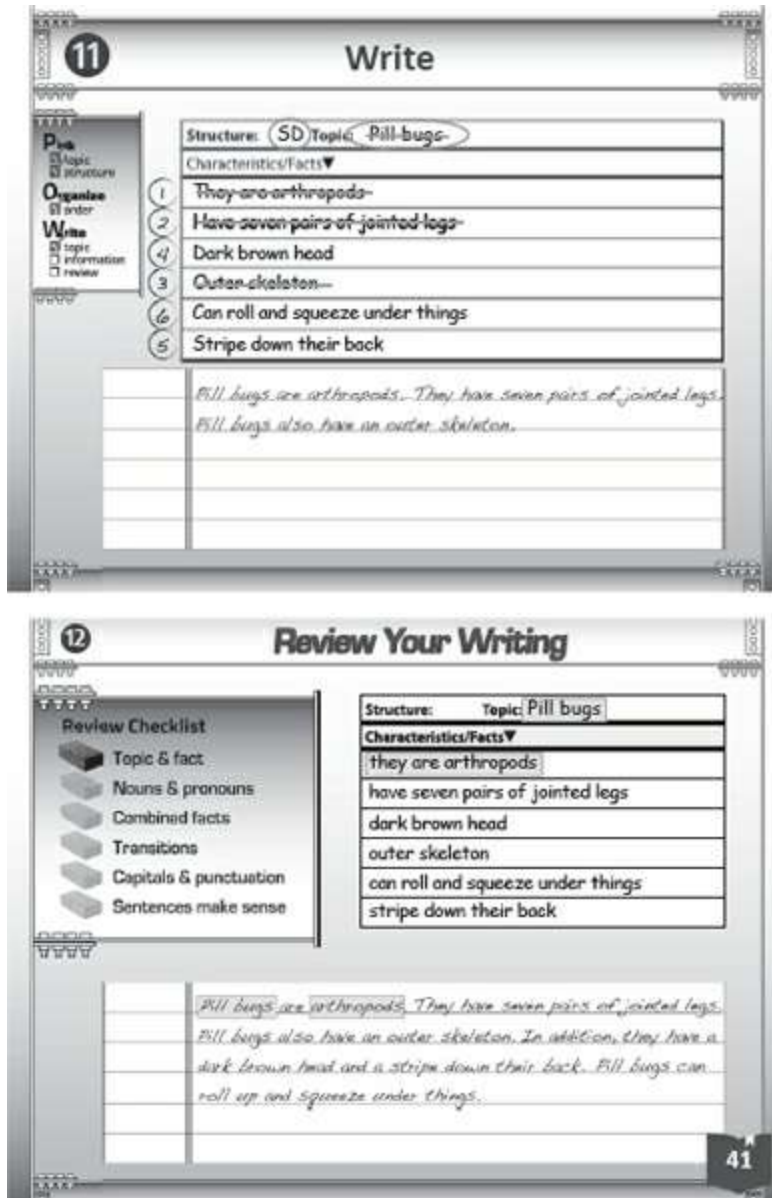
**FIGURE 5.3.** Information frame and strategy checklist from the Structures Writing program.

Students are taught an adapted version of the POW mnemonic and strategy for writing. The *P* in POW stands for *Pick* your idea. In this program, students are taught that they need to pick the *topic* and pick the *structure*. These are provided for them in the information frame, but the practice of picking the topic and structure are necessary to help the students attend to the information for planning, and provide a mechanism for transitioning students to choosing their own topics in the future.

The *O* in POW stands for *Organize* your notes. During this step, we teach the students to choose an order for their facts based on the text structure they are using. For example, in a sequence, it is important for the students to keep the facts in a specific order, whereas in a description, students may choose any order for their facts that makes sense (e.g., putting the most important or interesting facts first; keeping related facts together). In a compare–contrast, we teach students to either (1) write about all of the similarities followed by all of the differences, or (2) alternate between related similarities and differences. This step forces students to read through the informational facts provided and determine how they might be best organized for their purpose

and text structure.

Next, the students complete the *W* in POW, which stands for *Write and review*. Students are taught strategies for writing their topic sentence, and writing about the information in the order they chose. The students are then taught to review their writing to determine whether they have used all of the information, and to evaluate their writing for clarity and cohesiveness (see [Figure 5.4](#) for an example showing the write and review steps, and note the numbering on the left side of the information frame, which shows the result of the organize step). Students are encouraged to make edits and revisions during their review.



**FIGURE 5.4.** Examples of the write-and-review stage of the Structures Writing program.

In addition to the POW strategy, students are taught how to incorporate other important features of informational text. Some of these skills include combining related facts, pairing the topic with the most important fact in the topic sentence, using signal words to help readers identify the text structure, using transition words to indicate transitions among ideas, and so on.

By providing the source information, the program reduces the complexity of informational text writing in three important ways: (1) the program

reduces the demands on spelling and vocabulary knowledge by providing content; (2) students do not have to identify and choose facts to write about from multiple source texts, reducing reading demands; and (3) students do not need to paraphrase the ideas, as the ideas are already in paraphrased form. This allows students to practice organizing and writing, providing more writing practice opportunities. There is limited evidence for this approach, as it has only been used in a single study—however, it was shown to be effective for improving students’ writing in all of the text structures taught (Hebert et al., 2018). Future research with this approach is aimed at determining whether the improvements in students’ understanding of organizing and writing informational text for multiple text structures will make it easier for students to learn to choose and access their own source material in the future.

## **USING INFORMATIONAL SOURCE MATERIAL FOR WRITING SKILL EXERCISES**

One additional way teachers might consider using informational source material in their classrooms is for writing skill exercises. Research has shown that practice in basic writing skills can increase students’ ability to read and learn from such text (Graham & Hebert, 2011). For example, instruction in sentence combining in writing has been shown to improve reading-fluency outcomes (e.g., Hughes, 1975), extra spelling instruction in writing has been shown to improve word-reading outcomes (e.g., Uhry & Shepherd, 1993), and sentence-writing instruction has been shown to improve reading comprehension (e.g., Neville & Searls, 1991). Using informational text sources for this purpose may have added benefits for improving reading and learning with content-area texts. For example, handwriting or typing skills can be practiced through copying facts. Informational text can be used as the source of sentence and paragraph frames, or for kernel sentences used in sentence-combining activities. For spelling activities, teachers can choose to include content vocabulary words within the spelling lists taught, or include

informational text within spelling exercises, such as writing the spelling words in sentences.

## **Copying Exercises for Improving Handwriting and Spelling Skills**

Perhaps writers should begin . . . by inwardly uttering again what has already been uttered, to get the feel of it and to savor its full power.

—GEOFFREY O'BRIEN (2013)

Copying is sometimes stigmatized in Western schools as plagiarism. However, it is actually encouraged in many Asian countries as a tool for learning (Joyce & Lundberg, 2013). Also, plagiarism was not always stigmatized in the United States. Writing in the 1800s was often designed to provide students with experience imitating the text of others (National Research Council, 2000). Even today, teachers often begin writing instruction by teaching students to copy. For example, students are taught to trace letters and words during handwriting instruction, such as when they are prompted to copy the motor movements of the teacher. Copying facts learned in content areas during handwriting instruction has the added benefit of providing additional exposures to the facts and more experience with organization and vocabulary used in expository text.

Teachers also typically include copying target words as a part of spelling instruction (Graham et al., 2008), which is effective for improving spelling skills (van Daal & Leij, 1992). Students can be asked to write spelling words three times each and use them in sentences. This may help students with polysyllabic content words that often contain multiple syllables. Miller (1956) suggests the average person can only keep five to nine individual items in working memory, although more recent research suggests this may be constrained by cognitive maturity and intellectual aptitude (Cowan, 2010). Because most syllables are represented by three to five letters, copying the words multiple times and using the words in context can help reduce the working memory load for struggling readers, while allowing them to associate

sounds and chunk words. This can be especially helpful with content-area words in science and history. In one study, eighth-grade students who practiced spelling biological science words outperformed peers who did not practice spelling on measures of reading comprehension in science (Jones, 1966).

## Using Informational Source Text to Improve Sentence-Writing Skills

Informational source material can similarly be used to build sentence-writing tasks, such as those used in sentence-combining exercises. Sentence combining is an instructional technique relying on source material in the form of kernel sentences used to develop sentence-writing skills. Saddler ([Chapter 10](#), this volume) provides a thorough explanation of sentence combining and explains that it does not require any special materials, curriculum, or lengthy exercises. Because of this, it is easy to develop sentence-combining exercises using informational text, allowing students to develop sentence-writing skills using factual information.

When using informational text as the source material (i.e., kernel sentences), students build sentence-writing skills in the context of using formal content vocabulary and facts. The following example illustrates the benefits of practicing sentence-combining skills with informational text:

KERNEL 1

Alligators have *U*-shaped snouts.

KERNEL 2

Crocodile snouts are *V* shaped. (*whereas*)

COMBINED SENTENCE

Alligators have *U*-shaped snouts, whereas crocodile snouts are *V* shaped.

In this example, students learn to use the word *whereas* to contrast facts about alligators and crocodiles. Comparing and contrasting is one of the five primary text structures used in informational text (Hebert et al., 2016; Meyer,

1985). Therefore, the use of informational text as the source for the exercise teaches students how to organize and structure contrasting facts by developing a complex sentence and using the contrasting word in a dependent clause (i.e., *whereas*).

Another example is borrowed with permission from *Quill.org* (see [Figure 5.2](#)). Quill has developed multiple instructional tools, including sentence-combining units around specific informational content, such as the American Revolution. Similar to the classroom example presented by Saddler ([Chapter 10](#), this volume), Quill uses these content units to focus practice on the flexible use of multiple sentence-writing skills, rather than on a single skill. In this case, multiple sentence-combining exercises are developed with related facts around a cohesive topic.

[Figure 5.5](#) shows an example of a sentence-combining unit provided by Quill using informational source material for related facts across multiple exercises. The first exercise in the example from Quill includes two historical facts that have a causal relationship. Like the previous example, this one gives students an opportunity to develop a complex sentence, but this time utilizes a cause-effect text structure with the word *because*. The students also gain additional exposure to multiple cohesive facts relating to the Revolutionary War. Teachers can similarly develop sentence-combining exercises that align with content being taught in history, science, social studies, or mathematics to provide students with exposure to the content, while building sentence-writing skills using informational text.



<b>Exercise 1</b>	<p>Quill / <span style="float: right;">Unit 4.4</span></p> <p>The British taxed tea. The colonists decided to boycott British tea.</p> <p><input type="checkbox"/> Combine the sentences into one sentence.</p> <p>Type your answer here. Remember, your answer should be just one sentence.</p> <p style="text-align: right;"><input type="button" value="Check Your Answer"/></p>
<b>Exercise 2</b> (Feedback provided)	<p>The colonists protested. The protests were peaceful at first. Tension rose quickly.</p> <p><input type="checkbox"/> Revise your sentence to include the word <i>first</i>. You may have misspelled it.</p> <p>The colonists protested peacefully, but tensions rose quickly.</p> <p style="text-align: right;"><input type="button" value="Submit Your Answer"/></p>
<b>Exercise 3</b> (Examples of strong sentences provided)	<p>The British thought the taxes were fair. The tax money helped protect the colonies.</p> <p>→ Good work! Here are the most popular strong answers:</p> <ol style="list-style-type: none"> <li>1. The British thought the taxes were fair because the tax money helped protect the colonies. 66%</li> <li>2. The tax money helped protect the colonies, so the British felt thought the taxes were fair. 16%</li> <li>3. The British thought the taxes were fair since the tax money helped protect the colonies. 16%</li> </ol>
<b>Exercise 4</b>	<p>The colonists boarded British tea ships. The colonists destroyed the tea.</p> <p><input type="checkbox"/> Combine the sentences into one sentence.</p> <p>Type your answer here. Remember, your answer should be just one sentence.</p> <p style="text-align: right;"><input type="button" value="Check Your Answer"/></p>
<b>Exercise 5</b>	<p>Patrick Henry opposed new British taxes. He gave a speech. The speech was powerful. The speech was to inspire the colonists.</p> <p><input type="checkbox"/> Combine the sentences into one sentence.</p> <p>Type your answer here. Remember, your answer should be just one sentence.</p> <p style="text-align: right;"><input type="button" value="Check Your Answer"/></p>

**FIGURE 5.5.** *Quill.org* sentence-combining unit example. Used by permission of *Quill.org*.

## Guiding Principles for Using Informational Text Sources in Skill Exercises

There are three principles of instruction that should be considered when using informational text when developing exercises for improving writing skills. First, informational text source material should include content appropriate for the grade level. This ensures that the students will have some

context for the information. Second, skill exercises involving specialized content-area vocabulary need to be constructed carefully to either include only vocabulary that has already been introduced to students in another context, or provide context for learning the specialized content vocabulary within the exercises. In many cases involving exercises with single sentences, there may not be enough context for students to learn and understand new vocabulary, which could lead to confusion about the skill being taught/practiced. Third, these exercises should be paired with high-quality discussions about the content. Teacher-led discussions can help students make connections between the writing skill exercises and the content-area instruction in the classroom, as well as clear up any misconceptions that might arise as students complete the exercises.

## **SUMMARY AND CONCLUSIONS**

I framed this chapter around teaching students to use informational text sources when writing, with examples of effective strategies for teaching students to write about informational source text or to write original informational text. Additionally, I provided suggestions for using informational text sources to develop writing skill exercises. Others may define writing from source slightly differently, or come up with some additional purposes, as this is not the only way to approach this topic. However, I used the purposes to help teachers consider ways they might incorporate informational source material into their writing instruction. With that in mind, there are a few final considerations for using informational source text.

First, informational source material can be utilized in many different genres other than for writing about information and writing original informational text. As noted in my examples in the introduction of this chapter, informational source material can be used to develop narrative text, argumentation–persuasive text, and writing-to-learn activities, among others.

This volume contains several other chapters that include information about how to utilize sources for other genres, so I chose not to duplicate the efforts of those authors in this chapter. However, readers should reference those chapters for additional ideas. For example, Olson and Godfrey ([Chapter 4](#), this volume) present an example of using historical texts as the backdrop for writing a narrative; Ferretti and Lewis ([Chapter 6](#), this volume) examine the use of informational text in argumentative writing; and Klein, Haug, and Bildfell ([Chapter 7](#), this volume) include discussions on several effective writing-to-learn activities.

Second, there is considerable overlap among the purposes I have outlined. Skills development does not stop at basic skills instruction, and students need to develop skills for tasks such as taking notes and writing summaries, for example. We cannot simply expect students to be able to do these types of writing tasks without instruction. Therefore, teachers should be careful to introduce and model the use of these activities for their students.

Last, I focused primarily on writing skills and activities in this chapter. However, students need adequate reading skills to access the source material before being able to write about it. Instruction that balances reading and writing skills can be effective for promoting growth in both skill areas (Graham et al., 2017). Teachers should consider pairing effective reading instruction with the use of these writing strategies for writing from informational sources.

## REFERENCES

- Anderson, R. C., & Nagy, W. E. (1991). *Word meanings*. Hillsdale, NJ: Erlbaum.
- Bangert-Drowns, R. L., Hurley, M. M., & Wilkinson, B. (2004). The effects of school-based writing-to-learn interventions on academic achievement: A meta-analysis. *Review of Educational Research, 74*, 29–58.
- Bean, T. W., Singer, H., Sorter, J., & Frazee, C. (1983). Acquisition of summarization rules as a basis for question generation in learning from expository text at the high school level. In J. A. Niles (Ed.), *Searches for meaning in reading/language processing and instruction: Thirty-second yearbook of the National Reading Conference* (pp. 43–48). Rochester, NY: National Reading Conference.
- Bereiter, C., & Scardamalia, M. (1987). *The psychology of written composition*. Hillsdale, NJ: Erlbaum.

- Berkowitz, S. J. (1986). Effects of instruction in text organization on sixth-grade students' memory for expository reading. *Reading Research Quarterly*, 21, 161–178.
- Bohaty, J., Hebert, M., Nelson, J. R., & Roehling, J. (2016, April). *Taking notes on expository text using text structures: A strategy for struggling readers*. Paper presented at the annual meeting of the Council for Exceptional Children, St. Louis, MO.
- Chang, K. E., Chen, I., & Sung, Y. T. (2002). The effect of concept mapping to enhance text comprehension and summarization. *Journal of Experimental Education*, 71, 5–23.
- Ciullo, S., & Mason, L. (2017). Prioritizing elementary school writing instruction: Cultivating middle school readiness for students with learning disabilities. *Intervention in School and Clinic*, 52(5), 287–294.
- Cowan, N. (2010). The magical mystery four: How is working memory capacity limited, and why? *Current Directions in Psychological Science*, 19, 51–57.
- De La Paz, S. (1997). Strategy instruction in planning: Teaching students with learning and writing disabilities to compose persuasive and expository essays. *Learning Disability Quarterly*, 20, 227–248.
- Doctrow, M., Wittrock, M. C., & Marks, C. (1978). Generative processes in reading comprehension. *Journal of Educational Psychology*, 70(2), 109–118.
- Duke, N. K. (2000). 3.6 minutes per day: The scarcity of informational texts in first grade. *Reading Research Quarterly*, 35, 202–224.
- Emig, J. (1977). Writing as a mode of learning. *College Composition and Communication*, 28, 122–128.
- Fuchs, D., Fuchs, L. S., & Burish, P. (2000). Peer assisted learning strategies: An evidence-based practice to promote reading achievement. *Learning Disabilities Research & Practice*, 15, 85–91.
- Graham, S., Harris, K. R., & Chambers, A. B. (2016). Evidence-based practice and writing instruction. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (2nd ed., pp. 211–226). New York: Guilford Press.
- Graham, S., & Hebert, M. (2010). *Writing to read: The evidence-base for how writing can improve reading*. Washington, DC: Alliance for Excellent Education.
- Graham, S., & Hebert, M. (2011). Writing-to-read: A meta-analysis of the impact of writing and writing instruction on reading. *Harvard Educational Review*, 81, 710–744.
- Graham, S., Liu, X., Aitken, A., Ng, C., Bartlett, B., Harris, K. R., et al. (2017). Effectiveness of literacy programs balancing reading and writing instruction: A meta-analysis. *Reading Research Quarterly*, 53, 279–304.
- Graham, S., Morphy, P., Harris, K., Fink-Chorzempa, B., Saddler, B., Moran, S., et al. (2008). Teaching spelling in the primary grades: A national survey of instructional practices and adaptations. *American Educational Research Journal*, 45, 796–825.
- Graham, S., & Perin, D. (2007). *Writing Next: Effective strategies to improve writing of adolescents in middle and high schools: A report to the Carnegie Corporation of New York*. Washington, DC: Alliance for Excellent Education.
- Hayes, J. R. (1996). A new framework for understanding cognition and affect in writing. In R. Indrisano & J. R. Squire (Eds.), *Perspectives on writing: Research, theory, and practice* (pp. 6–44). Newark, DE: International Reading Association.
- Hebert, M., Bohaty, J. J., Nelson, J. R., & Brown, J. A. (2016). The effects of text structure instruction on expository reading comprehension: A meta-analysis. *Journal of Educational Psychology*, 108, 609–

- Hebert, M., Bohaty, J. J., Nelson, J. R., & Roehling, J. (2018). Writing informational text using provided information and text structures: An intervention for upper elementary struggling writers. *Reading and Writing*, 1–26.
- Hebert, M., Graham, S., Rigby-Wills, H., & Ganson, K. (2014). Effects of writing on informational text comprehension: Who benefits? *Learning Disabilities: A Contemporary Journal*, 12, 43–68.
- Hillocks, G. (1986). *Research on written composition*. Urbana, IL: National Council of Teachers of English.
- Hughes, T. O. (1975). *Sentence combining: A means of increasing reading comprehension*. ERIC Document Reproduction Service No. ED112421.
- Jamieson, S. (2016). Is it plagiarism or patchwriting?: Toward a nuanced definition. In T. Bretag (Ed.), *Handbook of academic integrity* (pp. 503–518). Singapore: Springer Reference.
- Jenkins, J. R., Heliotis, J. D., & Stein, M. L. (1987). Improving reading comprehension by using paragraph restatements. *Exceptional Children*, 54, 54–63.
- Jones, J. L. (1966). *Effects of spelling instruction in eighth-grade biological science upon scientific spelling, vocabulary, and reading comprehension; general spelling, vocabulary, and reading comprehension; science progress; and science achievement*. Unpublished doctoral dissertation, University of Maryland.
- Joyce, M., & Lundberg, A. (2013, December). *Copying to learn: Mimesis, plagiarism and 21st century English language education*. Paper presented at the 2nd International Higher Education Teaching and Learning Conference, Sarawak, Malaysia.
- Keck, C. (2006). The use of paraphrase in summary writing: A comparison of L1 and L2 writers. *Journal of Second Language Writing*, 15(4), 261–278.
- Kellogg, R. T. (2008). Training writing skills: A cognitive developmental perspective. *Journal of Writing Research*, 1, 1–26.
- Klein, P. (1999). Reopening inquiry into cognitive processes in writing-to-learn. *Educational Psychology Review*, 11, 203–270.
- Knudson, R. E. (1989). Effects of instructional strategies on children's informational writing. *Journal of Educational Research*, 83, 91–96.
- Langer, J., & Applebee, A. (1987). *How writing shapes thinking: A study of teaching and learning*. Urbana, IL: National Council of Teachers of English.
- Licata, K. P. (1993). *Writing about mathematical relations in science: Effects on achievement*. Buffalo: State University of New York at Buffalo.
- Mason, L. (2013). Teaching students who struggle with learning to think before, while, and after reading: Effects of self-regulated strategy development instruction. *Reading & Writing Quarterly*, 29, 124–144.
- Meyer, B. J. F. (1975). *The organization of prose and its effects on memory*. Amsterdam: North-Holland.
- Meyer, B. J. F. (1985). Prose analysis: Purposes, procedures, and problems. In B. K. Britton & J. Black (Eds.), *Understanding expository text: A theoretical and practical handbook for analyzing explanatory text* (pp. 269–304). Hillsdale, NJ: Erlbaum.
- Miller, G. A. (1956). The magical number seven plus or minus two: Some limits on our capacity for processing information. *Psychological Review*, 63, 81–97.
- National Research Council. (2000). *How people learn: Brain, mind, experience, and school* (expanded

- ed.). Washington, DC: National Academies Press.
- Neville, D. D., & Searls, E. F. (1991). A meta-analytic review of the effects of sentence-combining on reading comprehension. *Reading Research and Instruction, 31*(1), 63–76.
- O'Brien, G. (2013). We are what we quote. *The New York Times*, p. SR9.
- Pytash, K. E., & Morgan, D. N. (2014). Using mentor text to teach writing in science and social studies. *The Reading Teacher, 68*(2), 93–102.
- Reynolds, G. A., & Perin, D. (2009). A comparison of text structure and self-regulated writing strategies for composing from sources by middle school students. *Reading Psychology, 30*, 265–300.
- Rinehart, S. D., Stahl, S. A., & Erickson, L. G. (1986). Some effects of summarization training on reading and studying. *Reading Research Quarterly, 21*, 422–438.
- Roehling, J., Hebert, M., Nelson, J. R., & Bohaty, J. (2017). Text structure strategies for improving reading comprehension. *The Reading Teacher, 71*, 71–82.
- Shen, M., & Troia, G. A. (2017). Teaching children with language-learning disabilities to plan and revise compare–contrast texts. *Learning Disability Quarterly, 44*(1), 1–18.
- Snow, C. (2002). *Reading for understanding: Toward an R&D program in reading comprehension*. Santa Monica, CA: Rand.
- Spivey, N. N. (1991). The shaping of meaning: Options in writing the comparison. *Research in the Teaching of English, 25*(4), 390–418.
- Taylor, B. M., & Beach, R. W. (1984). The effects of text structure instruction on middle-grade students' comprehension and production of expository text. *Reading Research Quarterly, 19*, 134–146.
- Taylor, B. M., & Berkowitz, S. (1980). Facilitating children's comprehension of content material. In M. L. Kamil & A. J. Moe (Eds.), *Perspectives in reading research and instruction: Twenty-ninth yearbook of the National Reading Conference* (pp. 64–68). Clemson, SC: National Reading Conference.
- Uhry, J. K., & Shepherd, M. J. (1993). Segmentation/spelling instruction as part of a first-grade reading program: Effects on several measures of reading. *Reading Research Quarterly, 28*, 218–233.
- van Daal, V. H., & Leij, A. V. D. (1992). Computer-based reading and spelling practice for children with learning disabilities. *Journal of Learning Disabilities, 25*(3), 186–195.
- Wan, G., & Scott, M. R. (2016). Start them early and right: Creating a culture of academic integrity in elementary schools. In T. Bretag (Ed.), *Handbook of academic integrity* (pp. 503–518). Singapore: Springer Reference.
- Weisberg, R., & Balajthy, E. (1990). Development of disabled readers' metacomprehension ability through summarization training using expository text: Results of three studies. *Journal of Reading, Writing, and Learning Disabilities International, 6*, 117–136.
- Williams, J. P., Stafford, K. B., Lauer, K. D., Hall, K. M., & Pollini, S. (2009). Embedding reading comprehension training in content-area instruction. *Journal of Educational Psychology, 101*(1), 1–20.

# **Chapter 6**

## Argumentative Writing

Ralph P. Ferretti  
William E. Lewis

From the beginning of speech, toddlers have a natural and intuitive understanding of the importance of argumentative discourse (Dunn, 1988). With some reflection, parents and grandparents will recall heartfelt and sometimes challenging early interactions with our children concerning our perspectives about their behavior. Although sometimes vexing, these arguments are critical to our children's social understanding (Dunn, 1988). Some of the most valued developmental outcomes originate with the inevitable conflicts that arise from the pursuit of self-interested purposes. When resolved to the child's long-term interests, arguments contribute to the development of empathy and cooperation, language, perspective taking, and rule-governed behavior (Bruner, 1990; Dunn, 1988)—and, more broadly, to the intellectual, social, and cultural capacities upon which democratic institutions depend (Dewey, 1916). The current era of coarse and vitriolic discourse (Rodin & Steinberg, 2003) should remind us about the importance of renewing the commitment to our democratic ideals.

Everyday experience shows that youngsters have some skill in argumentation. At 18–24 months of age, toddlers use sentences to argue with parents and siblings (Kuczynski & Kochanska, 1990; Perlman & Ross, 2005).

Three-year-olds are able to produce negative and positive reasons for making a decision (Stein & Bernas, 1999), and they invoke social rules focusing on the consequences of actions for themselves or other people (Dunn & Munn, 1987). Despite their precocity, children (and adults!) often ignore relevant information that is inconsistent with their perspective (Perkins, Farady, & Bushey, 1991), are insensitive to potential criticisms of their opinion (Kuhn, 1991), lack standards for evaluating their arguments (Ferretti, Lewis, & Andrews-Weckerly, 2009; Song & Ferretti, 2013), and fail to adapt their strategies to the communicative context (Felton & Kuhn, 2001). As a result, people's arguments are often poorly developed and insensitive to alternative perspectives.

These qualities are also evident in students' written arguments, which are usually shorter and less well developed compared to narrative and expository writing (Applebee, Langer, Mullis, Latham, & Gentile, 1994). For example, the 2012 National Assessment of Educational Progress (NAEP) Writing Report Card (National Center for Education Statistics, 2012) showed that only about 25% of students' argumentative essays are competent. Competent essays usually develop strong reasons and provide supporting examples, but the support is not always effective, and they often fail to consider alternative perspectives. Poor argumentative writing is also found at the college level (Ferretti & Fan, 2016; Song & Ferretti, 2013). College students' argumentative essays often lack basic components of argumentation and focus on their own perspective of a controversial topic without considering alternative perspectives—that is, my-side bias (Perkins et al., 1991).

The purpose of this chapter is to describe evidence-based instructional practices for argumentative writing. Before discussing these practices, we begin by defining the concept of argumentation. We then highlight the importance of dialogue in argumentation because an argument is a communicative act that depends on the actual or imagined involvement of other people. For this reason, dialogic support is essential for the development of reflective argumentative writing. We then present argumentative writing as a problem-solving activity, and explain the



importance of supporting the development of self-regulatory skills for students' argumentative capacities. Finally, we discuss content-area arguments because they are important in the academic curriculum.

## DEFINING ARGUMENTATION

Arguments typically occur in the context of a discussion and are used to persuade, defeat, negotiate, consult, debate, and resolve differences of opinion. In the interest of clarity, we offer the following definition of argument:

Argumentation is a communicative and interactional complex act aimed at resolving a difference of opinion with the addressee by putting forward a constellation of propositions the arguer can be held accountable for to make the standpoint at issue acceptable to a rational judge who judges reasonably. (van Eemeren et al., 2013, p. 7)

This definition highlights three important aspects of argumentation that are taken up in our recommendations for improving argumentative writing. First, argumentation is an inherently social activity involving dialogue among people who may hold different perspectives about a controversial issue. Second, the presentation of a *constellation of propositions* implies that arguments possess a structure and organization that in their totality affect the acceptability of a standpoint. Third, arguments are acts of reason, and reasonable people use *critical standards* to judge the acceptability of a standpoint. These standards may include criteria such as the inclusion of argumentative discourse elements, the writer's sensitivity to audience considerations, or perhaps more importantly, the relevance of their argumentative strategies for accomplishing their purposes. With respect to the latter criterion, people can defend their arguments by answering *critical questions* about the relevance of their argumentative strategies (Walton, Reed, & Macagno, 2008).

## Argument as Dialogue

Argumentation is an inherently dialogic activity between people who may have a difference of opinion about a controversial issue. Arguments can have many purposes, including to fight, persuade, negotiate, consult, and debate (Ferretti, Andrews-Weckerly, & Lewis, 2007). Another more noble goal of everyday arguments is to resolve differences of opinion. The quality of that interaction and the resolution of these differences depend upon people's willingness to faithfully fulfill their communicative obligations (van Eemeren & Grootendorst, 2004). When these obligations are met, people learn about the strengths and weaknesses of their respective opinions, and are more likely to satisfactorily resolve their differences.

For these reasons, dialogic approaches provide a framework for supporting the development of students' argumentative thinking and writing (Kuhn & Moore, 2015). These approaches help promote students' understanding of other perspectives, as well as the limitations of their own perspective, by engaging them in planning, composing, and revising argumentative discourse within groups (Reznitskaya & Anderson, 2002), between conversational partners (Kuhn, Shaw, & Felton, 1997), or in online argumentative conversations (Newell, Beach, Smith, & VanDerHeide, 2011; Noroozi, Weinberger, Biemans, Mulder, & Chizari, 2012). Dialogic interactions afford instructional opportunities that challenge writers to consider competing perspectives (Kuhn & Crowell, 2011; Kuhn, Hemberger, & Khait, 2015). Interactions such as these should provide greater access to the "relevant and sufficient evidence" that the Common Core State Standards (CCSS) demand (National Governors Association Center for Best Practices & Council of Chief State School Officers [NGA & CCSSO], 2010).

Proponents of dialogic approaches view argumentative writing as woven into the literacy practices of specific communities (Newell et al., 2011). Therefore, unlike the argumentative writing that is often assigned in schools, which often conforms to its own genre-specific writing conventions, proponents of dialogic approaches see argumentative writing as a flexible tool

for gaining, elaborating on, and communicating knowledge through meaningful and motivating writing tasks (Ferretti & Lewis, 2012). According to Newell et al., the goal of those with a dialogic perspective is to “envision the types of classrooms where students are interested in what teachers teach, and in reading and writing arguments that are of significance to them and the culture at large” (p. 274).

## **Strategic Support for Self-Regulated Writing**

Dialogic support for effective argumentation is important because argumentation involves interactions among people who have different perspectives. However, it is also important to understand that argumentative reasoning depends upon cognitive resources that are limited (Stanovich, 2011; Stanovich & West, 2000). Furthermore, argumentative writing is a problem-solving process (Bereiter & Scardamalia, 1987) that requires the writer to use goal-directed self-regulatory processes (Graham & Harris, 1997). Like all problem solving, writing is also constrained by the writer’s available cognitive capacities and processing. As a consequence, the writer must manage all aspects of the writing process, including setting goals, planning, composing, and revising his or her essays. If the writer’s self-regulatory capacities are exceeded, performance will suffer.

Faced with the goal of resolving a difference of opinion, writers draw on their knowledge of argumentative discourse, the topic, and critical standards to write effectively (Ferretti et al., 2007; Ferretti & De La Paz, 2011). In contrast to expert writers, who usually set relevant and specific goals to guide the writing process, novices often write down only topically relevant information and then use this information to generate related information (Page-Voth & Graham, 1999). Furthermore, young and less able writers are often unable to devise strategies for managing the demands associated with planning and revising their essays (Graham, Harris, & McKeown, 2013). As a result of these self-regulatory problems, less able writers often produce

argumentative essays of inferior quality (Ferretti et al., 2009; Graham et al., 2013). In these cases, explicit support for self-regulation of the writing process may be needed (Graham & Perin, 2007).

## **Content-Area Arguments**

People routinely argue about commonplace issues for which no specialized expertise is needed. In fact, many tasks that are used to instruct students about argumentative writing draw on common knowledge that is usually acquired in everyday experience. Commonplace topics are sometimes used to avoid the potential influence of background knowledge on students' argumentative writing (e.g., Ferretti et al., 2009). In other cases, these tasks can facilitate instruction because they enable young and less able writers to draw on accessible knowledge to construct an argument. However, as students progress through the curriculum, literacy and content-area learning become inextricably interlinked, so academic progress increasingly depends upon the acquisition of highly specialized disciplinary knowledge and skills (Heller & Greenleaf, 2007). In short, students are increasingly expected to read, write, and argue like disciplinary experts (Ferretti & De La Paz, 2011). This expectation is echoed in the College and Career Readiness Standards for Writing (NGA & CCSSO, 2010), which require that students write arguments in response to content texts across the disciplines.

Experts think and argue in a number of disciplines, including literary studies (Fahnestock & Secor, 1991; Wilder, 2005) and history (Wineburg, 1991a, 1991b). We review some of this work later, but for now, suffice it to say that experts engage in arguments that are highly dependent upon their disciplinary knowledge and skills. To promote acquisition of disciplinary argumentation, we must design instructional activities that promote the acquisition of disciplinary knowledge and skills, including the disciplinary standards used to evaluate arguments.

## **DIALOGIC APPROACHES FOR SUPPORTING ARGUMENTATIVE WRITING**

Earlier we explained that argumentation is inherently dialogic. Whether the writer is having an actual or imagined exchange of views, he or she must consider other people's perspectives about the controversy. For this and other reasons, it would be wise to incorporate dialogic approaches into classroom instruction. Unfortunately, teachers are often apprehensive about introducing argumentative activities that might breed conflict and competition among students (Johnson & Johnson, 2009; Newell et al., 2011). This apprehension can lead to instruction that avoids substantive arguments (Newell et al., 2011). Additionally, the inauthentic nature of many school writing assignments—which are written without real purposes and for no real audience other than the teacher—potentially undermines students' abilities to anticipate other people's perspectives and potential criticisms of their own (Coker & Lewis, 2012). Andrews (1995) believes there is little point in engaging in argumentative discourse without a clear understanding of its audience and their perspective, a meaningless act that he calls “whistling in the wind” (p. 53). For Andrews and others who advance dialogic instructional frameworks, argument depends upon contrasting different perspectives.

The inherently dialogic nature of argumentation has some important implications for the teaching of argumentative writing. First, it suggests that teachers should find ways to incorporate writing tasks into their instruction that have a real audience and topics in which students are invested. Research shows that providing students with real-world social contexts for argumentative writing can help them produce clearer and more precise written arguments (Avery & Avery, 1995). In addition, authentic writing tasks encourage freedom to think more broadly about evidence as students focus on a real audience instead of just the teacher's possible reaction. Many researchers have addressed this challenge for school-like writing (Boscolo & Gelati, 2007).

More important, dialogic approaches to collaborative writing should be

designed to encourage students to entertain other students' perspectives. Written arguments are less effective when the dialogic support is absent and face-to-face interactions do not occur (Felton & Herko, 2004; Hemberger, Kuhn, Matos, & Shi, 2017). Therefore, teachers should provide collaborative experiences that help their students "bridge the gap" between written and face-to-face arguments. This would help students gain access to alternative perspectives (Newell et al., 2011) in ways that support democratic discourse in the classroom (Emmel, Resch, & Tenney, 1996). To return to the definition of argument, these interactions can help writers to evaluate the *constellation of propositions* needed to support their standpoints (van Eemeren et al., 2013) by receiving critical feedback about an argument's reasonableness and potential persuasiveness.

Wagner's (1999) study of role playing demonstrates the positive effects of dialogic partnerships on the argumentative writing of fourth and eighth graders. Wagner sought to determine the degree to which dramatic role playing increased students' ability to take into account another person's perspective in their written arguments. Students were assigned to a role-playing condition, a direct instruction condition, or a no-instruction condition. In the role-playing condition, students worked in pairs to role-play a persuasive situation between a student and the school principal, each student having the opportunity to play both the student's and the principal's role before writing to the principal about controversial topics. In the direct instruction condition, students received a list of eight rules of effective persuasion, and practiced analyzing and discussing one exemplary and one poor model of persuasive writing on a topic similar to the one on which they would write. In the no-instruction condition, students were shown the topic just before they wrote. Wagner found that the students who participated in the role-playing activities wrote argumentative letters that were better adapted to audience needs than those in the direct instruction condition. This finding shows the value of including prewriting supports in instruction that involve dialogic interactions—that is, role playing. These activities can scaffold the argumentative writing process for students (Felton & Herko,

2004; Morgan & Beaumont, 2003).

As we mentioned earlier, computer supports have been effectively used to support the development of students' argumentation skills (Noroozi et al., 2012). Kuhn and Crowell (2011) used a dialogic debate format that had been used successfully in other interventions (see Felton & Herko, 2004), but added an electronic chat room component to the debate phase of the intervention. In this 3-year study, the researchers created topic cycles during which they introduced an argumentative topic, and then guided students through a series of three dialogic activities that were designed to develop argumentative thinking (see [Table 6.1](#)). In the "pregame" phase of the intervention, students worked with small same-side groups facilitated by an adult, during which they generated reasons for their side and evaluated and ranked those reasons. At the end of year 1, students were also provided researcher-generated questions and answers to those questions for their topics. In years 2 and 3, students began asking their own questions with coaches supplying answers to the questions. At the end of the pregame phase, these same-side groups would then focus on generating reasons for the alternative perspective and generate "comebacks" (rebuttals) for these alternative perspectives.

**TABLE 6.1.** Example of Dialogic Support for Argument: Using Debate and Technology to Support Student Argumentation

---

Pregame phase

1. Students are provided with an argumentative topic.
2. Students work in "same-side" groups to generate and rank the reasons for their side's opinion on the topic.
3. Students are provided questions—and answers for those questions—about their opinion, or students generate their own questions about their opinion with coaches providing answers.
4. "Same-side" groups generate reasons for the alternative perspective and "comebacks" (rebuttals) for those reasons.

Game phase

5. Pairs of students from the same side compete via Google Chat with a pair from the opposing side.
6. Students complete a reflection sheet between turns to reflect on their arguments and their opponents' arguments, including possible counterarguments and rebuttals that could be generated

for their opponents' arguments.

#### Endgame phase

7. Students return to their pregame groups to review their reasons, counterarguments, and rebuttals.
8. Students participate in a 3-minute "hot seat" debate in which each team member debates a member from the other team with points awarded for effective argumentative moves.

#### Writing phase

9. Students write essays on their opinion using what they have learned from the debate to support their point of view and address the alternative perspective.
- 

*Note.* Based on Kuhn and Crowell (2011).

During the "game" phase of the intervention, pairs of students competed electronically against opposing-side students via Google Chat. The students debated each other and completed a reflection sheet between turns. These sheets guided students to identify and reflect on their arguments and their opponents' arguments, including possible counterarguments and rebuttals, in order to improve them. This was followed by the "endgame" phase of the intervention, during which students returned to their pregame groups, reviewed their arguments, counterarguments, and rebuttals, and participated in a "hot seat" debate during which each team member had 3 minutes to debate a team member from the opposing side. Students were then debriefed, given points for effective argumentative moves, and stripped of points for ineffective argumentative moves, with a winning side declared at the end of the activity. This phase finished with students writing individual argumentative essays on the topic.

Kuhn and Crowell (2011) analyzed the essays for the type and number of arguments that students produced, and whether the arguments addressed both sides of the issue. They also analyzed the number and types of questions students asked during the pregame phase of the intervention. Although students in the control condition engaged in teacher-led discussions of similar topics and wrote significantly more essays than students in the instructional condition over the course of the year, students who received the dialogic intervention wrote essays that contained more arguments that



addressed both sides of the controversy. In fact, few students in the control condition wrote essays that addressed both sides. Additionally, students who received instruction generated significantly more questions related to the topics than those in the control group. Recent extensions of Kuhn and Crowell's study highlight the potential benefits of extended engagement in computer-supported dialogic activities in the development of students' argumentative writing (Hemberger et al., 2017; Kuhn & Moore, 2015).

Earlier we mentioned the importance of teaching students to apply critical standards to their written arguments, and that the evaluation and defense of their arguments is best accomplished by answering *critical questions* about the relevance of their argumentative strategies (Walton et al., 2008). Students are often assigned the task of writing arguments about questions such as "Should teachers assign more homework?" Questions like this invite the use of the *argument from consequences* strategy, in which the proponent argues in favor of or against the policy on the basis of the consequences that may result from its enactment. The proponent might argue that homework (1) enables students to practice what they learned in school, (2) allows students to develop the habit of working without the constant presence of the teacher or other people, and (3) helps students make more rapid progress in learning skills. Skeptics of this policy might ask a series of critical questions about the purported advantages of homework. For example, they could ask, (1) "How sure are you that the good consequences will actually happen?"; (2) "Do you have evidence that these consequences are likely to happen?"; and (3) "Are there potentially bad consequences that might happen if we implement the policy?" In turn, the policy's proponent could ask these same questions about the reasons for the skeptic's perspective. In other words, critical questions can help establish the relevance of an argumentation strategy by encouraging consideration of the alternative perspective (Ferretti et al., 2007, 2009; Nussbaum & Edwards, 2011; Song & Ferretti, 2013).

Nussbaum and Edwards (2011) explored the effects of teaching seventh-grade social studies students to ask critical questions during dialogic interactions about controversial issues. The controversies were drawn from

current events presented in *Newsweek* magazine. Eight different controversies were discussed over the course of 20 weeks, and two additional controversies, for which there was no discussion, were used to assess the effects of the intervention. Three classrooms were involved in this study. In two of the classrooms, students were taught to use critical questions along with a graphic organizer (called an *argumentation vee diagram*) to represent contrasting arguments about the controversies and to evaluate the strength of the arguments. For example, students in the critical questions condition were told to ask questions such as “Are any of these arguments unlikely?” about the arguments that were represented on the graphic organizer. In the third classroom, students were taught to use the graphic organizer to represent different arguments, but they were not taught to ask the critical questions. The researchers were interested to see whether the inclusion of critical questions led students to write more integrated arguments (i.e., arguments that consider alternative perspectives and potential objections to their own perspective).

They found that that the inclusion of the critical questions seemed to be associated with an increase in the number of arguments that weighed different perspectives about the controversy. However, this effect did not always occur when the class discussions and the critical questions were unavailable. Furthermore, students in the critical questions condition did not seem to produce more arguments that explained how a solution to a controversy should be designed to address different perspectives. The researchers expected to see greater use of design arguments by students in the critical questions condition because these arguments are inherently integrative. Finally, the researchers included a case study that illustrated how dialogic support with critical questions and the graphic organizer might impact one student’s argumentative development. In total, the findings provide some evidence about the potential benefits of including critical questions in instruction for argumentative writing. We note, however, that explicit instruction about using critical questions to evaluate the relevance of students’ argumentative strategies was not provided by the researchers. In

fact, the argumentation strategies about which the critical questions could have been asked were not taught at all. In the absence of explicit instructional support, students may not have mastered the application of these challenging skills (see Song & Ferretti, 2013).

In conclusion, the evidence shows that dialogic support of argumentative writing can positively impact the quality of students' argumentative writing, as well as their ability to address alternative perspectives (Felton & Herko, 2004; Kuhn & Crowell, 2011; Wagner, 1999). Furthermore, students can experience the positive motivational effects of using writing as an expressive and communicative tool through active engagement in the classroom community (Ferretti & Lewis, 2012). In this way, writing becomes a "first moment" (Boscolo & Gelati, 2007) for building substantive classroom interactions, setting more effective argumentative goals related to different perspectives (Flower & Hayes, 1980), and crafting the constellation of propositions needed to increase the acceptability of their arguments (van Eemeren et al., 2013).

## **SELF-REGULATED STRATEGIES FOR ARGUMENTATIVE WRITING**

Many young and unskilled writers are challenged to regulate the many demands of writing argumentative essays. Difficulties with self-regulation are seen in all aspects of their problem solving, including goal setting, planning, writing, and revising their essays (Graham et al., 2013). As a result, these students may need explicit strategic support and scaffolding while planning, writing, and revising their essays. Luckily, research shows that strategy instruction, which involves the explicit and systematic teaching of the writing process, has a dramatic and positive effect on the quality of students' writing (Graham et al., 2013; Graham & Perin, 2007; Harris & Graham, 2016). The self-regulated strategy development (SRSD) model is a demonstrably effective approach to teaching argumentative writing (Graham et al., 2013; Graham &

Perin, 2007; Harris & Graham, 2016). While our focus is on argumentative writing, SRSD instruction has been used to support many genres of writing, and has also integrated reading and writing strategies to improve learning, reading, and writing (Harris & Graham, 2016). SRSD instruction provides strategic support to scaffold the acquisition and independent application of writing strategies (Graham & Harris, 2005; Harris & Graham, 2016).

Through six phases of instruction, students learn to regulate their behavior in the writing processes, set goals, and find appropriate ways to achieve their goals. The teacher first provides explicit instruction about the strategy's purposes and potential benefits ("Develop Background Knowledge" phase), and then explicitly supports learning specific strategies through instructional mnemonics ("Discuss It" phase), including modeling their use ("Model It" phase). Over time, the student memorizes the mnemonic through practice ("Memorize It" phase) and the teacher cedes control to the student, who assumes greater responsibility for monitoring the strategy's application ("Support It" phase), and provides experiences designed to ensure the strategy's internalization, maintenance, and generalization ("Practice It" phase) (Graham & Harris, 2005; Graham et al., 2013).

A number of SRSD argumentative writing strategies have been developed to support the planning process (Graham & Harris, 1989; Sexton, Harris, & Graham, 1998). Graham and Harris (1989) conducted the earliest study of the effects of SRSD instruction on the argumentative writing of three sixth-grade students, who were taught to write using a multistep planning strategy. The *TREE* strategy prompted students to provide a *Topic* sentence, provide *Reasons* for their opinion, *Examine* the reason from the audience's perspective, and provide an *Ending*. The strategy elements were based on a general framework for arguments that includes a premise, supporting reasons and data, and a conclusion. Children were also encouraged to consider the audience's response to their argument, although specific guidance for doing so was not provided. The *TREE* strategy instruction had a positive effect on students' argumentative writing and self-efficacy as writers. Prior to instruction, few of the students' essays contained elements of argumentative

discourse and most of them served no discernable rhetorical purpose. After instruction, nearly all of the essays included the basic elements of argumentative discourse, and were of a higher quality than before instruction.

Graham, MacArthur, Schwartz, and Page-Voth (1992) taught four fifth-grade students with learning disability (LD) to use a planning and writing strategy to improve their argumentative writing. The *PLANS* strategy (*P*ick goals, *L*ist ways to meet goals, *A*nd make *N*otes, *S*equence notes) included process and product goals that were meant to guide students' writing. The product goals helped to define the purpose of writing, the structure of the essay, and the essay's length; the process goals broke the steps of the writing process into manageable subproblems. Prior to instruction, the students averaged very few argumentative elements per essay; after instruction, they averaged more elements per essay and the gains were maintained for several weeks. Furthermore, less than a quarter of the students' essays contained all of the elements of argumentative discourse before instruction, but almost all included these elements after instruction. Essays written after instruction were also longer, more coherent, and of higher quality. Finally, students planned little before instruction, but after instruction they used the planning strategy before writing.

Kiuhara, O'Neill, Hawken, and Graham (2012) taught six tenth-grade students with disabilities to use the *STOP, AIMS, and DARE* strategy to plan and write persuasive essays. The *STOP* and *DARE* strategy (De La Paz & Graham, 1997a, 1997b) was designed to ensure that students stopped, reflected, and planned before writing (*S*uspend judgment, *T*ake a side, *O*rganize their ideas, and *P*lan as they wrote more). The *AIMS* strategy was designed to help students construct an introduction to their essays that would help the audience understand the context for information provided about the topic (*A*ttract the reader's attention, *I*dentify the problem of the topic so the reader understands the issues, *M*ap the context of the problem or provide background needed to understand the problem, and *S*tate the thesis so the premise is clear). Part of the *DARE* strategy is embedded in *AIMS* in that it asks students to *D*evelop a topic sentence. Students then *A*dd supporting

details, *Reject* arguments for the other side, and *End* with a conclusion. Prior to instruction, the students spent little time planning and writing their essays, so the quality of their essays was poor and they were relatively impoverished (i.e., they usually included a premise and an unelaborated supporting reason). After instruction, students spent much more time planning and writing their essays, which were of much higher quality. In addition to elaborating the reasons for their position and attempting to refute the alternative perspective, their post-instruction essays usually contextualized the topic about which they wrote and provided relevant background information about it (see [Table 6.2](#)).

**TABLE 6.2.** Cognitive Support for Writing: POW and TREE and STOP and DARE

Steps in SRSD instruction	TREE: An argumentative strategy for younger children	STOP and DARE: An argumentative strategy for older children
<b>1. <i>Build background knowledge:</i></b> Providing students a rationale for the instructional strategy	Teacher explains the importance of argumentative writing, its connection to state and national standards, the role it plays in school and society, and how this strategy will help them write better arguments.	
<b>2. <i>Discuss it:</i></b> Introducing the strategic mnemonic to the students, and how the mnemonic can be used to set manageable goals for their writing	Teacher presents students the mnemonic. When they write an argument it should include:  <b>T:</b> A clear Topic sentence. <b>R:</b> Reasons (three or more). <b>E:</b> Explanations where they say more about the reasons. <b>E:</b> An Ending where they wrap it up right.	Teacher presents students the mnemonic. When they <i>plan</i> their argument they should:  <b>S:</b> Suspend judgment by listing reasons for both sides of an issue. <b>T:</b> Take a side by deciding which side has the strongest support. <b>O:</b> Organize ideas for their chosen side by numbering how they will appear in the composition. <b>P:</b> Plan more as you write.  When students <i>write</i> their argumentative essay they should remember to:  Develop their topic sentence.

**3. *Model it:*** Modeling how the strategy works by thinking aloud through the writing process, and demonstrating how to use the mnemonic to plan and write text

Teacher models writing an argumentative paragraph or essay by “thinking aloud” in front of the students. She will use a topic sentence (T) and three or more reasons (R) for his or her opinion, and then show students how to write more about each reason (E) by providing elaborations or examples, and demonstrate how to write an ending (E) that reinforces his or her point of view.

Add supporting details.

Reject at least one argument for the other side.

End with a conclusion that wraps it up right.

Teacher models planning for an argumentative essay while thinking aloud and using a t-chart graphic organizer where he or she stops (S) to list reasons for both sides of an argumentative topic, evaluates the strength of both sides and takes a side (T), and then organizes (O) his or her plan by numbering the arguments the teacher will use in his or her composition. The teacher will remind him- or herself to continue to plan (P) throughout the writing process. Teacher then models writing using his or her plan by developing a topic sentence (D), adding (A) supporting details from the numbered list of reasons from his or her t-chart plan sheet, addressing the alternative perspective and rejecting (R) one of the reasons for that perspective that would be found on the t-chart, and then end (E) the essay by reinforcing his or her point of view.

**4. *Memorize it:*** Encouraging students to memorize the mnemonic in order to internalize the planning and writing process

Teacher provides students with the opportunity to commit the strategy to memory. This can be done through a game format or through additional collaborative practice using the mnemonic to plan or write arguments.

**5. *Support it:*** Using scaffolding to support students’ independent acquisition of the strategy

Teacher provides additional collaborative experiences through peer interactions or shared writing experiences to reinforce the use of the

Teacher provides additional collaborative experiences through peer interactions to reinforce the strategy use with other argumentative topics. This would be a particularly good time to reinforce how students can address

	strategy with other argumentative topics.	the alternative perspective and reject arguments for that perspective.
6. <i>Independent performance:</i> Independent use of the strategy for a variety of argumentative tasks	Teacher provides students the opportunity to use the strategy to independently produce argumentative texts for a variety of purposes, in compositions of various lengths, and addressing both policy issues and analytic and evaluative questions based on content-area material.	

---

SRSD strategies have also been developed to support the revision of argumentative essays (Graham & MacArthur, 1988; Song & Ferretti, 2013). These strategies are important because the revision process enables students to reflect on their ideas, develop and apply critical standards of evaluation, and improve their writing skills (Bereiter & Scardamalia, 1986). Research shows that expert writers revise their work to improve its overall quality and to clarify important ideas, while novices revise to correct grammar, spelling, diction, and punctuation (MacArthur, Graham, & Schwartz, 1991). Revising skill clearly develops over time (Fitzgerald & Markman, 1987), but many college students are unable to revise effectively (Kinsler, 1990).

Graham and MacArthur (1988) taught three fifth- and sixth-grade students with LD the SCAN strategy for revising argumentative essays on a word processor. The SCAN strategy teaches a procedure for reflecting on the following questions: Does it make Sense? Is it Connected to my belief? Can I Add more? *Note Errors*. Instruction in the use of the SCAN strategy positively impacted students' revising behavior. Prior to instruction, only a third of the students' revisions involved the addition of reasons for the writer's standpoint. In contrast, nearly two-thirds of the revisions involved the addition of reasons after instruction, and their post-instruction essays were longer and of higher quality. The criteria for revising argumentative essays embedded in the SCAN strategy included presenting a clear belief, providing reasons to support this belief, and removing mechanical errors. These criteria are appropriate for younger students and students with LD, but do not focus attention on the critical standards that older students should use to evaluate



their argumentation strategies.

As we mentioned earlier, critical standards of argumentation are important because they provide the criteria that students should use to evaluate the relevance of their argumentation strategies. Song and Ferretti (2013) conducted an SRSD study that was specifically designed to teach critical standards of argumentation to college students. Although the study included college students, this work is applicable to the instruction of middle and high school students, who must also learn how to evaluate their arguments. In this study, college students were assigned to one of three conditions: an ask and answer critical questions (ASCQ) condition, an argumentation schemes (AS) condition, and an uninstructed control condition. In the ASCQ condition, students were taught to revise their essays by asking and answering critical questions about two argumentation strategies that are commonly used to address controversial policies (Ferretti et al., 2007, 2009). The *argument from consequences* strategy justifies a policy based on the potential positive or negative consequences that may result from its enactment. The *argument from example* strategy uses particular cases or instances to illustrate a generalized claim. In contrast, students in the AS condition were taught to revise their essays by using the above-mentioned argumentation strategies to justify their standpoint, but did not learn to apply the critical questions. Finally, students in the uninstructed control condition received no instruction about either the argumentation schemes or the critical questions.

Song and Ferretti (2013) expected that the ASCQ strategy would not only improve the quality of students' essays but also increase their responsiveness to alternative perspectives in comparison to the other conditions. This is because students who learned the ASCQ strategy were taught to ask and answer questions that could be used to evaluate the reasons for their standpoint (i.e., counterarguments), and they were also taught to ask and answer those critical questions for the reasons for the alternative standpoint (i.e., rebuttals). The researchers also expected that students in the AS condition would use their knowledge of the argumentation schemes to

further elaborate the reasons for their standpoint. In fact, students in the ASCQ condition wrote essays that were of higher quality, and included more counterarguments, alternative standpoints, and rebuttals than those in the other conditions. Furthermore, the students who learned argumentative schemes in the AS condition produced more reasons for their standpoints than those in the other conditions. Interestingly, the effects of these revision strategies were evident for students' revised drafts, but they were also apparent in their first drafts. This is an educationally desirable outcome because standards for good writing acquired during the revising process should positively impact the quality of students' writing (MacArthur, 2012). In conclusion, these findings indicate that strategy instruction that includes critical standards for argumentation increases college students' sensitivity to alternative perspectives.

The evidence clearly shows that SRSD instruction can improve the planning and revision processes of young and less able students. There is, however, less evidence about the efficacy of SRSD instruction for older and more able students (see Graham et al., 2013). Furthermore, SRSD instruction is usually implemented in small groups or one-on-one instruction (De La Paz & Graham, 2005) because students are usually taught to a mastery criterion. Consequently, there is less evidence about the efficacy of the classroomwide implementation of SRSD instruction. However, De La Paz and Graham (2005) demonstrated the efficacy of SRSD instruction in normalized classroom settings. They examined the effects of a teacher-delivered SRSD planning, drafting, and revision framework on seventh- and eighth-grade students' expository and argumentative writing.

Students in De La Paz and Graham's (2005) experimental condition learned about the characteristics of five-paragraph expository essays, and were taught to use the *PLAN and WRITE* mnemonic to plan and draft their essays. This mnemonic encouraged students to PLAN (*Pay attention to prompt, List main ideas, Add supporting ideas, Number your ideas*) before drafting, and then to WRITE (*Work from your plan to develop your thesis statement; Remember your goals; Include transition words for each*

paragraph; Try to use different kinds of sentences; add *Exciting*, interesting words). Students used these writing goals during the revision process to evaluate the effectiveness of their essays in peer-revising conferences. Students in the control condition were given the same general instruction in the characteristics of five-paragraph expository essays, and wrote about the same topics as those in the experimental condition, but their instruction focused on mechanics, idea generation, and organization. Students receiving the SRSD PLAN and WRITE intervention created better-developed writing plans, and wrote essays that were longer and of higher quality than those students in the control condition. Additionally, students using PLAN and WRITE wrote essays with a greater variety of seven (or more)-letter words than those in the control condition. All effects were maintained 1 month after instruction.

Teachers need ongoing professional opportunities focusing on writing instruction to help their students regulate the writing process. Research shows that teachers at the elementary and secondary levels feel that their preservice college programs did not prepare them to teach writing (Gillespie, Graham, Kiuahara, & Hebert, 2014; Kiuahara, Graham, & Harris, 2009). It is not surprising, then, that teachers rarely ask their students to engage in writing activities that require interpretation or analysis (Applebee & Langer, 2006) or to write extended texts (Gilbert & Graham, 2010). To help their students produce robust evidence-based arguments, teachers need equally robust and sustained professional learning experiences in the writing methods that they are expected to implement (Festas et al., 2015; Harris & Graham, 2016; Harris et al., 2012).

The practice-based professional development (PBPD) framework (Ball & Cohen, 1999; Grossman & McDonald, 2008) has been used to support teachers' writing instruction. PBPD provides time for systematic instruction, collaborative practice, and ongoing support and feedback for teachers. This professional learning framework has been adopted by writing researchers to provide support in SRSD methods (Festas et al., 2015; Harris et al., 2012). Like SRSD instruction, PBPD is introduced in stages. Teachers begin by

discussing students' strengths and needs in writing. They then learn about SRSD through research summaries, observing instruction, and practicing with methods and materials while receiving ongoing feedback and support (Harris et al., 2012).

Harris et al. (2012) conducted a study of PBPD in SRSD with 20 second- and third-grade teachers, half of whom engaged in PBPD for opinion writing (TREE strategy) and the other half focused on PBPD for story writing. The authors found that students of teachers in the opinion-writing condition wrote essays that were of higher quality and contained both a greater number of opinion essay elements and transition words than those in the story-writing condition. Furthermore, both students and teachers rated the instruction positively, providing evidence about the intervention's social validity.

Festas et al. (2015) examined the effects of PBPD in SRSD instruction in opinion writing for teachers of eighth-grade students in Portugal. In this study, half of the teachers were provided PBPD using a modified POW (*Pick, Organize, Write and review*) TREE strategy to accommodate language differences. The other half implemented their schools' standard curriculum for opinion writing. Although the researchers were not able to holistically rate student essays for quality, students of teachers who were in the PBPD condition showed significant improvement in the production of the elements of opinion writing (premise, reasons, conclusions, and elaborations) compared to those receiving the typical writing curriculum. Additionally, students rated the instruction positively, and teachers in the PBPD condition believed that SRSD instruction positively impacted their students. U.S. teachers feel that they are inadequately prepared to teach writing (Brindle, Graham, Harris, & Hebert, 2016), and these studies provide hope that well-designed professional learning for teachers can significantly improve student argumentative writing outcomes.

The evidence shows that SRSD instruction clearly improves students' argumentative writing. After instruction, students are able to use strategies that allow them to manage the planning and revising processes. Furthermore,

there is mounting evidence about the benefits of providing sustained professional learning for teachers who support their students' strategic self-regulation of the writing process (Harris & Graham, 2016).

## **INSTRUCTIONAL SUPPORT FOR CONTENT-AREA ARGUMENTS**

As children progress through the curriculum, their academic progress depends upon the development of literacy skills that become increasingly dependent upon disciplinary knowledge and skills (Ferretti & De La Paz, 2011; Heller & Greenleaf, 2007). Expert writers draw on their general world knowledge, knowledge of text structure (RAND Reading Study Group, 2002), and their disciplinary expertise to write effective content-area arguments (De La Paz, 2005; Lewis & Ferretti, 2009; Shanahan & Shanahan, 2008). In what follows, we review some evidence about how disciplinary experts think and reason in literary studies (Fahnestock & Secor, 1991; Lewis & Ferretti, 2009, 2011) and history (De La Paz, 2001, 2005; Wissinger & De La Paz, 2016). This work illustrates how we can design instructional activities that empower students to write disciplinary arguments.

### **Literary Arguments**

The skills involved in analyzing and interpreting literary text are an important focus of the English curriculum for high school students (Lewis & Ferretti, 2009). Despite the significance of these skills, students are rarely able to construct arguments about interpretations of literature (Marshall, 2000) or go beyond basic plot summary to engage in substantive thematic issues of a text (Persky, Daane, & Jin, 2003). Unfortunately, little instructional time is devoted to interpretative or analytic writing (Kihara et al., 2009).

Students must be able to analyze and interpret literature before they are able to write analytic arguments, and analysis and interpretation depends on

two interdependent processes (Lewis & Ferretti, 2009, 2011). First, students must be able to recognize the patterns of language that enable them to comprehend the text and interpret it. Second, students must translate these interpretations into a written argument that supports their interpretations. Literary experts use very specific critical approaches when interpreting literature and writing literary arguments (Fahnestock & Secor, 1991), and they justify their interpretations on the basis of specific patterns that appear in text (Beers & Probst, 2013; Scholes, 1985). These can be repeated patterns of imagery, symbolism or syntactic elements, or textual elements that stand in opposition to one another (Lewis & Ferretti, 2009, 2011). According to Scholes (pp. 31–32), these patterns provide “an interpretive code” for “thematizing” and interpreting literary text, or what Beers and Probst have called “signposts” that lead to meaning. When they translate their interpretations of these patterns, literary analysts bolster their written arguments with quotations, textual references, and explanations that warrant the use of these sources as evidence (Lewis & Ferretti, 2009, 2011).

Lewis and Ferretti (2009, 2011) demonstrated the value of teaching high school students who were poor writers about these pattern recognition skills. In addition, students were taught *THE READER* strategy, which was designed to help them plan and write interpretative arguments about literature using these pattern recognition skills. Six lessons, based on the principles of SRSD instruction (Graham et al., 2013), were used to teach THE READER strategy and the disciplinary knowledge needed to use it effectively. In brief, students were taught to develop a *THE*sis, back up the thesis with *RE*asons, include *DE*tails as illustrations of those reasons (direct quotes or references to the text), *EX*plain how those quotes and references are related to their reasons or thesis (warrant), and *RE*view their main points in a conclusion. Students also learned to use a graphic organizer to help plan their essay.

Before instruction, students wrote literary arguments that were of poor quality, did not invoke the patterns, include textual citations, or warrant the connection between textual citations and their interpretative claims. At the completion of instruction, students were able to invoke the patterns, use

textual citations to support their interpretations, and warrant the relationship between the textual evidence and their standpoint. These elements are the discourse-specific constellation of propositions (van Eemeren et al., 2013) that are at the heart of critical literary discourse (Fahnestock & Secor, 1991). In general, the quality of students' literary arguments improved as a result of instruction, and they showed a rudimentary understanding of literary analysis (Lewis & Ferretti, 2009, 2011). In addition, the authors found that experienced English teachers favorably evaluated the instructional protocol. However, the study was not conducted under the conditions of everyday classroom instruction, so evidence about how the intervention might be adapted to the complexities of the classroom was not provided. Nevertheless, Lewis and Ferretti's (2009, 2011) findings show that strategy instruction grounded in the disciplinary knowledge used in literary analysis produced marked improvements in students' written arguments.

## **Historical Arguments**

There is general agreement that history instruction should promote the acquisition of disciplinary knowledge and critical habits of mind that are needed to participate in democratic decision making (Ferretti, MacArthur, & Okolo, 2001). Historical thinking requires that students puzzle about sources (artifacts and accounts of the past) to construct an interpretation of an event (Ferretti et al., 2001). These sources are a representation of the past, so students must analyze evidence to determine how the sources came into being, who constructed them and for what purposes, what other accounts exist, and which of these accounts are trustworthy (Seixas, 1996). In judging and evaluating evidence, historians use strategies and standards that are shared by members of their discourse community. Wineburg (1991a, 1991b) showed that historians use the strategies of corroboration, contextualization, and sourcing to judge the trustworthiness of the evidence. They compare the details of one source against those of another (*corroboration*), situate the

event in its historical context (*contextualization*), and check the document's source to determine the purposes for which it was created (*sourcing*). Unfortunately, students lack historical perspective and have a limited ability to conduct historical analysis (Lee & Weiss, 2007).

De La Paz (2005) demonstrated how instruction about argumentative writing and historical interpretation could be combined in middle school classrooms. Students of wide-ranging abilities (talented students and students with LD) were taught to apply Wineburg's (1991a, 1991b) strategies for interpreting primary source documents, and were also taught the STOP and DARE strategy (De La Paz & Graham, 1997a, 1997b) for writing argumentative essays based on these sources. The sources included information about different perspectives concerning controversies that arose during the period of the Westward Expansion. Students read and took notes about primary sources, and were taught to use their notes to prepare for writing argumentative essays. The STOP and DARE strategy was modified to address historical elements of the argumentative writing task, including the use of source material as evidence to support a historical argument. In contrast, students in a comparison condition read these sources but were neither taught the historical reasoning nor the argumentative writing strategies.

De La Paz's (2005) three-step historical reasoning strategy included two self-questioning routines. The first prompted students to consider the text's source and then analyze it for potential inaccuracies. Students answered three questions: (1) "What was the author's purpose?"; (2) "Do the reasons make sense?"; and (3) "Do you find evidence of bias?" To detect bias students were guided to examine the author's *word choice* and whether there was *only one point of view* in the document. The second prompted students to ask questions that focused on conflicting perspectives or information. Students were asked, (1) "Is an author inconsistent?"; (2) "Is a person described differently?"; (3) "Is an event described differently?"; (4) "What is missing from the author's argument?"; and (5) "What can you infer from reading *across* sources?" These questions helped students to recognize and ignore



untrustworthy information, and to attend to information that could be corroborated.

Students who learned the historical reasoning and argumentative writing strategies wrote higher-quality essays that contained more argumentative elements and more accurate historical content than students in the comparison condition. Furthermore, the length and quality of the argumentative essays written by students with LD after instruction were comparable to the pretest papers written by talented writers. De La Paz's (2005) findings suggest that strategy instruction that includes relevant disciplinary knowledge and skills has a salutary effect on students' written arguments about historical controversies.

Wissinger and De La Paz (2016) demonstrated the benefits of teaching middle school students about argumentation strategies and critical questions in the context of discussions about historical controversies. Students in the experimental condition engaged in teacher-led discussions using two argumentative schemes and five critical questions. In contrast, students in the comparison condition engaged in group discussions responding to sets of questions that were used to support students' reading comprehension. The authors found that students who were taught about argumentation strategies and critical standards learned more historical knowledge, acquired discipline-specific skills for critical analysis, and wrote essays that showed more sophisticated and substantial arguments and rebuttals than students in the control group. Along with Song and Ferretti (2013), the findings of Wissinger and De La Paz show that students can be taught to use argumentation strategies and critical questions to improve their argumentative writing.

## **CONCLUSIONS**

We began this chapter by describing the importance of argumentative discourse and identifying some persistent constraints on its development. These constraints, which include both the privileging of one's perspective to

the negligence of others and ignorance of genre-specific and discipline-relevant knowledge, are also seen in students' argumentative writing. While these are formidable obstacles to the development of students' argumentative writing, they can be overcome by instructional practices that provide carefully structured opportunities for dialogic interactions, strategic support for effective self-regulation, the acquisition of specialized expertise (including evaluative standards) needed to argue effectively, and robust and research-based professional learning opportunities for teachers that instruct and support their writing instruction. Equipped with this knowledge, and teachers who understand writing instruction, our students will be better prepared to participate in the institutions of democratic life.

## REFERENCES

- Andrews, R. (1995). *Teaching and learning argument*. New York: Cassell.
- Applebee, A., & Langer, J. (2006). *The state of writing instruction: What existing data tell us*. Albany, NY: Center on English Learning and Achievement.
- Applebee, A. N., Langer, J. A., Mullis, I. V. S., Latham, A. S., & Gentile, C. A. (1994). *NAEP 1992: Writing report card*. Washington, DC: U.S. Government Printing Office.
- Avery, C. W., & Avery, K. B. (1995). Real audiences, real issues transform high school students into real writers. *Journal of Adolescent and Adult Literacy*, 39(3), 235–237.
- Ball, D. L., & Cohen, D. K. (1999). Developing practice, developing practitioners: Toward a practice-based theory of professional education. In L. Darling-Hammond & G. Sykes (Eds.), *Teaching as the learning profession: Handbook of policy and practice* (pp. 3–22). San Francisco: Jossey-Bass.
- Beers, K., & Probst, R. E. (2013). *Notice and note: Strategies for close reading*. Portsmouth, NH: Heinemann.
- Bereiter, C., & Scardamalia, M. (1986). Chapter 8: Levels of inquiry into the nature of expertise in writing. *Review of Research in Education*, 13(1), 259–282.
- Bereiter, C., & Scardamalia, M. (1987). *The psychology of written composition*. Hillsdale, NJ: Erlbaum.
- Boscolo, P., & Gelati, C. (2007). Best practices in promoting motivation in writing. In S. Graham, C. A. MacArthur, & J. Fitzgerald (Eds.), *Best practices in writing instruction* (pp. 144–157). New York: Guilford Press.
- Brindle, M., Graham, S., Harris, K. R., & Hebert, M. (2016). Third and fourth grade teacher's classroom practices in writing: A national survey. *Reading and Writing*, 29(5), 929–954.
- Bruner, J. (1990). *Acts of meaning*. Cambridge, MA: Harvard University Press.
- Coker, D. L., & Lewis, W. (2012). Beyond *Writing Next*: A discussion of writing research and instructional uncertainty. In J. Ippolito, J. L. Steele, & J. F. Samson (Eds.), *Adolescent literacy* (pp. 231–251). Cambridge, MA: Harvard Educational Review.

- De La Paz, S. (2001). Teaching writing to students with attention deficit disorders and specific language impairment. *Journal of Educational Research*, 95(1), 37–47.
- De La Paz, S. (2005). Effects of historical reasoning instruction and writing strategy mastery in culturally and academically diverse middle school classrooms. *Journal of Educational Psychology*, 97(2), 139.
- De La Paz, S., & Graham, S. (1997a). The effects of dictation and advanced planning instruction on the composing of students with writing and learning problems. *Journal of Educational Psychology*, 89(2), 203–222.
- De La Paz, S., & Graham, S. (1997b). Strategy instruction in planning: Effects on the writing performance and behavior of students with learning difficulties. *Exceptional Children*, 63(2), 167–181.
- Dewey, J. (1916). *Democracy and education*. New York: Macmillan.
- Dunn, J. (1988). *The beginnings of social understanding*. Cambridge, MA: Harvard University Press.
- Dunn, J., & Munn, P. (1987). Development of justification in disputes with mother and sibling. *Developmental Psychology*, 23(6), 791.
- Emmel, B., Resch, P., & Tenney, D. (1996). *Argument revisited: Argument redefined*. Thousand Oaks, CA: SAGE.
- Fahnestock, J., & Secor, M. (1991). The rhetoric of literary criticism. In C. Bazerman & J. Paradis (Eds.), *Textual dynamics of the professions: Historical and contemporary studies of writing in professional communities* (pp. 77–96). Madison: University of Wisconsin Press.
- Felton, M. K., & Herko, S. (2004). From dialogue to two-sided argument: Scaffolding adolescents' persuasive writing. *Journal of Adolescent and Adult Literacy*, 47(8), 672–683.
- Felton, M. K., & Kuhn, D. (2001). The development of argumentative discourse skill. *Discourse Processes*, 32(2–3), 135–153.
- Ferretti, R. P., Andrews-Weckerly, S., & Lewis, W. E. (2007). Improving the argumentative writing of students with learning disabilities: Descriptive and normative considerations. *Reading & Writing Quarterly*, 23(3), 267–285.
- Ferretti, R. P., & De La Paz, S. (2011). On the comprehension and production of written texts: Instructional activities that support content-area literacy. In R. O'Connor & P. Vadasy (Eds.), *Handbook of reading interventions* (pp. 326–355). New York: Guilford Press.
- Ferretti, R. P., & Fan, Y. (2016). Argumentative writing. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (2nd ed., pp. 301–315). New York: Guilford Press.
- Ferretti, R. P., & Lewis, W. E. (2012). Motivating argumentative writing. In C. Gelati, B. Arfé, & L. Mason (Eds.), *Issues in writing research: In honor of Piero Boscolo* (pp. 127–146). Padova, Italy: CLEUP.
- Ferretti, R. P., Lewis, W. E., & Andrews-Weckerly, S. (2009). Do goals affect the structure of students' argumentative writing strategies? *Journal of Educational Psychology*, 101(3), 577–589.
- Ferretti, R. P., MacArthur, C. A., & Okolo, C. M. (2001). Teaching for historical understanding in inclusive classrooms. *Learning Disability Quarterly*, 24(1), 59–71.
- Festas, I., Oliveira, A. L., Rebelo, J. A., Damião, M. H., Harris, K., & Graham, S. (2015). Professional development in self-regulated strategy development: Effects on the writing performance of eighth grade Portuguese students. *Contemporary Educational Psychology*, 40, 17–27.
- Fitzgerald, J., & Markham, L. R. (1987). Teaching children about revision in writing. *Cognition and*

- Instruction*, 4(1), 3–24.
- Flower, L., & Hayes, R. H. (1980). The cognition of discovery: Defining a rhetorical problem. *College Composition and Communication*, 31(1), 21–32.
- Gilbert, J., & Graham, S. (2010). Teaching writing to elementary students in grades 4–6: A national survey. *Elementary School Journal*, 110(4), 494–518.
- Gillespie, A., Graham, S., Kiuahara, S., & Hebert, M. (2014). High school teachers use of writing to support students' learning: A national survey. *Reading and Writing*, 27(6), 1043–1072.
- Graham, S., & Harris, K. R. (1989). Improving learning disabled students' skills at composing essays: Self-instructional strategy training. *Exceptional Children*, 56(3), 201–214.
- Graham, S., & Harris, K. R. (1997). It can be taught, but it doesn't develop naturally: Myths and realities in writing instruction. *School Psychology Review*, 26(3), 414–424.
- Graham, S., & Harris, K. (2005). *Writing better: Effective strategies for teaching students with learning difficulties*. New York: Brooks.
- Graham, S., Harris, K. R., & McKeown, D. (2013). The writing of students with LD and a meta-analysis of SRSD writing intervention studies: Redux. In H. L. Swanson, K. Harris, & S. Graham (Eds.), *Handbook of learning disabilities* (2nd ed., pp. 405–438). New York: Guilford Press.
- Graham, S., & MacArthur, C. (1988). Improving learning disabled students' skills at revising essays produced on a word processor: Self-instruction strategy training. *Journal of Special Education*, 22(2), 133–152.
- Graham, S., MacArthur, C. A., Schwartz, S., & Page-Voth, V. (1992). Improving learning disabled students' compositions using a strategy involving product and process goal setting. *Exceptional Children*, 58(4), 322–334.
- Graham, S., & Perin, D. (2007). *Writing Next: Effective strategies to improve writing of adolescents in middle and high schools*. New York: Carnegie Corporation.
- Grossman, P., & McDonald, M. (2008). Back to the future: Directions for research in teaching and teacher education. *American Educational Research Journal*, 45(1), 184–205.
- Harris, K. R., & Graham, S. (2016). Self-regulated strategy development in writing: Policy implications of an evidence-based practice. *Policy Insights from the Behavioral and Brain Sciences*, 3, 77–84.
- Harris, K. R., Lane, K. L., Graham, S., Driscoll, S. A., Sandmel, K., Brindle, M., et al. (2012). Practice-based professional development for self-regulated strategies development in writing: A randomized controlled study. *Journal of Teacher Education*, 63(2), 103–119.
- Heller, R., & Greenleaf, C. (2007). *Literacy instruction in the content areas: Getting to the core of middle and high school improvement*. Washington, DC: Alliance for Excellent Education.
- Hemberger, L., Kuhn, D., Matos, F., & Shi, Y. (2017). A dialogic path to evidence-based argumentative writing. *Journal of the Learning Sciences*, 26(4), 575–607.
- Johnson, D. W., & Johnson, R. T. (2009). Energizing learning: The instructional power of conflict. *Educational Researcher*, 38(1), 37–51.
- Kinsler, K. (1990). Structured peer collaboration: Teaching essay revision to college students needing writing remediation. *Cognition and Instruction*, 7(4), 303–321.
- Kiuahara, S. A., Graham, S., & Hawken, L. S. (2009). Teaching writing to high school students: A national survey. *Journal of Educational Psychology*, 101(1), 136–160.
- Kiuahara, S. A., O'Neil, R. E., Hawken, L. S., & Graham, S. (2012). The effectiveness of teaching 10th-grade students STOP, AIMS, AND DARE for planning and drafting persuasive text. *Exceptional*

- Children*, 78(3), 335–355.
- Kuczynski, L., & Kochanska, G. (1990). Development of children's noncompliance strategies from toddlerhood to age 5. *Developmental Psychology*, 26(3), 398–408.
- Kuhn, D. (1991). *The skills of argument*. New York: Cambridge University Press.
- Kuhn, D., & Crowell, A. (2011). Dialogic argumentation as a vehicle for developing young adolescents' thinking. *Psychological Science*, 22(4), 545–552.
- Kuhn, D., Hemberger, L., & Khait, V. (2015). Tracing the development of argumentative writing in a discourse-rich environment. *Written Communication*, 33(1), 92–121.
- Kuhn, D., & Moore, W. (2015). Argumentation as core curriculum. *Learning: Research and Practice*, 1(1), 66–78.
- Kuhn, D., Shaw, V., & Felton, M. (1997). Effects of dyadic interaction on argumentative reasoning. *Cognition and Instruction*, 15(3), 287–315.
- Lee, J., & Weiss, A. (2007). *The nation's report card: U.S. History 2006* (No. NCES 2007-474). Washington, DC: U.S. Department of Education, National Center for Education Statistics.
- Lewis, W. E., & Ferretti, R. P. (2009). Defending interpretations of literary texts: The effects of topoi instruction on the literary arguments of high school students. *Reading & Writing Quarterly*, 25(4), 250–270.
- Lewis, W. E., & Ferretti, R. P. (2011). Topoi and literary interpretation: The effects of a critical reading and writing intervention on high school students' analytic literary essays. *Contemporary Educational Psychology*, 36(4), 334–354.
- MacArthur, C. A. (2012). Evaluation and revision processes in writing. In V. W. Berninger (Ed.), *Past, present, and future contributions of cognitive writing research to cognitive psychology* (pp. 461–484). New York: Psychology Press.
- MacArthur, C. A., Graham, S., & Schwartz, S. (1991). Knowledge of revision and revising behavior among students with learning disabilities. *Learning Disability Quarterly*, 14(1), 61–73.
- Marshall, J. (2000). Research on response to literature. In R. Barr, M. L. Kamil, P. Mosenthal, & P. D. Pearson (Eds.), *Handbook of reading research* (Vol. 3, pp. 381–402). Mahwah, NJ: Erlbaum.
- Morgan, W., & Beaumont, G. (2003). A dialogic approach to argumentation: Using a chat room to develop early adolescent students' argumentative writing. *Journal of Adolescent and Adult Literacy*, 47(2), 146–157.
- National Center for Education Statistics. (2012). *The nation's report card: Writing 2011* (NCES 2012-470). Washington, DC: Institute of Education Sciences, U.S. Department of Education.
- National Governors Association for Best Practices & Council of Chief State School Officers. (2010). *Common Core State Standards for English language arts and literacy in history/social studies, science, and technical subjects*. Washington, DC: Authors. Retrieved from [www.corestandards.org/assets/CCSSI\\_ELA%20Standards.pdf](http://www.corestandards.org/assets/CCSSI_ELA%20Standards.pdf).
- Newell, G. E., Beach, R., Smith, J., & VanDerHeide, J. (2011). Teaching and learning argumentative reading and writing: A review of research. *Reading Research Quarterly*, 46(3), 273–304.
- Noroozi, O., Weinberger, A., Biemans, H. J. A., Mulder, M., & Chizari, M. (2012). Argumentation-based computer supported collaborative learning (ABCSCCL): A synthesis of 15 years of research. *Educational Research Review*, 7(2), 79–106.
- Nussbaum, E. M., & Edwards, O. V. (2011). Critical questions and argument stratagems: A framework for enhancing and analyzing students' reasoning practices. *Journal of the Learning Sciences*, 20(3),

443–488.

- Page-Voth, V., & Graham, S. (1999). Effects of goal-setting and strategy use on the writing performance and self-efficacy of students with writing and learning problems. *Journal of Educational Psychology, 91*(2), 230–240.
- Perkins, D. N., Faraday, M., & Bushey, B. (1991). Everyday reasoning and the roots of intelligence. In J. F. Voss, D. N. Perkins, & J. W. Segal (Eds.), *Informal reasoning and education* (pp. 83–105). Hillsdale, NJ: Erlbaum.
- Perlman, M., & Ross, H. (2005). If-then contingencies in children's sibling conflicts. *Merrill-Palmer Quarterly, 51*, 42–66.
- Persky, H. R., Daane, M. C., & Jin, Y. (2003). *The nation's report card: Writing 2002* (NCES 2003–529). Washington, DC: U.S. Department of Education Publication, U.S. Government Printing Office.
- RAND Reading Study Group. (2002). *Reading for understanding*. Santa Monica, CA: RAND.
- Reznitskaya, A., & Anderson, R. C. (2002). The argument schema and learning to reason. In C. C. Block & M. Pressley (Eds.), *Comprehension instruction: Research-based best practices* (pp. 319–334). New York: Guilford Press.
- Rodin, J., & Steinberg, S. P. (2003). *Public discourse in America: Conversation and community in the twenty-first century*. Philadelphia: University of Pennsylvania Press.
- Scholes, R. (1985). *Textual power: Literary theory and the teaching of English*. New Haven, CT: Yale University Press.
- Seixas, P. (1996). Conceptualizing the growth of historical thinking. In D. R. Olson & N. Torrance (Eds.), *The handbook of education and human development* (pp. 765–783). Oxford, UK: Blackwell.
- Sexton, M., Harris, K. R., & Graham, S. (1998). Self-regulated strategy development and the writing process: Effects on essay writing and attributions. *Exceptional Children, 64*(3), 295–311.
- Shanahan, T., & Shanahan, C. (2008). Teaching disciplinary literacy to adolescents: Rethinking content-area literacy. *Harvard Educational Review, 78*(1), 40–59.
- Song, Y., & Ferretti, R. P. (2013). Teaching critical questions about argumentation through the revising process: Effects of strategy instruction on college students' argumentative essays. *Reading and Writing: An Interdisciplinary Journal, 26*(1), 67–90.
- Stanovich, K. E. (2011). *Rationality and the reflective mind*. New York: Oxford University Press.
- Stanovich, K. E., & West, R. F. (2000). Individual differences in reasoning: Implications for the rationality debate? *Behavioral and Brain Sciences, 23*(5), 645–726.
- Stein, N. L., & Bernas, R. (1999). The early emergence of argumentative knowledge and skill. In G. Rijlaarsdam & E. Espéret (Series Eds.) & J. Andriessen & P. Coirier (Vol. Eds.), *Studies in writing: Vol. 5. Foundations of argumentative text processing* (pp. 97–116). Amsterdam: University of Amsterdam Press.
- van Eemeren, F. H., Garssen, B., Krabbe, E. C. W., Snoeck Henkemans, A. F., Verheij, B., & Wagemans, J. H. M. (2013). *Handbook of argumentation theory*. Dordrecht, the Netherlands: Heidelberg.
- van Eemeren, F. H., & Grootendorst, R. (2004). *A systematic theory of argumentation: The pragma-dialectical approach*. Cambridge, UK: Cambridge University Press.
- Wagner, B. J. (1999). *Building moral communities through educational drama*. Stamford, CT: Ablex.
- Walton, D., Reed, C., & Macagno, F. (2008). *Argumentation schemes*. New York: Cambridge University Press.
- Wilder, L. (2005). "The rhetoric of literary criticism" revisited: Mistaken critics, complex contexts, and

social justice. *Written Communication*, 22(1), 76–119.

Wineburg, S. (1991a). Historical problem solving: A study of the cognitive processes used in the evaluation of documentary and pictorial evidence. *Journal of Educational Psychology*, 83(1), 73–87.

Wineburg, S. (1991b). On the reading of historical texts: Notes on the breach between school and the academy. *American Educational Research Journal*, 28(3), 495–519.

Wissinger, D. R., & De La Paz, S. (2016). Effects of critical discussions on middle school students' written historical arguments. *Journal of Educational Psychology*, 108(1), 43–59.

# ***Chapter 7***

## **Writing to Learn**

Perry D. Klein  
Katrina N. Haug  
Ashley Bildfell

In elementary and secondary classrooms, writing serves multiple purposes, often at the same time. One purpose is the focus of most chapters in this volume: to teach students to communicate well through writing. A second purpose, often pursued in the content areas, is to assess students' understanding of subject matter, both formatively and summatively. A third and less familiar purpose is the focus of this chapter: to think and learn about subject matter in disciplines such as science, history, mathematics, and English studies (Bangert-Drowns, Hurley, & Wilkinson, 2004; Klein & Boscolo, 2016). In a related purpose, some teachers have used writing to help students learn about the nature and methods of disciplines—for example, students can learn about how scientists construct knowledge by engaging in science-writing activities (Keys, Hand, Prain, & Collins, 1999).

The purpose of this chapter is to discuss ways in which elementary and secondary teachers can incorporate writing into content-area subjects, and optimize its effects on learning. The chapter focuses on five different kinds of writing activities, each of which involves a different type of text and a different educational purpose: journal writing, summary and discourse



synthesis, argumentation, the science-writing heuristic (SWH), and multimodal composing. The approach of this chapter is evidence based; for each type of writing-to-learn activity, we describe an experiment in which one group of students participated in a writing activity, and a control group participated in a different activity, resulting in significant differences in learning. We also signal where the results of a given writing activity have been supported by only a few studies, and where they have been well replicated.

Like all educational activities, writing to learn requires classroom time. This raises the question “Does writing contribute to learning strongly enough to justify the time that teachers and students invest in it?” Based on previous research, the answer to this is “Yes, but it depends. . . .” When students are simply asked to write about subject matter, this usually has little or no effect on learning (Bangert-Drowns et al., 2004; Gillespie Rouse, Graham, & Compton, 2017). However, research has shown that there are several kinds of actions that teachers can take to make writing more effective for learning (Klein & Boscolo, 2016). The five kinds of writing activities discussed here embody examples of relatively effective activities. Additionally, at the end of this chapter, we highlight five general principles for enhancing learning from writing.

## **A THEORY OF WRITING TO LEARN**

Before beginning, we discuss the process through which writing contributes to learning. There are several hypotheses about this question, which have been discussed elsewhere (Klein & Boscolo, 2016). Here, we focus on the hypothesis that we believe currently has the best support. Researchers, largely from the University of Freiberg in Germany, have conducted a program of research on the *self-regulation view of writing to learn* (e.g., Hübner, Nückles, & Renkl, 2010; Roelle, Krüger, Jansen, & Berthold, 2012). The key idea is that if writing leads students to engage in cognitive and metacognitive strategies, it then increases learning. As examples of cognitive strategies, students could

identify the main points from a lesson, or generate examples of the concept they are learning from everyday life. As an example of metacognitive strategies, students could write about “What I don’t understand yet.” There are two kinds of evidence that support the self-regulatory theory of writing to learn: first, correlational research shows that students who apply cognitive and metacognitive strategies during writing learn more than students who do not; and second, experimental research shows that *prompting* students to use cognitive and metacognitive strategies in their writing significantly increases their learning (Glogger, Schwonke, Holzäpfel, Nückles, & Renkl, 2012; Hübner et al., 2010). The teaching practices and research associated with this theory are discussed in more detail in the “[Journal Writing](#)” section.

## **FIVE GENRES FOR WRITING TO LEARN**

In a recent meta-analysis, it was found that different kinds of writing activities did not produce different effects on reading comprehension—for example, summary writing was not more effective than note taking (Hebert, Simpson, & Graham, 2013). This suggests that it may not be fruitful to look for a “best” kind of writing activity. Rather, different kinds of writing activities appear to serve different educational purposes; they produce different types of texts, and are sometimes used in different subject areas. This section examines five different kinds of writing activities that have been found to be effective, each of which serves a different purpose.

### **Journal (Learning Protocol) Writing**

Journal writing is an informal writing activity that encourages students to reflect on their learning. This reflection facilitates a deeper understanding of the material and has been shown to improve student learning outcomes, especially when metacognitive writing prompts are provided (Bangert-Drowns et al., 2004). How to help students write effective learning journals in

elementary and secondary school by providing lessons, prompts, and examples is the focus of this section of the chapter.

### ***How Metacognitive Writing Contributes to Learning***

Writing learning journals is a type of activity that is helpful if the student uses cognitive and metacognitive learning strategies (Roelle et al., 2012). Cognitive skills are required to do a task and metacognitive skills are used to understand how a task is done (Schraw, 1998). For the purpose of journal writing, two types of cognitive skills—organization and elaboration—help students integrate new information with personal knowledge and experience (Roelle et al., 2012). *Organization* helps students to identify the main ideas and structure of material, and organize it in a meaningful way. For example, a student may write, “Today we learned about fractions. Fractions are how many equal parts you can divide something into.” *Elaboration* helps students to link what they have learned with their own experiences and previously learned concepts—for example, “If I cut a pizza into 8 pieces, each piece is  $\frac{1}{8}$  of the entire pizza” (Roelle et al., 2012). Learning journals have been shown to be significantly more effective when both cognitive and metacognitive strategies are included than if one or neither of these types of strategies are included (Bangert-Drowns et al., 2004; Nückles, Hübner, & Renkl, 2009). Metacognitive skills allow a student to monitor his or her own learning by reflecting on what has been understood well, and in what areas further work is needed—for example, “I understand what a fraction is, but I still do not understand how to add fractions.” See [Table 7.1](#) for examples of organization, elaboration, and metacognitive prompts that teachers can use in the classroom (Nückles et al., 2009, p. 264).

**TABLE 7.1.** Cognitive and Metacognitive Example Writing Prompts

---

Cognitive skills

Organization

- “How can you best structure the learning contents in a meaningful way?”

- “Which headings and subheadings enable you to arrange the learning contents in a logical order?”
- “Which are the main points, in your opinion?”

#### Elaboration

- “Which examples can you think of that illustrate, confirm, or conflict with the learning contents?”
- “Can you create any links between the contents of the lesson and your knowledge from school and everyday experience?”
- “Which aspects of the learning materials do you find interesting, useful, convincing, and which not?”

#### Metacognitive skills

##### Monitoring

- “Which main points have I already understood well?”
- “Which main points haven’t I understood yet?”
- “How can I best explain my comprehension problem?”
- “Which questions, in my opinion, were not sufficiently clarified?”

---

*Note.* From Nückles, Hübner, and Renkl (2009, p. 264).

## ***Student Development in Reflective/Metacognitive Writing***

The independent use of active learning strategies is linked to age (Zimmerman & Martinez-Pons, 1990). Elementary students typically need more support from their teachers to benefit from journal-writing activities than secondary students. Elementary students may be completely unfamiliar with a given learning strategy, so they need instruction, concrete examples, and reminders of each strategy. In contrast, secondary students are more likely to know some strategies, but may not use them—this is referred to as performance deficiency. Therefore, simply prompting secondary or college students to use cognitive and metacognitive strategies during writing may be sufficient to increase their learning on a given occasion, and lead to subsequent independent performance of the strategy (Nückles, Hübner, Dümer, & Renkl, 2010; Roelle et al., 2012).

## ***Learning Protocols in Elementary Education***

An example of an effective teaching practice that teachers could use to enhance strategy use and learning was carried out in a fifth-grade classroom. First, students were given a slide presentation that taught them how to write learning journals using three cognitive prompts (one organizational and two elaboration) and one metacognitive prompt (Roelle et al., 2012). The prompts were similar to those provided in [Table 7.1](#), but they were adapted to make them specific to math—for example, “Describe and explain the main contents of the last mathematics lesson. For this purpose, you can also compose a chart that highlights the main contents” (p. 5). It was explained to students that the organizational prompt helped them identify the main ideas and order them in a meaningful way; the elaboration prompts helped students link the new material to their personal experiences and ideas that they had already learned, and the metacognitive prompts helped them to keep track of their learning. After each prompt, students were shown an example of a high-quality student response, like this one for organization:

“Today we learned what a divisor is. If a first number can be divided by a second number without remainder, then the second number is a divisor of the first number. For instance, we learned that 6 is a divisor of 24 because 24 can be divided by 6, so we can say 6 is a divisor of 24. The number 5 is not a divisor of 24, so we cannot say 5 is a divisor of 24.” (Roelle et al., 2012, p. 6)

Students were provided with five-page journals that consisted of a title page, and then four pages that presented one prompt per page. An example of a well-done response was printed on the previous, facing page, so students would have easy access to the example while responding to each prompt. Overall, students who were provided with prompts and worked out examples in their learning journals scored higher on a subsequent math test than students who were not. This suggests that customizing learning prompts to be specific to the subject (e.g., math), while providing worked examples for students to study, can help elementary students learn more from journal writing.

### ***Learning Protocols in Secondary Education***

Providing students with cognitive and metacognitive prompts also contributes to learning for secondary students, especially when the prompts indicate specific behaviors that students can complete (Glogger, Holzäpfel, Schwonke, Nückles, & Renkl, 2009). Ninth-grade students were provided with a worksheet with nonspecific or specific prompts. To illustrate, a nonspecific prompt such as “Organize the learning contents in a clear way” (p. 98) was transformed into a specific prompt by expanding it to “For this purpose, compose a brief summary of the topics of last week using your exercise-book and your math book. Extract three to five main ideas of the learning contents” (p. 98). The researchers found that the use of specific prompts increased the quality of learning journals students produced.

## **Writing to Learn with Summary/Discourse Synthesis**

A summary is a text that tells the gist of a longer text—that is, the main ideas and the connections among them. A discourse synthesis is a summary that integrates information from multiple source texts. Writing summaries and discourse syntheses are common activities in elementary and secondary classrooms. For example, discourse syntheses are frequently created by students in research projects in content-area subjects such as history, family studies, or social studies, using sources such as Internet websites or library books.

### ***How Summary and Discourse Syntheses Contribute to Learning***

When students write a summary, they perform the challenging task of searching for main ideas, selecting them, and connecting them to one another, as well as combining or deleting details that are less important. When students create a discourse synthesis, they take the summarizing process a step further, selecting important ideas from each of several sources, and comparing and contrasting ideas across sources. Mentally, the student

creates an *intertext* that connects ideas across source texts (Britt & Rouet, 2012). This integration of ideas results in improved comprehension (Solé, Miras, Castells, Espino, & Minguela, 2013). Previous research has shown that specific kinds of actions that students take during summarizing/discourse synthesis increase their understanding of the source texts. First, students learn more if they create *mediators* during their writing process—these are products, such as rough drafts or concept maps, that are bridges that summarize information from the sources and help with planning the student’s own text. Students can also increase their learning by alternating the operations of searching for information in source texts, reading source texts, and writing about source texts—this is more effective than doing each of these operations separately and sequentially (Solé et al., 2013).

### ***Student Development in Discourse Synthesis***

The way in which students develop in writing discourse syntheses, and the differences between good and poor synthesis writers, points to strategies that teachers can teach to beginners, and “look fors” that teachers can incorporate into rubrics for assessment. To write a discourse synthesis, less skilled writers may create a text with this kind of structure:

- Summary of source A
- Summary of source B
- Summary of source C

The result is not a true synthesis because it is not integrated; instead, it is a series of separate summaries. This type of text is low in quality and makes limited contributions to student learning (Segev-Miller, 2007; Solé et al., 2013). More skilled writers may create a text in which they address a series of subtopics, combine information from two or more source texts, and integrate information across the sources to discuss each subtopic. For example:

- Subtopic 1 (information from sources A, B, and/or C)
- Subtopic 2 (information from sources A, B, and/or C)
- Subtopic 3 (information from sources A, B, and/or C)

This kind of text connects information from different sources, and it has a somewhat original overall framework of subtopics that is created by the student (Segev-Miller, 2007; Solé et al., 2013).

### ***How to Use Summary Writing to Support Elementary Learning***

Teachers can assign students to write summaries to support their learning (see Graham & Hebert, 2011, for a review). For example, teachers can ask students to read a section of a textbook or a webpage in science or history, and then summarize it. Teachers can further increase the effect of summary writing on learning by teaching students a strategy for summary writing (Gelati, Galvan, & Boscolo, 2014; but cf. Graham & Hebert, 2011). Gelati et al. carried out an intensive program of instruction with fourth-grade students. They taught students to select main ideas, elaborate on these ideas by connecting them to one another and to prior knowledge, and rewrite the text in their own words.

They described how, early in the instruction, students relied on a “copy–delete” strategy. In response, the researchers engaged students in discussions that made important concepts, such as “connections in text,” concrete for the students. First, to help students learn to select main ideas, the instructor started with a discussion of the familiar narrative of *Little Red Riding Hood*. She recorded various pieces of information from the story on the blackboard; then through discussion, she helped students to understand that the important ideas are the ones that help the plot move forward.

The instructor then extended this to expository text. First, students read the text and the instructor led a discussion to help students understand it. Next, the class identified the author’s purpose in the text. The instructor then taught students to use the author’s purpose to select important ideas in the



text. To help students understand ideas that were implicit, she then asked students to connect concepts that were located in different parts of the text.

To model writing the actual summary, the instructor started with the main ideas that the students had selected, trying different sentences to express the same concept, and engaging students in choosing the best option. She also modeled connecting the sentences, which required revising the existing sentences. She then invited students to read the entire text and propose revisions of the text as a whole. Finally, the students copied the summary.

### ***Teaching Students a Strategy for Writing Syntheses***

How can we teach students a strategy for discourse synthesis that will enhance their ability to use synthesis writing as a learning tool? Martínez and colleagues (Martínez, Mateos, & Martín, 2017; Martínez, Mateos, Martín, & Rijlaarsdam, 2015) have carried out a series of studies with sixth-grade students that provide a useful model. The instructors taught a sequence of four strategies to students:

1. Select important ideas from the source texts.
2. Elaborate on the information using prior knowledge.
3. Organize the content.
4. Integrate information from both source texts.

To teach this material, the researchers held 12 sessions, organized as three blocks of four lessons each. Each block focused on one learning theme (topic), in which students read two source texts, and based on them, created one synthesis text. They taught the same strategy in each block of lessons, with greater responsibility transferred to the students in each block.

In the early part of the first block, the researchers emphasized helping the students think about and understand the genre of discourse synthesis. Because the students initially knew very little about synthesis, they started by eliciting students' ideas about the simpler but related genre of summary. They

also presented students with a scenario in which a new student started at the school, and would read the students' synthesis to learn about a topic, and then write an essay on it.

In the first block of instruction, instructor modeling was prominent, with an emphasis on deeply understanding each source text. "The actions that are modeled in this phase of the program are activation of prior knowledge, global and local understanding of the source texts, selecting the main ideas, elaborating upon these, integrating the information, organizing the content of the synthesis and writing it" (Martínez et al., 2017, p. 6). Consequently, they began by asking students to brainstorm their prior knowledge about the topic. The students read a text paragraph by paragraph, and after each one they asked, "What is the author trying to convey to me here?" They reread the texts and highlighted and took notes to identify important ideas. They also explained the ideas in their own words to integrate them with prior knowledge—for example, imagining that they must explain the topic to another student. Another approach for helping students select the main ideas was to list the ideas from the source with the class, and then sort them from most important to least important. In order to integrate ideas from each source, students created concept maps for a given source to relate the ideas within the source. Students later used concept maps again to relate the information from the two sources to each other.

Following the first phase, students worked in small groups to create a guide to writing syntheses, informed by their experience in the first phase. The focus of this was the steps of writing the syntheses. However, it was formulated as a series of questions. Across the three blocks of synthesis writing, the researchers further transferred control from themselves to the students: first, the teacher modeled the strategy for students, including modeling by thinking aloud. In the next block, students collaborated in groups of four with instructor support to create a text. Later, students wrote individually with support, and eventually, students wrote individually without support. As a result, the students improved significantly in the quality of the texts that they wrote, as well as their understanding of the content about

which they wrote.

## **Argumentation as Writing to Learn**

There are many forms of argumentation, with goals that include trying to change the opinion of others, or trying to reason collaboratively with them (Walton, Reed, & Macagno, 2008). In school writing, argumentation includes a variety of related terms and subgenres. *Persuasive writing* is commonly used in elementary education; students are asked to present an opinion and reasons. *Essays* are their counterpart in secondary school. The terms *discussion* or *deliberation* are sometimes used to refer to a balanced consideration of arguments on two sides of an issue (e.g., Felton, Garcia-Mila, & Gilabert, 2009; Klein & Ehrhardt, 2015). In this section, we focus on the elements that go into argumentation as writing to learn, rather than the distinctions among these subgenres. Argument writing has proven to be a useful tool for learning across a variety of subjects (Felton et al., 2009; Klein, Haug, & Arcon, 2016; Lewis & Ferretti, 2011; Zohar & Nemet, 2002).

### ***How Argument Writing Contributes to Learning***

Writing an argument requires students to consider contrasting beliefs, and to evaluate them on the basis of evidence. For example, in science, argumentation can allow students to compare misconceptions and scientific concepts using scientific data, and shift toward the standard conception (Klein & Ehrhardt, 2015; Klein et al., 2016). Writing to learn through argumentation can be beneficial for understanding the nature of disciplines; in history, students can learn to read and think like historians by critically interpreting and writing from primary sources of information (De La Paz & Felton, 2010). Students can also learn about controversial social issues, becoming familiar with different viewpoints and evidence that supports each of them (Zohar & Nemet, 2002).

## ***The Development of Persuasive Writing***

Writers in early elementary school frequently create arguments that include only a claim and one or two reasons. Students' argumentation improves significantly with age and educational level, although it does not track them closely. With development, students more frequently address conflicting opinions, apparent evidence for alternative opinions, and criticisms of their own opinion (Reznitskaya, Kuo, Glina, & Anderson, 2009; Yeh, 1998). Students who write better content-area texts include a larger number of relevant content ideas (Klein & Samuels, 2010). Elementary students frequently exhibit my-side bias, selecting and interpreting information to support their claim, while ignoring evidence for alternative claims; some writers present conflicting explanations without resolving them (Klein & Ehrhardt, 2015). To integrate conflicting arguments effectively, writers must learn to compare competing claims to evidence, weighing or synthesizing competing arguments (Nussbaum & Schraw, 2007). In research to date, the features that characterize higher-quality argument writing—including variety of rhetorical moves, number of content propositions, and weighing of evidence—are also associated with learning during writing (Klein & Ehrhardt, 2015).

### ***Argumentation in Writing to Learn for Elementary School Students***

For elementary students (grades 4–6), research has shown that teachers can use argument writing to help students learn challenging elementary science concepts (Klein & Ehrhardt, 2015; Klein et al., 2016). Research by Klein and colleagues (2016) investigated how to use argument writing to help students change their science misconceptions. In each of a series of three writing activities, students learned about the kinds of characteristics that are used to classify animals, as well as learning about two orders of animals. For example, many students initially believed that dolphins were fish. The first writing

activity allowed them to learn about the characteristics that are used to classify animals (e.g., respiration, method of reproduction), as well as learning the characteristics of members of two orders: fish and mammals. First, students read brief information packets on mammals, fish, and dolphins. They were asked to decide whether dolphins were fish or mammals, and to write an argument to support their view.

The researchers compared three methods of supporting student’s argument writing, assessing their knowledge on an end-of-unit test, as well as the quality of writing. The most effective method of supporting students was to provide them with a series of rhetorical subgoal prompts—that is, prompts that guided them through the different elements of argument, such as claims, evidence, and rebuttals. This was more effective than providing content subgoal prompts, which asked students to write about various subtopics, or no subgoal prompts (see [Table 7.2](#); Klein et al., 2016).

**TABLE 7.2.** Rhetorical and Content Subgoal Prompts

Rhetorical subgoal prompt	Content subgoal prompt
<p>“What is your opinion? To persuade the reader, please remember to . . .</p> <ul style="list-style-type: none"> <li>• Give a reason for your opinion.</li> <li>• Give a second reason.</li> <li>• Give a third reason.</li> <li>• Give a fourth reason.</li> <li>• Give a fifth reason.</li> <li>• What opinion could someone have that is different from yours? What reason could he or she give for his or her opinion? Explain why his or her reason is not a good one.”</li> </ul>	<p>“What is your opinion? To persuade the reader, please write about . . .</p> <ul style="list-style-type: none"> <li>• How it breathes.</li> <li>• Its skin covering.</li> <li>• Warm-bloodedness or cold-bloodedness.</li> <li>• How it is born.</li> <li>• If it feeds its young or how it feeds its young.</li> <li>• How it moves.”</li> </ul>

### ***Argumentation in Writing to Learn for Secondary School Students***

In a study with high school students in history class, teachers used self-regulated strategy development (SRSD) as a method of instruction for

teaching students a strategy for persuasive writing; they also taught students a strategy for historical reasoning that students could then use to generate content for these arguments (De La Paz & Felton, 2010). There were five stages in the framework for instruction for SRSD; each stage required one or more sessions. The stages of instruction were as follows:

1. Develop background knowledge.
  - Students were given primary sources and other material on the Spanish-American War.
  - Two sample argumentative essays were provided so students could see how historical content could be used to support either point of view.
  - The teacher reviewed these documents with students and explained how they would learn to read and analyze, and then write during the semester.
2. Discuss it.
  - The teacher described the historical reasoning strategy (detailed below).
  - The teacher provided an overview about the purpose of the strategy.
3. Model it.
  - The teacher worked backward from the sample essays, showing students how to locate evidence.
  - The teacher used examples of students' written essays to point out what they were missing and what was written well.
4. Support it.
  - The teacher used a set of materials to work in small groups and apply the historical reasoning strategy.
  - Students were given a rubric for future grading of essays that integrated text structure with evidence.
  - Students were given the mnemonic STOP (Suspend judgment, Take a side, Organize ideas, Plan more as you write) to remind them to generate ideas on both sides of the argument.

5. Independent performance.

- Students used strategies to read historical documents and write essays on two topics: neutrality and the Cuban Missile Crisis.

The historical reasoning strategy included the following steps:

1. *Consider the author.* How does the author's viewpoint have an effect on his or her argument?
2. *Understand the source.* What kind of worldview does the source show?
3. *Critique the source.* Look within and across each source. Does the evidence prove what it claims to prove?
4. *Create a more focused understanding.* How does each source deepen your understanding of the historical event?

Results of the study indicated that students who learned argumentation using SRSD and the historical reasoning strategy (experimental group) wrote texts that were higher in quality and showed a deeper understanding of historical content in comparison to their peers in the control group (De La Paz & Felton, 2010).

## The Science-Writing Heuristic

The SWH is an approach to science education for elementary and secondary students that uses writing to support hands-on inquiry, collaboration with peers, and reflection. Teachers are guided through the process by a template (Hand, Wallace, & Yang, 2004, p. 132; see [Figure 7.1](#)) that can be adapted to various topics and grade levels. We begin by focusing on what could be called the “classical” approach to teaching with the SWH, and then present some recent variations.

1. Exploration of preinstruction understanding through individual or group concept mapping.

2. Prelaboratory activities, including informal writing, making observations, brainstorming, and posing questions.
3. Participation in a laboratory activity.
4. Negotiation phase I—writing personal meaning for the laboratory activity (e.g., writing journals).
5. Negotiation phase II—sharing and comparing data interpretations in small groups (e.g., making a group chart).
6. Negotiation phase III—comparing science ideas to textbooks or other printed resources (e.g., writing group notes in response to focus questions).
7. Negotiation phase IV—individual reflection and writing (e.g., writing a report or textbook explanation).
8. Exploration of post-instruction understanding through concept mapping.

**FIGURE 7.1.** Teacher template for the SWH.

### ***The SWH in Seventh-Grade Cell Biology***

A study of a seventh-grade biology unit on cells illustrates the key features of the SWH (Hand et al., 2004). The teaching was carried out over the course of 8 weeks in four classes. The SWH begins by exploring students' initial understanding. For this study, the students initially completed a pretest that included multiple-choice questions, as well as questions that called on them to write an analogy, an argument, and an explanation of a diagram.

The students began the instructional phase by participating in group discussions, during which they initiated their own questions for a lab activity. For this first lab, the teacher led these discussions to guide students to develop reasonable research questions, such as “What is the function of a cell membrane?”; “What is the structure of a cell membrane?”; and “What are the relationships between organelles, cells, organs, and organ systems?”

These research questions then guided the development of lab activities. The teacher provided various materials appropriate to each topic (e.g., microscopes, glass slides, beakers, vegetable oil, pieces of a leaf) but did not



provide step-by-step instructions. Instead, the students designed their own investigations, using the materials and equipment. This included deciding on observations and methods of collecting appropriate evidence in order to answer their particular research question. For this first activity, the teacher also organized classwide and small-group discussions focusing on the relationships between students' evidence and their claims. The students wrote a report on each activity. For their writing, students were guided by the following template (Hand et al., 2004, p. 132):

1. Beginning ideas—"What are my questions?"
2. Tests—"What did I do?"
3. Observations—"What did I see?"
4. Claims—"What can I claim?"
5. Evidence—"How do I know? Why am I making these claims?"
6. Reading—"How do my ideas compare with other ideas?"
7. Reflection—"How have my ideas changed?"

They shared this with a peer, evaluated each other's writing, and gave appropriate feedback.

Finally, the students completed a research paper requiring individual reflection and writing. In this case, they summarized the ideas that they had learned across the several activities of the unit. The instructor provided questions to guide their writing, such as "How do substances move in and out of cells?"

### ***Variations for Elementary School Students***

Early research with the SWH focused on junior high school (i.e., middle school) and secondary school. More recent research has included a greater number of studies with elementary students, with positive results. This research has further integrated teaching about argumentation into the SWH (Chen, Hand, & Park, 2016; Choi, Klein, & Hershberger, 2015). Interestingly,

initial research has shown that in the primary grades, the SWH increases students' basic literacy and numeracy skills (Hand, Norton-Meier, Gunel, & Akkus, 2016).

### ***How the SWH Supports Learning***

The SWH has consistently produced good effects on students' learning. Controlled studies have isolated components of instruction that contribute to its effectiveness—writing for an authentic readership that provides feedback to the writer is more effective than writing for the teacher as audience (Gunel, Hand, & McDermott, 2009). Similarly, multiple writing assignments are more effective than a single writing assignment (Hand, Hohenshell, & Prain, 2007). Additionally, we note that the SWH includes two elements that have proven effective in research on cooperative learning: One component is individual accountability (e.g., individual writing activities and concept maps) and the other is positive interdependence (e.g., shared plans for inquiry and team presentations; Johnson & Johnson, 2002). Finally, in recent years, the SWH has been extended to include types of representation beyond written text, such as presentation software, diagrams, and mathematics. In initial studies, multimodality has been found to contribute significantly to learning (McDermott & Hand, 2013); this is discussed further in the next section.

### **Composing to Learn with Multimodal Representations**

Traditionally, writing to learn was purely textual. However, writing is only one of the media in which students can compose; they can also create drawings, and use tables, graphs, and equations. Students can also combine text with a variety of kinds of representations. In some subject areas, such as mathematics, visual arts, and science, media other than text frequently carry much of the meaning. To date, science education researchers have led the way in experimentally testing the effect of multimodal composition on learning.

Much of this research has been conducted in secondary school; an exception to this is concept mapping. Concept maps integrate textual and diagrammatic elements, and constructing concept maps is an activity that reliably contributes to learning, for both elementary and secondary students, and for students with or without learning disabilities (Dexter & Hughes, 2011; Nesbit & Adesope, 2006).

### ***How Multimodality Contributes to Learning***

Research on the processes through which multimodality contributes to learning is limited, but there are some initial theories and evidence. One theory is that the human mind represents knowledge in “dual codes”—one type of code is language and the other type is imagery. The two codes work together in creating and interpreting language. Moreover, the imagistic code may provide the basic source of meaning for language, because it evolved earlier and is more closely based on concrete experience (Paivio, 2007). Some support for the importance of mental imagery comes from research showing that the “active ingredient” (mediator) in drawing to learn is the student learning a visual representation of the information (Leopold, Sumfleth, & Leutner, 2013). In a different, but not incompatible, theory, some researchers have noted that creating a graphic or multimodal representation requires students to select ideas, organize them, and make referential connections to language. As we have seen above, these operations are shared by activities such as writing discourse syntheses and learning protocols; this suggests that the processes of learning with visual or multimodal representations may be analogous to the processes involved in learning through writing text. In support of this modality-neutral theory, we note that creating new representations can contribute to learning, even when the new representation is symbolic (numerical) rather than imagistic (Hand, Gunel, & Ulu, 2009).

### ***How Can Students Use Pictorial Summaries to Learn?***

In a project that teachers could readily duplicate in the classroom, tenth-grade students learned about molecules. First, the instructor walked students through an activity concerning the circulation of blood—the students read a text 12 paragraphs in length. For each paragraph, they read the text, and then drew a quick sketch representing the main idea, creating a pictorial summary. The researcher told students that the drawings would help them to better understand the material that they read, and directed students to make the drawings clear and simple to help them understand the text. Then, in the next phase of the study, students created pictorial summaries on the new topic of molecules. In two studies of this kind, the researchers found that drawing a pictorial summary contributed more to learning than writing a textual summary (Leopold & Leutner, 2012; Leopold et al., 2013). An important qualification is that when students simply studied a pictorial summary, this was more effective than drawing one for themselves, possibly because of the greater accuracy of the instructor-provided summary (Leopold et al., 2013).

### ***Teaching Strategies for Multimodal Composition***

A second study illustrates how students can learn to craft more complex multimedia documents as a way of supporting learning (McDermott & Hand, 2013). In high school chemistry, students completed a unit of study in which they learned to integrate a variety of representations into science writing. In the first lesson, the teacher encouraged students to use multimodal representations (this was the core of the treatment). The lesson series included:

1. Opportunities to evaluate the types and uses of modes in sources of science information including their textbooks.
2. Opportunities to highlight and critique specific strategies utilized in these sources to embed the modes other than text with the text.
3. Opportunity to create a checklist of strategies that could be used to evaluate any source of science information to determine its degree of

embeddedness.

4. Opportunities to practice creating and critiquing products incorporating these embeddedness strategies. (p. 226)

The students participated in these activities as they completed two series of lessons in which they created presentations. The presentations were shared with a real audience that provided feedback that shaped the final draft. The students then assessed their own final product using the checklist that they created earlier. The researchers added to this checklist, which assessed several dimensions of the use of representations in the presentations:

- Types of representations (picture, graph, table, list, diagram, math)
- Appropriateness
- Embeddedness (next to text, referred to in text, accurate, complete, caption, original)

The researchers found that for students to create effective presentations as well as increase their own understanding, they needed to receive the initial “encouragement lesson” plus experience in designing at least two presentations. In a subsequent, similar study, the same type of benefits from education in multimodal composition were found with students in grades 6, 7, 8, 10, and 11 (McDermott & Hand, 2016).

## **CONCLUSION: FIVE PRINCIPLES FOR WRITING TO LEARN**

Each day, teachers must create or adapt lessons to fit their grade level, curriculum, resources, and schedule. Based on research on writing to learn, what can we recommend to elementary and secondary teachers for creating writing lessons that support content learning? Here are five principles, along with some caveats.

**1. Select a genre that supports your educational purpose.** This chapter has described five genres for writing to learn, each with a different educational purpose or purposes.

- *Journal writing.* Use this genre to help students assess and build their understanding of information. It is applicable to a wide range of subjects and a variety of types of sources of information (e.g., readings, video, problem sets in math, work-learning experiences). Journal writing can be brief and informal enough to use several times a week. However, this casual type of writing has limited application beyond the classroom or course.

- *Summary/discourse synthesis.* The purpose of these two genres is to help students form an understanding of one source text or several texts. They are applicable to a wide range of content subjects. The ability to create summaries and discourse syntheses (report writing) are both essential learning and communication skills, so instruction will help to prepare students for success in secondary and postsecondary school.

- *Argumentation.* This genre can help students to think critically, to understand social or scientific controversies, and to address students' scientific or historical misconceptions. Additionally, argument writing is a communication skill that is required by many state or national curricula.

- *The SWH.* The purpose of this approach is to develop an understanding of challenging science topics. It also teaches students about the nature of inquiry in science, and initial research indicates that it raises the literacy level of early elementary students.

- *Multimodal composition.* The purpose of this genre is to understand material that lends itself to diagrams, mathematics, presentation programs (e.g., PowerPoint), or other media and genres. It also helps students understand the place of these media in disciplines such as science.

**2. Provide writing prompts that elicit learning strategies and metacognition.** Avoid simply assigning students writing activities and

expecting them to learn from these. Instead, provide students with prompts that guide them to use cognitive and metacognitive strategies and monitor their learning. The “[Journal \(Learning Protocols\) Writing](#)” section illustrates this most clearly, but as we have seen, writing activities in all five of the genres reviewed in this chapter can include cognitive and/or metacognitive writing prompts.

**3. *Teach a writing strategy.*** Strategy instruction takes principle 2 a step further—instead of simply providing students with prompts that support learning in a given activity, consider teaching students to internalize a new writing strategy that they can transfer across activities. Teachers can do this using a series of lessons in which they explicitly teach, discuss, model, support, and ask students to memorize the strategy. Strategies can be taught for writing arguments, summaries, and discourse syntheses (De La Paz & Felton, 2010; Martínez et al., 2015). A valuable resource for strategy teaching is *Powerful Writing Strategies for All Students* (Harris, Graham, Mason, & Friedlander, 2008).

**4. *Consider brief, frequent writing activities, over an extended time.*** Projects in which students have written less than 10 minutes per session, for a full semester or more, contribute significantly more to learning than writing longer texts, or using writing activities for less than a semester (Bangert-Drowns et al., 2004). However, a caveat is that this guideline may be most applicable to units of study based on informal writing. Other purposes and approaches (e.g., teaching students a strategy for writing discourse syntheses) require different allocations of time (e.g., Martínez et al., 2015).

**5. *Consider differentiating.*** The following suggestions proportion the challenge of activities to students’ achievement or knowledge level. A caveat is that each of these suggestions have been investigated in only one or two studies; additionally, one recent study found no difference in the effectiveness of two types of writing activities for students with learning disabilities versus

without learning disabilities (Hebert, Graham, Rigby-Wills, & Ganson, 2014). To date, some findings about differentiating for students include (a) differentiate the modality, so that lower-ability students learn through talk or talk combined with writing, while higher-achieving students learn through individual writing (Rivard & Straw, 2000); (b) differentiate the genre, so that lower-prior-knowledge students summarize information from source texts, while higher-prior-knowledge students write arguments (Gil, Bråten, Vidal-Abarca, & Strømsø, 2010); and (c) differentiate the presentation of writing prompts by allowing higher-achieving students to select from a menu of prompts and sequence their own responses, while asking lower-achieving students to respond sequentially to one prompt at a time (Klein & Ehrhardt, 2015).

## REFERENCES

- Bangert-Drowns, R. L., Hurley, M. M., & Wilkinson, B. (2004). The effects of school-based writing-to-learn interventions on academic achievement: A meta-analysis. *Review of Educational Research, 74*, 29–58.
- Britt, M. A., & Rouet, J. F. (2012). Learning with multiple documents: Component skills and their acquisition. In J. R. Kirby & M. J. Lawson (Eds.), *Enhancing the quality of learning: Dispositions, instruction, and learning processes* (pp. 276–314). Cambridge, UK: Cambridge University Press.
- Chen, Y. C., Hand, B., & Park, S. (2016). Examining elementary students' development of oral and written argumentation practices through argument-based inquiry. *Science and Education, 25*, 277–320.
- Choi, A., Klein, V., & Hershberger, S. (2015). Success, difficulty, and instructional strategy to enact an argument-based inquiry approach: Experiences of elementary teachers. *International Journal of Science and Mathematics Education, 13*, 991–1011.
- De La Paz, S., & Felton, M. K. (2010). Reading and writing from multiple source documents in history: Effects of strategy instruction with low to average high school writers. *Contemporary Educational Psychology, 35*, 174–192.
- Dexter, D. D., & Hughes, C. A. (2011). Graphic organizers and students with learning disabilities: A meta-analysis. *Learning Disability Quarterly, 34*, 51–72.
- Felton, M., Garcia-Mila, M., & Gilabert, S. (2009). Deliberation versus dispute: The impact of argumentative discourse goals on learning and reasoning in the science classroom. *Informal Logic, 29*, 417–446.
- Gelati, C., Galvan, N., & Boscolo, P. (2014). Summary writing as a tool for improving comprehension of expository texts: An intervention study in a primary school. In P. D. Klein, P. Boscolo, L.



- Kirkpatrick, & C. Gelati (Eds.), *Writing as a learning activity* (pp. 191–216). Leiden, the Netherlands: Brill.
- Gil, L., Bråten, I., Vidal-Abarca, E., & Strømsø, H. I. (2010). Summary versus argument tasks when working with multiple documents: Which is better for whom? *Contemporary Educational Psychology, 35*, 157–173.
- Gillespie Rouse, A., Graham, S., & Compton, D. (2017). Writing to learn in science: Effects on grade 4 students' understanding of balance. *Journal of Educational Research, 110*(4), 366–379.
- Glogger, I., Holzäpfel, L., Schwonke, R., Nückles, M., & Renkl, A. (2009). Activation of learning strategies in writing learning journals: The specificity of prompts matters. *German Journal of Educational Psychology, 23*(2), 95–104.
- Glogger, I., Schwonke, R., Holzäpfel, L., Nückles, M., & Renkl, A. (2012). Learning strategies assessed by journal writing: Prediction of learning outcomes by quantity, quality, and combinations of learning strategies. *Journal of Educational Psychology, 104*, 452–468.
- Graham, S., & Hebert, M. (2011). Writing to read: A meta-analysis of the impact of writing and writing instruction on reading. *Harvard Educational Review, 81*, 710–744.
- Gunel, M., Hand, B., & McDermott, M. A. (2009). Writing for different audiences: Effects on high-school students' conceptual understanding of biology. *Learning and Instruction, 19*, 354–367.
- Hand, B., Gunel, M., & Ulu, C. (2009). Sequencing embedded multimodal representations in a writing to learn approach to the teaching of electricity. *Journal of Research in Science Teaching, 46*, 225–247.
- Hand, B., Hohenshell, L., & Prain, V. (2007). Examining the effect of multiple writing tasks on year 10 biology students' understandings of cell and molecular biology concepts. *Instructional Science, 35*, 343–373.
- Hand, B., Norton-Meier, L. A., Gunel, M., & Akkus, R. (2016). Aligning teaching to learning: A 3-year study examining the embedding of language and argumentation into elementary science classrooms. *International Journal of Science and Mathematics Education, 14*, 847–863.
- Hand, B., Wallace, C. W., & Yang, E. (2004). Using a science writing heuristic to enhance learning outcomes from laboratory activities in seventh-grade science: Quantitative and qualitative aspects. *International Journal of Science Education, 26*, 131–149.
- Harris, K. R., Graham, S., Mason, L. H., & Friedlander, B. (2008). *Powerful writing strategies for all students*. Baltimore: Brookes.
- Hebert, M., Graham, S., Rigby-Wills, H., & Ganson, K. (2014). Effects of note-taking and extended writing on expository text comprehension: Who benefits. *Learning Disabilities: A Contemporary Journal, 12*(1), 43–68.
- Hebert, M., Simpson, A., & Graham, S. (2013). Comparing effects of different writing activities on reading comprehension: A meta-analysis. *Reading and Writing: An Interdisciplinary Journal, 26*, 111–138.
- Hübner, S., Nückles, M., & Renkl, A. (2010). Writing learning journals: Instructional support to overcome learning-strategy deficits. *Learning and Instruction, 20*, 18–29.
- Johnson, D. W., & Johnson, R. T. (2002). Learning together and alone: Overview and meta-analysis. *Asia Pacific Journal of Education, 22*, 95–105.
- Keys, C. W., Hand, B., Prain, V., & Collins, S. (1999). Using the science writing heuristic as a tool for learning from laboratory investigations in secondary science. *Journal of Research in Science*

- Teaching*, 36, 1065–1084.
- Klein, P. D., & Boscolo, P. (2016). Trends in research on writing as a learning activity. *Journal of Writing Research*, 7, 311–350.
- Klein, P. D., & Ehrhardt, J. S. (2015). The effects of discussion and persuasion writing goals on reasoning, cognitive load, and learning. *Alberta Journal of Educational Research*, 61, 40–64.
- Klein, P. D., Haug, K. N., & Arcon, N. (2016). The effects of rhetorical and content subgoals on writing and learning. *Journal of Experimental Education*, 85, 291–308.
- Klein, P. D., & Samuels, B. (2010). Learning about plate tectonics through argument-writing. *Alberta Journal of Educational Research*, 56, 196–217.
- Leopold, C., & Leutner, D. (2012). Science text comprehension: Drawing, main idea selection, and summarizing as learning strategies. *Learning and Instruction*, 22, 16–26.
- Leopold, C., Sumfleth, E., & Leutner, D. (2013). Learning with summaries: Effects of representation mode and type of learning activity on comprehension and transfer. *Learning and Instruction*, 27, 40–49.
- Lewis, W. E., & Ferretti, R. P. (2011). Topoi and literary interpretation: The effects of a critical reading and writing intervention on high school students' analytic literary essays. *Contemporary Educational Psychology*, 36, 334–354.
- Martínez, I., Mateos, M., & Martín, E. (2017). Analysis of effective instructional sequences in upper primary education (11–12 year old students) to enhance content-learning through the integrated use of reading and writing: Key components and possible improvements. In R. Fidalgo, K. Harris, & M. Braaksma (Eds.), *Design principles for teaching effective writing* (pp. 179–200). Leiden, the Netherlands: Springer.
- Martínez, I., Mateos, M., Martín, E., & Rijlaarsdam, G. (2015). Learning history by composing synthesis texts: Effects of an instructional programme on learning, reading and writing processes, and text quality. *Journal of Writing Research*, 7, 275–302.
- McDermott, M. A., & Hand, B. (2013). The impact of embedding multiple modes of representation within writing tasks on high school students' chemistry understanding. *Instructional Science*, 41, 217–246.
- McDermott, M. A., & Hand, B. (2016). Modeling scientific communication with multimodal writing tasks: Impact on students at different grade levels. In B. Hand, M. McDermott, & V. Prain (Eds.), *Using multimodal representations to support learning in the science classroom* (pp. 183–211). Cham, Switzerland: Springer.
- Nesbit, J. C., & Adesope, O. O. (2006). Learning with concept and knowledge maps: A meta-analysis. *Review of Educational Research*, 76, 413–448.
- Nückles, M., Hübner, S., Dümer, S., & Renkl, A. (2010). Expertise reversal effects in writing-to-learn. *Instructional Science*, 38, 237–258.
- Nückles, M., Hübner, S., & Renkl, A. (2009). Enhancing self-regulated learning by writing learning protocols. *Learning and Instruction*, 19, 259–271.
- Nussbaum, E. M., & Schraw, G. (2007). Promoting argument-counterargument integration in students' writing. *Journal of Experimental Education*, 76, 59–92.
- Paivio, A. (2007). *Mind and its evolution: A dual coding theoretical approach*. Mahwah, NJ: Erlbaum.
- Reznitskaya, A., Kuo, L. J., Glina, M., & Anderson, R. C. (2009). Measuring argumentative reasoning: What's behind the numbers? *Learning and Individual Differences*, 19, 219–224.

- Rivard, L. P., & Straw, S. B. (2000). The effect of talk and writing on learning science: An exploratory study. *Science Education, 84*, 566–593.
- Roelle, J., Krüger, S., Jansen, C., & Berthold, K. (2012). The use of solved example problems for fostering strategies of self-regulated learning in journal writing. *Education Research International, 2012*, 1–14.
- Schraw, G. (1998). Promoting general metacognitive awareness. *Instructional Science, 26*, 113–125.
- Segev-Miller, R. (2007). Cognitive processes in discourse synthesis: The case of intertextual processing strategies. In M. Torrance, D. Galbraith, & L. Van Waes (Eds.), *Writing and cognition: Research and application* (pp. 231–250). Amsterdam: Elsevier.
- Solé, I., Miras, M., Castells, N., Espino, S., & Minguela, M. (2013). Integrating information: An analysis of the processes involved and the products generated in a written synthesis task. *Written Communication, 30*, 63–90.
- Walton, D., Reed, C., & Macagno, F. (2008). *Argumentation schemes*. New York: Cambridge University Press.
- Yeh, S. S. (1998). Validation of a scheme for assessing argumentative writing of middle school students. *Assessing Writing, 5*, 123–150.
- Zimmerman, B. J., & Martinez-Pons, M. (1990). Student differences in self-regulated learning: Relating grade, sex, and giftedness to self-efficacy and strategy use. *Journal of Educational Psychology, 82*(1), 51–59.
- Zohar, A., & Nemet, F. (2002). Fostering students' knowledge and argumentation skills through dilemmas in human genetics. *Journal of Research in Science Teaching, 39*, 35–62.

# Chapter 8

## Writing with Digital Tools

Rachel Karchmer-Klein

The digital era has negatively impacted grammar and writing skills. But it doesn't have to if K-12 schools do their jobs.

—ANONYMOUS TWEET

I am a moderately active Twitter user, mainly relying on the application (app) to build my professional learning network (PLN). The tweet above captured my attention while I was researching ideas for this chapter. I did not know the author, yet the words struck me so that I reread it several times, trying to make meaning of the message. I thought about the first sentence, the one about how digital tools impact grammar and writing skills, and pondered whether or not I agreed. Sure, the ubiquity of text-speak, “a form of written language characterized by abbreviations and typically not following standard grammar, spelling, punctuation, and style” (dictionary.com) goes hand in hand with the increased use of digital tools, especially when such tools constrain the writer to 280 characters. And yes, I have been known to cringe when a friend sends me a message that substitutes numbers for words (e.g., 4 instead of *for*). Yet, I understand the need for conciseness and brevity in one’s

writing when communicating in the 21st century. I also recognize the importance of understanding social settings and the fact that some digital landscapes do not warrant traditional grammar structures.

I also reread the second sentence several times, focusing on the phrase “if K–12 schools do their jobs.” If the purpose of school is to transfer knowledge in ways that allow children to become productive members of society (i.e., economic, cultural, social), then shouldn’t 21st-century education prepare students to read and write with the affordances of digital tools whether or not they conform to traditional norms? Digital tools like Twitter, Snapchat, Tumblr, and Instagram rely on photographs, video, images, sound, and truncated written language to communicate ideas. The versatility of communication modes is a unique attribute of today’s technology.

To examine this idea further, I shared the tweet with a group of teachers who taught a range of grade levels and content areas and asked them to informally share their reactions. The majority agreed that many times students’ grammar and writing skills parallel electronic dialogue, rather than traditionally printed text that reflects standard written English. From these teachers’ perspectives, students seem to rely on autocorrect, write in short sentences with little detail, and use punctuation sparingly when engaging in out-of-school digital literacy practices. A middle school teacher explained, “Students spend so much time at home behind a screen talking to their friends via text or other social media that it translates to the writing they produce in school.” However, the teachers were emphatic that educating students on the functional skills associated with technology, as well as the pragmatics of digital environments, is part of their job, one they take very seriously. As a high school English teacher explained, her students are taught to understand social media so they can delineate its norms from those used when communicating within school and other professional settings.

Thus, it *is* our schools’ responsibility to teach students about different types of writing. This includes recognizing the various ways we communicate via “different technologies, modalities, and contexts” (Leu, Slomp, Zawilinski, & Corrigan, 2016, p. 42). In fact, researchers argue that writing instruction

would benefit from leveraging what students learn from informal digitally mediated communication to more effectively prepare them for the inherent demands of writing in formal digital environments (Alvermann, 2011; Stone, 2007).

What are best practices for writing with digital tools? In order to answer this question, I took a two-step approach. First, unlike sentence construction, planning, argumentative writing, and revision, I was hard-pressed to find evidence-based practices (EBPs) that “show a positive effect on student performance across multiple investigations” using randomized control designs (Graham, Harris, & Chambers, 2016, p. 214). Therefore, I read reviews of research on EBPs in writing for students in grades 1–12 (Graham et al., 2016) and grades K–8 (Graham, Harris, & Santangelo, 2015). Interestingly, both highlighted the paucity of research on digital tools and writing instruction, referring only to the effects of word processing as a tool for composing (e.g., Morphy & Graham, 2012). Next, I examined the digital tools I wrote about in the two previous editions of this volume as well as the recent work I conducted on multimodal composition (e.g., Karchmer-Klein, Mouza, Shinas, & Park, 2017; Karchmer-Klein, Shinas, & Park, 2014). Using the EBPs in writing as guides (Graham et al., 2016; Graham, Harris, et al., 2015), I identified digital tools that can be seamlessly incorporated to facilitate the implementation of best practices in writing instruction.

The purpose of this chapter is to encourage educators to think differently about writing and its relationship to digital tools. To this end, the chapter is divided into three sections. I begin by defining digital text—the medium by which we communicate via digital devices. I argue that before technology can be used effectively as a tool in writing, teachers must recognize the unique characteristics of digital text (Karchmer-Klein et al., 2014). Next, I share a range of digital tools along with examples of how they can be used to support evidence-based writing practices in K–12 settings. It is important to note two caveats:

1. I contemplated the selection of tools to include in the third edition of

this chapter. Given technology's rapid rate of development, I wanted to make sure the tools were timely and also applicable to a large audience with a range of technology experience. Therefore, some of the tools may be familiar while others are new. Hopefully either way, innovative approaches to their integration can be gleaned.

2. I recognize schools around the world have purchased large amounts of technology and districts' choices vary between iPads, Chromebooks, and other options (U.S. Department of Education, 2016). To make this chapter applicable to a large audience, I describe tools designed for different operating systems, but encourage readers to identify ones with similar capabilities that run on the system that matches their technology.

The chapter concludes by encouraging teachers to use digital tools to build a PLN to help them navigate the ever-changing digital landscape.

## **CHARACTERISTICS OF DIGITAL TEXT AND EBPS IN WRITING**

Schools around the world are equipped with a range of tools such as computers, cameras, tablets, and interactive whiteboards (U.S. Department of Education, 2016). Although different devices, they share a common medium: digital text. The unique characteristics of digital text can be leveraged to support EBPs in writing (Graham et al., 2016).

Digital text is multimodal. Modes—such as words, images, animation, hyperlinks, or sounds—are signs that carry meaning (Cope & Kalantzis, 2015). Multimodality is the use of multiple modes within a text, and when integrated effectively results in a cohesive message. Jewitt (2014) suggests four assumptions that undergird our understanding of multimodality. One assumption is that all communication is multimodal—that is, although we tend to prioritize written language in teaching and learning, communication

can be represented through a variety of linguistic and nonlinguistic modes. A second assumption is that each mode serves a unique purpose requiring writers to make informed choices regarding modal representation. Third, multimodality is intentional. In other words, writers must consider how modes complement and “co-present” a communicative event (Jewitt, 2014, p. 16) so as not to contradict each other. Finally, multimodality is a social act interpreted by social norms. For instance, a writer may use flashing images to indicate that each image must be clicked on to forward the progress of a digital story. If the reader is unfamiliar with flashing lights, he or she may not realize they are used to draw attention, indicating a portal to another digital space.

Another characteristic of digital text is that it tends to be nonlinear. By incorporating hyperlinks and other modes, writers can guide their readers down varying paths. Alternatively, readers can develop their own reading path, perhaps leading them to a different understanding of the text than the author intended. Valerie Shinas and I found this to be the case in our own research when examining digital text designed with a virtual poster tool (Karchmer-Klein & Shinas, 2012). Participants inserted arrows as textual scaffolds to guide the reader down the writer’s path. However, some posters did not include such textual scaffolds, leaving readers to develop their own reading paths, which in several instances hindered their comprehension of the writer’s intended meaning. To develop 21st-century readers and writers, we must prepare students to work within nonlinear writing structures so they understand how these dynamic texts affect comprehension.

Digital text is also malleable, enabling writers to continuously revise content and change background colors, font styles, and the placement of graphics to determine the best format for their writing. This is a much different capability than traditionally printed prose that is typically sent to editors for proofreading and formatting. In digital environments, what one person reads on Monday may be different from what another reads on Tuesday.

A fourth characteristic of digital text is that it is easily shareable and



publishable on the Internet, the global computer network serving billions of users. This is beneficial to writers who want to write collaboratively or project their message to a large audience. In fact, teachers report an increase in students' motivation to write well when they have opportunities to revise their work based on peer feedback of online publications (Lapp, Shea, & Wolsey, 2010). By inviting critique from outside audiences via the Internet, writers may recognize the social context of their work, leading them to consider different perspectives on their ideas and to think more deeply about how best to approach revision (Castek, Beach, Cotanch, & Scott, 2014).

The characteristics of digital text make it a rich conduit to implementing best practices in writing instruction. For example, to be college and career ready, students must be able to work collaboratively (National Governors Association Center for Best Practices & Council of Chief State School Officers [NGA & CCSSO], 2010; Schriver, 2012). Research indicates collaborative writing experiences have positive effects on students' writing skills (Graham, Harris, et al., 2015). There is also a solid foundation of research demonstrating the positive effects of feedback on students' writing skills (Graham, Hebert, & Harris, 2015). While the largest gains stem from adult feedback, peer feedback has been proven worthy as well (Boscolo & Ascorti, 2004; Philippakos & MacArthur, 2016). Publishing digital text using collaborative digital tools affords users the opportunity to work with peers across grade levels (Milman, Carlson-Bancroft, & Boogart, 2014) and disciplines (Castek & Beach, 2013) during different stages of the writing process.

Foundational writing skills are also critical to the development of successful writers. The Common Core State Standards (CCSS; NGA & CCSSO, 2010) and researchers define these as typing, spelling, handwriting, genre, and strategies (e.g., Santangelo & Graham, 2013). Yet foundational skills within digital landscapes extend beyond those defined within traditionally printed texts that privilege written language. Instead, we must rethink foundational literacy skills in light of the characteristics of digital text (Karchmer-Klein, Shinas, & Wise, 2015). Writing instruction should be

systematically teaching students how to carefully select images, sounds, video, and other modes to compose cohesive ensembles (Jewitt, 2014). Digital tools provide excellent opportunities to design such lessons.

The next section of this chapter presents a range of digital tools along with examples of how they can be used to build foundational and collaborative writing skills. Importantly, some examples describe ways for teachers to practice with digital tools independent of their writing instruction for students.

## **Blogs**

Weblogs, also known as blogs, are virtual spaces where writers share thoughts, ponder ideas, and pose questions using compilations of words, images, video, and audio. Two unique aspects stand out about this form of digital writing. First, blog authors take on the role of both writer and editor, making decisions about the content, layout, and language of their digital text. This differs greatly from the traditional publication process where editors dictate the presentation. Second, blogs enable readers to comment on entries, allowing relationships to form between readers and writers. This is an especially powerful affordance from a pedagogical perspective as it provides writers access and interaction with a wide range of audiences.

It is estimated there are over 450 million English language blogs (Technorati, 2011) covering a range of topics. Edublogs, the largest blog provider, reports over four million education-related blogs created by teachers and students on their platform. Previous work identified three types of blogs focused on education (MacArthur & Karchmer-Klein, 2010). One type are those blogs written by educators about the highs and lows of teaching. A good example is Stack of Marking (<https://stackofmarking.wordpress.com/about>), named as a Best Teaching Blog of 2017 by A+ Star Teachers, a teacher recruitment company. A former teacher and educational consultant in the United Kingdom, Tom Starkey

writes about class issues, school behavior, and teacher well-being. His detailed posts describe work-related experiences that illustrate his view of the current state of schooling. George Couros shares a principal's perspective of education on his blog *The Principal of Change: Stories of Learning and Leading* (<https://georgecouros.ca/blog>). He chronicles his views of collaborating with stakeholders to meet the needs for all students.

Some bloggers choose to remain anonymous so they can share their stories while maintaining their privacy. Perhaps the most interesting compilation of anonymous blogs is found on the "Secret Teacher" section of The Guardian website ([www.theguardian.com/teacher-network/series/the-secret-teacher](http://www.theguardian.com/teacher-network/series/the-secret-teacher)). Educators are encouraged to submit ideas for anonymous posts for the purpose of "lifting the lid on teaching." Topics covered include lack of teacher appreciation, comforting students after a death of a classmate, to classroom distractions and the crush of creativity. Although these blogs detail personal experiences in education, their stories are relatable to many educators as evidenced by the numerous comments left by readers.

A second type of blog is written by educators who devote their time for the purpose of sharing advice and educational resources. With 250,000 followers, the Cool Cat Teacher blog ([www.coolcatteacher.com](http://www.coolcatteacher.com)) earned a Best Teacher Edublog Award in 2014. The accolades were not surprising given the blog was mentioned on several websites as I conducted research for this chapter. Blogger Vicki Davis worked as a high school teacher and now an educational consultant. Her site serves as a portal where readers can access a wealth of resources. For instance, last year she started a 10-minute teacher podcast where she interviews experts on important education topics. Likewise, Katherine McKnight, a former high school teacher, maintains a blog ([www.katherinemcknight.com/blog](http://www.katherinemcknight.com/blog)) sharing important ideas and lessons about how to use technology to support writing development.

Educators' perspectives should not be undervalued when it comes to understanding technology integration. In fact, much of what we know about best practices in using the technology to support reading and writing is informed by exemplary classroom teachers who use technology on a regular

basis (Karchmer, Mallette, Kara-Soteriou, & Leu, 2005). Their daily interactions with students, along with their interest in technology, puts them in an exceptional position to share critical insight into how the Internet can support writing as well as other disciplines.

A third type of educational blog includes those in which teachers and students work together to share content. Learning Is Messy, authored by Brian Crosby, an upper elementary classroom teacher and science, technology, engineering, and math (STEM) leader, is a great example of this. On the blog ([www.learningismessy.com](http://www.learningismessy.com)) you will find videos of teachers engaging in innovative STEM lessons as well as videos documenting students' community service projects. Importantly, the class assignments are described in detail, providing context from which to understand the process students engaged in as they planned, drafted, revised, and edited their final presentations (Graham, Harris, et al., 2015).

While one of the benefits of blogs is the interaction between reader and writer, many bloggers are disappointed by the few comments they receive in response to their posts. Through Internet searching, I found two exciting projects that target this issue through intentional collaboration. David Mitchell, the deputy head teacher at Heathfield Primary School in the United Kingdom, found the lack of interaction between reader and writer unsettling to students when they published work on the class blog. The comments that were made came from inside his school with few, if any, outside comments. In response, he created the concept of quadblogging (<http://quadblogging.net>). Quadblogging connects four classrooms from around the world, building an international community of children communicating. Each week one class is the focus and the students in the other three classes read and make "quality comments" on the classroom's posts. The students get to know one another and also learn about different places, customs, and cultures. Since its inception in 2011, 500,000 students have participated in quadblogging. You can go to the Quadblogging site to sign your class up to participate in this innovative collaborative project for the following school year.

The second project is titled the Student Blogging Challenge (<http://studentchallenge.edublogs.org>). Stemming from her own classroom blog use, Sue Wyatt partnered with Sue Waters and the Edublog team to design a project that would “connect student bloggers with a global audience while supporting teachers with their classroom blogging.” The challenge, run twice a year, consists of 10 tasks. Some require students to research topics such as global warming, cultural differences, and food choices. Others are focused on digital literacy skills such as digital citizenship, cyber safety, composing thoughtful digital feedback, and multimodality (e.g., embedding sound and images). The final task is designed to bring the experience to a close by requiring bloggers to audit their work. A variety of prompts are provided to scaffold their thinking:

- “How many posts did you write?”
- “How many comments did you receive from classmates, teachers, or overseas students?”
- “Which post received the most comments? Why do you think that happened?”
- “Which post did you enjoy writing the most and why?”
- “Which web tools did you use to show creativity on your blog?”

A unique aspect of this project requires the blogger to ask a student or adult unfamiliar with his or her work to audit the blog by providing feedback on the weekly posts.

Teachers may choose to have their entire class join the challenge, but individual students are also encouraged to participate. Perhaps most exciting is the opportunity to mentor other participants. Once a student has participated in two challenges, he or she may register as a mentor. This role requires the mentor to regularly comment on a specific set of students’ work each week. This ensures all participants receive thoughtful, timely feedback after publication.

Quadblogging and the Student Blogging Challenge give students

opportunities to practice foundational digital skills while honing their collaborative writing skills.

## Wikis

A wiki is a digital collaborative writing space where writers can incorporate a range of modes to share thoughts and ideas about different topics within a single digital text. Wikipedia is probably the most recognized. Created in 2001, it is an online encyclopedia meant to be revised by its readers. From a pedagogical perspective, wikis are especially useful tools because they maintain records of development and revisions, enabling teachers to document students' participation.

Innovative teachers integrate wikis into classroom instruction in many ways, from basic approaches to more sophisticated. For instance, Kathy Cassidy, a primary teacher from Canada, created a public wiki for the purpose of visually representing the number 1,000 (<http://1000names.wikispaces.com/home>). She asked her audience, "My grade ones and twos want to know what 1000 looks like. We are collecting 1000 names. Can you help us by adding your name to our wiki? Just click on edit at the top of the page, add the next number and your name AT THE BOTTOM, then click save." As of October 9, 2017, at 1:23 P.M., 2,212 people had added their names to the table.

Greetings from the World (<http://greetingsfromtheworld.wikispaces.com>) is a collaborative writing project that uses wikis and a virtual poster tool to share important content. Arjana Blazic, the creator, wanted to share her students' experiences in her home country of Croatia with the rest of the world. To do so, her students created glogs using Glogster, a Web 2.0 tool that allows users to create virtual posters combining text, video, images, and music (Karchmer-Klein & Shinas, 2012). She embedded these glogs on her classroom wiki and invited other schools to view them. She also invited students and teachers to create their own glogs about their home countries,

states, and cities and post them to the wiki so her students could learn about different places and cultures. As of March 2012, 520 students from 19 different countries had created 300 glogs representing their home countries. Together, they have developed a dynamic compilation of resources from which others can learn.

Wikijunior (<http://en.wikibooks.org/wiki/Wikijunior>) captures the essence of true collaborative writing. It is a project geared toward children through age 12. Here you will find hundreds of books in various stages of the writing process. Students can choose one and add, delete, and revise sections to make it better. The site encourages writers to fact-check, proofread, and also create their own books. There is also a Wikijunior talk page where students can discuss changes and content with others.

Although not technically called a wiki, Google Docs affords similar collaborative opportunities. I recently taught a class on digital literacies and the majority of students, all practicing K–12 teachers, worked in classrooms that utilized this tool frequently. This was not surprising given the rise in Chromebook access across the country (Taylor, 2015). Perhaps one of the best ways to illustrate Google Docs is by watching this video posted by high school teacher Mr. Sowash ([www.youtube.com/watch?v=6vUkoRJ9YE8](http://www.youtube.com/watch?v=6vUkoRJ9YE8)). It depicts the process of 18 ninth-grade students writing a collaborative story while working independently on desktop computers in their school's computer lab. Mr. Sowash screen captured the story's development using Camstasia software and then converted it to an iMovie to share the process with other educators. The directions he gave the students illustrated the simplicity of the assignment:

- [Teacher] writes the first sentence to get things going.
- Every student adds one sentence to the story.
- Students may not change anything that someone else has written (with the exception of spelling).
- Students should not write anything they would not want their mothers to read.

Of course, writing one story with 18 adolescents could be a disjointed task and the video does not represent the revising component of the process. However, once students understand the functional skills associated with Google Docs and practice with the collaborative aspects, they will become more versed in the process.

The above is certainly not an exhaustive list of ways to integrate wikis, but is meant to provide ideas to get you thinking about how to do so in your writing classrooms. It is also important to keep in mind that along with using this collaborative tool comes a number of issues. My colleague Skip MacArthur and I highlighted these issues in previous work and they are worth mentioning here (MacArthur & Karchmer-Klein, 2010). First, teachers must consider carefully what it means to collaborate on writing assignments in the classroom and how they will prepare students to divide the responsibilities associated with the tasks. Second, given the open nature of the writing process when using wikis, students must learn how to respectfully respond and revise their classmates' work. Third, teachers must consider appropriate evaluation methods when assessing collaborative writing pieces. While there are no definitive ways of negotiating these issues in all classrooms, I strongly encourage you to develop a plan for responding to them before you consider using wikis in your instruction.

## **Social Media Tools**

The last edition of this chapter referred to micro-blogging and social networking as separate tools. Since 2013, the line between them has continued to blur, so for the purposes of this chapter I am combining them under the heading of “Social Media Tools”—that is, “forms of electronic communication through which users create online communities to share information, ideas, personal messages and other content” (Schauer, 2015, p. 3). Before sharing ideas related to these tools I must stress the importance of using them in safe and secure environments. Most schools have cyber-safety



policies in place. These should be reviewed before opening an account that is connected in any way to a professional environment. Teachers must not only follow these procedures because they are required to do so by the school, but because it is critical to model for our students how to be safe and maintain privacy in digital environments.

School districts across the country have been utilizing social media for several years to keep parents, teachers, and students in direct communication with school-related events (Carpenter & Krutka, 2014). According to a survey conducted by the Pew Research Center (Lenhart, 2015), Facebook (41%) continues to be the most used social media platform by U.S. teens (ages 13–17), followed by Instagram (20%), Snapchat (11%), and Twitter (6%). Likewise, teachers continue to reimagine ways to leverage the affordances of these tools for classroom writing instruction.

Like blogs and wikis, social media tools are used to promote schools and showcase student work. Instagram is often used in these ways by telling stories through images and limited written text. For example, take a look at the official DC Public Schools' Instagram site ([www.instagram.com/dcpublicschools](http://www.instagram.com/dcpublicschools)). To date there are 2,039 posts and over 10,600 followers. One of the photos on the DC Public School site shows a teenager jumping in the air in front of the Eiffel Tower. The caption reads “More than 400 DCPS students are traveling on 22 study abroad trips all over the world this summer, entirely for free! The 8th grade Paris trip is off to an exciting start. #DCPSGoesGlobal.” Followers of the site can comment on the posts.

Twitter asks users to answer the question “What are you doing?” in 280 characters or less. Teachers and writing organizations are taking advantage of this feature to help students practice writing concise messages that convey important points. Steve Rayburn, a college English teacher, engaged his students in a Twitter activity that required them to take on a character's persona. As they read *Dante's Inferno*, students posted tweets from Dante's perspective to his love interest Beatrice. The assignment required students to hone their writing skills by composing concise messages that conveyed deep

meanings (Ladd, 2009). Similarly, students at the San Francisco School of Arts were encouraged to enroll in a Twitter Micro-Lit Contest, hosted by Unstuck, a nonprofit annual publication. Contestants could write a nonfiction, fiction, or poetry entry of 12 separate tweets of 280 characters or less. The winning piece would be posted on the publication's Twitter account. These types of activities require students to think deeply about the words they choose and participate in active language building.

Another way teachers are integrating social media in their instruction is by backchanneling, a real-time digital stream that allows students to respond to classroom discussions. Students use classroom Twitter accounts and other backchannel tools (e.g., TodaysMeet) to respond to, query, and summarize class content (Gabriel, 2011). For example, Chris Webb, a middle school teacher, explained on his blog how he observed sixth graders backchanneling as they watched a 50-minute video. The students were required to post questions they had about the content presented and also summarize portions of the video.

I observed Mrs. Arenstad's fifth-grade class engaged in backchanneling during a class read-aloud of Lois Lowry's *Number the Stars*. Mrs. Arenstad told me that she liked backchanneling because "it motivated the students and at the same time engaged them directly in the lesson, requiring them to think about the content and report on it during class time." The day of my observation the students were already familiar with backchanneling and using TodaysMeet, a free program that creates a safe space for students to discuss relevant content. The purpose of the lesson was to reinforce note-taking skills by summarizing and paraphrasing important episodes in the narrative text to recognize sequence and main ideas. Students were asked to listen to Mrs. Arenstad read aloud two chapters of the book and backchannel main ideas in the order they happened. At the start, Mrs. Arenstad reminded the students of her guidelines. These included:

1. "Be respectful of your classmates' comments."
2. "Stay on topic."

3. “Do your best to use conventional spelling, but it is not required.”
4. “Focus on multitasking: listen, summarize thoughts, write.”
5. “Pose questions you have about the text.”
6. “Paraphrase your ideas in 280 characters or less.”
7. “Add something new. Don’t repeat what others have said.”

As the teacher read the chapter, I watched as students listened intently and typed directly onto their laptops. At the end of the first chapter, Mrs. Arenstad projected the transcript onto the whiteboard so the class could review the notes so far:

Annemarie is upset she does not know everything.—JOYCE

She is upset but she is figuring out that it is part of being an adult.—MIKE

I’m not sure she knows why. I think she is confused by what Uncle says.—LAUREN

Annemarie was confused early in the day but as the day goes on she seems to put two and two together.—KIRSTEN

She is becoming like her mother; an adult.—JOYCE

Annemarie is also learning what it is like to say goodbye to someone who dies. They are making food and preparing the living room.—NATHAN

Together they prioritized the most relevant comments by developing a timeline of events from the chapter. They also highlighted questions that still needed to be answered. Mrs. Arenstad then read the second chapter and the students continued to backchannel. At the end of the reading, she again projected the transcript and the class reviewed the comments. Once this was completed, the students worked in small groups to compose summaries of the chapters. This example of backchanneling illustrates how it can be an integral part of the lesson by reinforcing content through collaborative meaning making. Backchanneling has become more popular recently because teachers recognize how technology can facilitate class discussions.

Edmodo, a social networking site for education, is similar to Facebook but it is a password-protected closed system. Once connected, students can participate in a range of collaborative literacy activities given the number of tools available. In fact, Edmodo could be considered a portal or “instructional

hub” (Dobler, 2012) because it allows teachers to store a range of resources in one location, much like learning management systems (e.g., Schoology, Canvas).

I observed a seventh-grade teacher engage his students in an Edmodo-based lesson. The topic was the Mexican–American War. To begin, the students opened their laptops and their class Edmodo site as Mr. Reilly projected the site on the whiteboard and introduced the lesson. He explained that they would be using a variety of activities to think deeply about the conflict. The class reviewed the content covered the previous day, including an overview of the war and who was involved. Next, Mr. Reilly opened a link he had embedded in the Edmodo site, and as a class the students listened to “Saint Patrick’s Battalion,” a song about the Irishmen who fought against the U.S. army during the war. When the song was over, Mr. Reilly gave the students 2 minutes to use what they learned from the song to decide which side of the war they would fight on. Next, the students used the polling tool on Edmodo to post their decision. As a class they reviewed the poll’s results and discussed the different perspectives. To close the lesson, the students were required to post a note explaining their position along with one reason to support their view. Tyler, one of Mr. Reilly’s students, wrote:

I would not switch sides. You can call me a coward, but the United States had a much stronger army. I would be too afraid to move to a weaker military. It is also cowardly to leave your own country.

Edmodo can be used in a multitude of ways to support writing, including activities such as literature circle discussions, peer editing, and pen pals. However, it is only as powerful as the teacher makes it.

## **EDUCATIONAL APPLICATIONS THAT SUPPORT WRITING**

I continue to work in K–12 schools that are integrating educational apps into teaching and learning (Karchmer-Klein et al., 2017). Additionally, I teach

100% online courses in literacy. Each semester I search for new ways to present content in asynchronous environments and design instruction that leverages digital tools in ways that will challenge students' thinking about the course goals. I am constantly on the lookout for new apps that can be used to support these objectives.

Apps are software programs designed to support user content knowledge, productivity, presentation, and/or gaming in the content areas. The number of apps has increased dramatically since I wrote the second edition of this chapter in 2013. There are over 83,000 apps in the Google Play Store (Olmstead & Atkinson, 2015) and more than 200,000 education-related apps available in the Apple Store (Baig, 2018).

## Content Apps

Content apps introduce or reinforce content. Skills are typically assessed as levels of difficulty are completed. Many have game-like interfaces requiring users to beat the clock, play against opponents, or earn points. For example, based on the CCSS (NGA & CCSSO, 2010), iTooch English incorporates a plethora of multiple-choice content-area questions organized by grade level within an interactive interface. Third grade, for instance, includes questions related to choosing words and phrases for effect, introducing a topic, stating and supporting an opinion, vocabulary usage, and parts of speech. Students can work in practice or test mode and the app maintains a running progress report. Additionally, the app provides instructional support if the student struggles with content. Recent research indicates that student learning is greatest when content scaffolds are available before and during game play (Tsai, Kinzer, Hung, Chen, & Hsu, 2011). iTooch English is an especially promising app given the interface, direct correlation to the CCSS, and the content support available to students. A list of noteworthy apps that fit in this category can be found in [Table 8.1](#).

**TABLE 8.1.** Noteworthy Content Apps

---

Title	Skills
iTooch English	Range of ELA skills
Bluster	Vocabulary
Shake-a-Phrase	Vocabulary/parts of speech
Spelling City	Vocabulary/spelling
SAT Vocabulary Flashcards	Vocabulary
Mad Libs	Parts of speech
Super Sight Words	Sight words

## Presentation Apps

Presentation apps do not teach a skill or present information on their own. Instead, the teacher can design learning experiences that allow students to present their knowledge with these apps in creative ways (Beach, Anson, Breuch, & Reynolds, 2014). Show Me, for instance, is similar to a whiteboard where users can draw, color, and insert images and audio to represent ideas. I have seen Show Me used in the classroom at a simplistic level and I have also observed more complex integration, encouraging analysis of concepts and inferencing. For example, a basic implementation of Show Me was observed in a fourth-grade writing class where students were reviewing grammar rules. The teacher wrote a series of sentences on the whiteboard and asked students to “show me” the different parts of speech. The teacher called out a word and told the students to write *verb*, *noun*, *adjective*, *pronoun*, or *adverb* on their iPad. This method of using Show Me allowed the teacher to evaluate all of the students’ knowledge of the topic at the same time since they were responsible for independently documenting their responses.

An example of a more complex use was observed when seventh-grade students developed Show Me presentations to illustrate the transformation of North America into the postapocalyptic world of Panem in Suzanne Collins’s *The Hunger Games*. Students studied the geographical descriptions of the 12 districts presented in the book. Using the Show Me app, they presented their interpretations to the class in two ways. First, they drew concept maps,

showing the relationships between the author's descriptions of the districts and the characteristics of the current North America. Second, they projected a map of North America and using the drawing features, drew lines to represent the districts' boundaries. In this example, the app's affordances allowed students to conceptualize the content and visually represent their interpretations in meaningful ways.

Another type of presentation apps are screen capture tools, such as Screencastify and Quick Time. Research has examined their use when documenting students' thought processes when reading (White, 2016) and solving math problems (Soto, 2015). The idea is for the tool to capture the digital screen as students complete a particular task and verbally describe what they are doing as they complete it (Afflerbach, 2000). I observed Mrs. Burnden, a fourth-grade English language arts teacher, engage her students in screen casting as they composed book reviews about the book *Frindle* using iMovie, another presentation tool. Although the screen casts were not part of the finished product, they did illuminate the processes students followed when drafting and revising their reviews. Furthermore, Mrs. Burnden paired her students and tasked them with watching each other's screen casts and providing constructive comments. These conferences allowed for peer feedback and time to make adjustments prior to completing the final version of the iMovie. This is an example of how a digital tool, while not part of the writing process per se, can influence writing instruction.

Digital storytelling apps are another example of this category. Digital storytelling is the practice of composing multimodal texts that share narratives in dynamic ways. They can be personal accounts, professional presentations, or interactive stories and can require students to conceptualize content and apply what they have learned about genre. Digital stories are becoming a staple in many writing classrooms now that the process of integrating audio, video, graphics, and text has become less cumbersome. Most exciting, there are apps for all age levels, enabling even the youngest writers to create dynamic multimodal ensembles.

If you teach young children or are apprehensive about implementing

digital storytelling in your classroom, I recommend starting with structured apps. These provide support to the writer by including preset themes, images, and characters. They also take the writer through the process of creating a digital story, teaching students how to combine different modes to compose the narrative. For example, Toontastic 3D, a cartoon-creator app, is organized by genre. The user can choose between a three-part short story, a five-part classic story, or a five-part science report. Audio support leads the writer through the composing process, defining concepts such as conflict, climax, and resolution, and explaining how to navigate through the site. The app provides ready-made characters or the option of drawing your own. Especially exciting, Toontastic 3D allows writers to animate their scenes by moving characters and adding audio dialogue and mood music (see [Figure 8.1](#) for a screenshot).



**FIGURE 8.1.** Screenshot of Toontastic 3D.

Once students and teachers become more comfortable with utilizing different modes to tell stories (e.g., audio, video, images), they can transition



to less-structured storytelling apps, ones that allow writers to develop their own content and are not confined by the choices provided by the app. The iBook Author app is a powerful example of how authors can compose dynamic multimodal stories. The writer begins by choosing a preset page layout. However, the remainder of the composition is left to the author to determine. You can easily embed interactive graphics, text, video, and 3-D objects. Of particular interest is the ability to insert text saved as a Microsoft Word or Pages document. For instance, I created a new book and inserted this chapter into the app. Quickly, I had a professionally formatted text that could be read on the iPad. Powtoon, VoiceThread, and Tellagami are other apps that fit within this category.

It is critical to add a word of caution about such powerful tools and digital storytelling in general. In order for students to compose effective multimodal ensembles, they must understand that each mode carries meaning (Kress, 2003). They must be aware of audience and consider alternative reading paths so that their message is unified and comprehensible (Karchmer-Klein & Shinas, 2012). Similar to issues with PowerPoint, steer students away from the bells and whistles of the tool (Baker, Pearson, & Rozendal, 2010) and toward purposefully selecting modes to develop unified messages.

Presentation apps are more complex to integrate than content apps because they rely completely on teachers' instructional design. If you are hesitant to take this step, it may be beneficial to organize your instruction using Hutchison and Woodward's (2014) Technology Integration Planning Cycle for Literacy and Language Arts. The planning cycle begins the instructional design process by encouraging teachers to identify specific learning objectives. Once these are clear, teachers can make important pedagogical decisions related to the classroom environment such as whether the lesson is teacher or student centered, whether it requires few or more prior experiences, and whether it should be completed individually, in small groups, or as a whole class. Once these goals are established, teachers choose an app that provides support to student learning within the context of the learning goals. Importantly, the planning cycle reminds teachers to deeply

consider the appropriateness of the digital tool. If the constraints of the tool are too great to overcome, Hutchison and Woodward recommend instead choosing a nondigital tool to meet the lesson’s goals. By following this process of lesson development, the focus remains on how students can experience, conceptualize, analyze, and apply curriculum content (Cope & Kalantzis, 2015) through meaningful technology-integrated activities rather than using technology for its own sake. See [Table 8.2](#) for a list of noteworthy presentation apps.

**TABLE 8.2.** Noteworthy Presentation Apps

Title	Type
Puppet Pals HD	Digital storytelling tool
Kid in Story Book Maker	Digital storytelling tool
Pictello	Digital storytelling tool
Storyjumper	Digital storytelling tool
Mindmeister	Concept-mapping tool
Popplet	Concept-mapping tool
Baiboard	Collaborative whiteboard
Web Whiteboard	Collaborative whiteboard
Padlet	Collaborative online bulletin board
Write About This	Story prompts
Writing Prompts	Story prompts
SundryNotes Pro	Note-taking tool
Evernote	Note-taking tool
EdPuzzle	Interactive presentation tool
Nearpod	Interactive presentation tool
Voki	Interactive presentation tool

## PROFESSIONAL LEARNING NETWORKS

I believe the best way for educators to become well versed in digital tools is by using them regularly in their personal and professional lives. One approach I have embraced in my own practice is building a PLN—digital connections

made with educators, parents, university faculty, students, content experts, and other stakeholders. These connections enrich my professional practice by providing space to ask questions, brainstorm, vent, and share resources. The unique aspect of a digital PLN is the opportunity to connect with the global community, allowing the exchange of truly diverse perspectives.

PLNs can be created using a wide range of tools. My PLN is mostly driven by Twitter (@Rkarchmerklein). In this digital space, I tweet about my courses (@educ777sp17), service to the field (@ILA), and recent publications. I also connect to other educators who I learn from on a daily basis. For example, check out @JenWilliamEDU, an International Literacy Association board member and an educational consultant. Jen tweets regularly, sharing insightful comments on new technologies and best practices with her 45,300 followers. The more I tweet, the more information I find. Sometimes it is an educator's blog, a podcast, or news article.

When you find a resource you like you probably bookmark it on your computer so you can refer to it later. Unfortunately, this approach is limiting because the bookmarks are connected to your computer. So, for example, what do you do if you bookmarked a site on your home computer and you want to access the site on your phone? You may also bookmark sites but neglect to identify the original author or become overzealous and bookmark many more sites than you can ever review. A solution to these problems is digital content curation—utilizing digital tools to strategically select and categorize digital content. I use Diigo to organize my resources, but other educators prefer Feedly, Pinterest, or Evernote.

I recently incorporated a semester-long PLN project into an online course I teach in a Master of Teacher Leadership program at my university. See [Table 8.3](#) for a list of steps.

**TABLE 8.3.** Steps to Developing a PLN

Steps	Description	Example(s)
Problem of practice (POP)	Identify a POP found in your professional environment that you	In my fifth-grade class, at least five students have difficulty

	are invested in examining closer.	writing complex sentences.
Professional organizations	Identify and connect with professional organizations whose mission statements and resources relate to your POP.	National Council of Teachers of English National Writing Project International Literacy Association
Educators	Identify and connect with educators who examine issues related to your POP.	A Year of Reading (blog) @2TLMshine (Twitter) @laffinteach (Twitter)
Colleagues	Connect with people you have established relationships with and discuss your POP.	
Evaluate	Closely examine the information gathered from your PLN using the CRAAP test.	

---

The course introduced practicing educators to different ways of using technology to foster collaborative experiences with colleagues and a PLN seamlessly fit within the learning objectives. In an effort to make the activity applicable to everyone, I asked students to identify a problem of practice (POP) found in their professional environment that they were invested in examining closer (City, 2011). Each week they built another aspect of the PLN related to the POP. They began by identifying and connecting with professional organizations that published content about their POP. The following week they focused on finding educators who were interested in the same POP and discussed the topic on social media platforms, such as Twitter chats or blogs. They connected with them using digital tools such as LinkedIn and Plus.google.com. The third week students connected with people they knew personally, both in and outside of their professional settings. The final step of the project required students to take a step back and carefully examine the information they uncovered about their POP through their PLN. This was a critical portion of the project because students evaluated the content to determine whether their PLN contacts were reliable sources. For this course, I

utilized the five criteria outlined in the CRAAP test designed by the Meriam Library at California State University, Chico (2010):

1. Currency: timeliness of the information.
2. Relevance: importance of the information as it relates to the POP.
3. Authority: quality of the source of the information.
4. Accuracy: reliability and correctness of the information.
5. Purpose: reason the information is published by the author.

Creating a PLN is beneficial because it allows on-demand professional development tailored to meet the needs of the individual teacher. I encourage all educators to take the leap to envelope themselves in digital tools, learning with and about them along the way.

## **FINAL THOUGHTS**

Teachers are more inclined to integrate digital tools when there is a clear connection between technology-based activities and curriculum standards (Karchmer-Klein, 2007). Fortunately, technology is embedded within the CCSS (NGA & CCSSO, 2010) for writing. When I was asked to write this chapter, I took a closer look at the Standards and found that while the degree and complexity to which technology is included at each grade level varied, there were four common threads. Students are expected to (1) use a variety of digital tools, (2) produce and publish digital text, (3) interact and collaborate with others on their writing, and (4) use multimedia (i.e., modes) to scaffold comprehension of their texts. The applications and examples presented in this chapter illustrate how students can use digital tools for these purposes.

In conclusion, digital tools and the ease of publication have expanded students' opportunities to communicate their voices. As such, audience awareness has become even more critical. Rather than blame technology for poor writing skills, I encourage educators to examine its affordances and constraints and most importantly, expand their repertoire of writing

instructional practices to teach students when and how to craft their work for appropriate settings. We must bridge in and outside of school writing opportunities or we disservice our students by privileging written language while reality takes place in a multimodal world. I hope the tools and examples discussed in this chapter empower educators to try them out and further explore best practices.

## REFERENCES

- Afflerbach, P. (2000). Verbal reports and protocol analysis. In M. Kamil, P. D. Mosenthal, E. B. Moje, P. D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. 3, pp. 163–180). New York: Routledge/Taylor & Francis.
- Alvermann, D. E. (2011). Popular culture and literacy practices. In M. Kamil, P. D. Pearson, E. B. Moje, & P. P. Afflerbach (Eds.), *Handbook of reading research* (Vol. 4, pp. 541–560). New York: Routledge/Taylor & Francis.
- Baig, E. C. (2018). Apple unveils new \$299 iPad for students with support for augmented reality, Apple Pencil. Retrieved from [www.usatoday.com/story/tech/2018/03/27/apple-unveils-new-299-ipad-students-supports-ar-apple-pencil/460694002](http://www.usatoday.com/story/tech/2018/03/27/apple-unveils-new-299-ipad-students-supports-ar-apple-pencil/460694002).
- Baker, E. A., Pearson, P. D., & Rozendal, M. S. (2010). Theoretical perspectives and literacy studies: An exploration of roles and insight. In E. A. Baker (Ed.), *The new literacies: Multiple perspectives on research and practice* (pp. 1–22). New York: Guilford Press.
- Beach, R., Anson, C. M., Breuch, L. A. K., & Reynolds, T. (2014). *Understanding and creating digital texts: An activity-based approach*. New York: Rowman & Littlefield.
- Boscolo, P., & Ascorti, K. (2004). Effects of collaborative revision on children's ability to write understandable narrative text. In L. Allal, L. Chanquoy, & P. Largy (Eds.), *Revision: Cognitive and instructional processes* (pp. 157–170). Boston: Kluwer.
- Carpenter, J. P., & Krutka, D. G. (2014). How and why educators use Twitter: A survey of the field. *Journal of Research on Technology in Education*, 46(4), 414–434.
- Castek, J., & Beach, R. (2013). Using apps to support disciplinary literacy and science learning. *Journal of Adolescent and Adult Literacy*, 56(7), 554–564.
- Castek, J., Beach, R., Cotanch, H., & Scott, J. (2014). Examining middle-school students' uses of Diigo annotations to engage in collaborative argumentative writing. In R. Anderson & C. Mims (Eds.), *Handbook of research on digital tools for writing instruction in K–12 settings* (pp. 80–101). Hershey, PA: IGI Global.
- City, E. A. (2011). Learning from instructional rounds. *Educational Leadership*, 69(2), 36–41.
- Cope, B., & Kalantzis, M. (2015). The things you do to know: An introduction to the pedagogy of multiliteracies. In B. Cope & M. Kalantzis (Eds.), *A pedagogy of multiliteracies: Learning by design* (pp. 1–36). New York: Palgrave Macmillan.
- Dobler, E. (2012). Flattening classroom walls: Edmodo takes teaching and learning across the globe.

*Reading Today*, 29, 12–13.

- Gabriel, T. (2011). Speaking up in class, silently, using social media. *The New York Times*. Retrieved from [www.nytimes.com/2011/05/13/education/13social.html?pagewanted=2&r=1](http://www.nytimes.com/2011/05/13/education/13social.html?pagewanted=2&r=1).
- Graham, S., Harris, K., & Chambers, A. B. (2016). Evidence-based practice and writing instruction. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (2nd ed., pp. 211–226). New York: Guilford Press.
- Graham, S., Harris, K. R., & Santangelo, T. (2015). Research-based writing practices and the Common Core: Meta-analysis and meta-synthesis. *Elementary School Journal*, 115(4), 498–522.
- Graham, S., Hebert, M., & Harris, K. R. (2015). Formative assessment and writing: A meta-analysis. *Elementary School Journal*, 115(4), 523–547.
- Hutchison, A., & Woodward, L. (2014). A planning cycle for integrating digital technology into literacy instruction. *The Reading Teacher*, 67(6), 455–464.
- Jewitt, C. (2014). An introduction to multimodality. In C. Jewitt (Ed.), *The Routledge handbook of multimodal analysis* (2nd ed., pp. 15–30). London: Routledge.
- Karchmer, R. A., Mallette, M. H., Kara-Soteriou, J., & Leu, D. J., Jr. (Eds.). (2005). *New literacies for new times: Innovative models of literacy education using the internet*. Newark, DE: International Reading Association.
- Karchmer-Klein, R. A. (2007). Re-examining the practicum placement: How to leverage technology to prepare preservice teachers for the demands of the 21st century. *Journal of Computing in Teacher Education*, 23(4), 121–129.
- Karchmer-Klein, R., Mouza, C., Shinas, V., & Park, S. (2017). Patterns in teachers' instructional design when integrating apps in middle school content-area teaching. *Journal of Digital Learning in Teacher Education*, 33(3), 91–102.
- Karchmer-Klein, R., & Shinas, V. (2012). 21st century literacies in teacher education: Investigating multimodal texts in the context of an online graduate-level literacy and technology course. *Research in the Schools*, 19(1), 60–74.
- Karchmer-Klein, R., Shinas, V. H., & Park, S. (2014). Preparing teachers to immerse students in multimodal digital writing opportunities. In R. S. Anderson & C. Mims (Eds.), *Handbook of research on digital tools for writing instruction in K–12 settings* (pp. 499–519). Hershey, PA: IGI Global.
- Karchmer-Klein, R., Shinas, V. H., & Wise, J. B. (2015). Rethinking foundational reading skills: Making room for the complexities of digital texts. In T. Rasinski, R. Ferdig, & K. Pytash (Eds.), *Using technology to enhance reading* (pp. 17–22). Bloomington, IN: Solution Tree.
- Kress, G. (2003). *Literacy in the new media age*. London: Routledge.
- Ladd, D. (2009). Anonymous fame: Steve Rayburn's "Twitter in Hell" project gets national attention. *The Online Gargoyle*. Retrieved from [www.uni.illinois.edu//og/news/2009/04/anonymous-fame-steve-rayburns-twitter](http://www.uni.illinois.edu//og/news/2009/04/anonymous-fame-steve-rayburns-twitter).
- Lapp, D., Shea, A., & Wolsey, T. D. (2010). Blogging and audience awareness. *Journal of Education*, 191(1), 33–44.
- Lenhart, A. (2015). *Teens, social media and technology overview 2015*. Washington, DC: Pew Research Center. Retrieved from [www.pewinternet.org/2015/04/09/teens-social-media-technology-2015](http://www.pewinternet.org/2015/04/09/teens-social-media-technology-2015).
- Leu, D. J., Slomp, D., Zawilinski, L., & Corrigan, J. A. (2016). Writing research through a new literacies lens. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (2nd ed.,

- pp. 41–53). New York: Guilford Press.
- MacArthur, C. A., & Karchmer-Klein, R. A. (2010). Web 2.0: New opportunities for writing. In G. A. Troia, R. K. Shankland, & A. Heintz (Eds.), *Writing research in classroom practice* (pp. 45–69). New York: Guilford Press.
- Meriam Library. (2010). *Evaluating information: Applying the CRAAP test*. Chico: California State University. Retrieved from [www.csuchico.edu/lins/handouts/eval\\_websites.pdf](http://www.csuchico.edu/lins/handouts/eval_websites.pdf).
- Milman, N. B., Carlson-Bancroft, A., & Boogart, A. V. (2014). Examining differentiation and utilization of iPads across content areas in an independent, preK–4th grade elementary school. *Computers in the Schools, 31*(3), 119–133.
- Morphy, P., & Graham, S. (2012). Word processing programs and weaker writers/readers: A meta-analysis of research findings. *Reading and Writing, 25*(3), 641–678.
- National Governors Association Center for Best Practices & the Council of Chief State School Officers. (2010). *Common Core State Standards for English language arts and literacy in history/social studies, science, and technical subjects*. Washington, DC: Authors. Retrieved from [www.corestandards.org](http://www.corestandards.org).
- Olmstead, K., & Atkinson, M. (2015). *Chapter 2: An analysis of apps in the Google Play Store*. Washington, DC: Pew Research Center. Retrieved from [www.pewinternet.org/2015/11/10/an-analysis-of-apps-in-the-google-play-store](http://www.pewinternet.org/2015/11/10/an-analysis-of-apps-in-the-google-play-store).
- Philippakos, Z., & MacArthur, C. A. (2016). Effects of giving feedback on the persuasive writing of fourth- and fifth-grade students. *Reading Research Quarterly, 51*(4), 419–433.
- Santangelo, T., & Graham, S. (2013). *Meta-analyses of handwriting and spelling instruction*. Paper presented at the Pacific Coast Research Conference, Mission Beach, CA.
- Schauer, P. (2015). 5 biggest differences between social media and social networking. *Social Media Today*. Retrieved from [www.socialmediatoday.com/social-business/peteschauer/2015-06-28/5-biggest-differences-between-social-media-and-social](http://www.socialmediatoday.com/social-business/peteschauer/2015-06-28/5-biggest-differences-between-social-media-and-social).
- Schrivver, K. (2012). What we know about expertise in professional communication. In V. W. Berninger (Ed.), *Past, present, and future contributions of cognitive writing research to cognitive psychology* (pp. 275–312). New York: Psychology Press.
- Soto, M. (2015). Elementary students' mathematical explanations and attention to audience with screencasts. *Journal of Research on Technology in Education, 47*(4), 242–258.
- Stone, J. C. (2007). Popular websites in adolescents' out-of-school lives: Critical lesson on literacy. In C. Lankshear & M. Knobel (Eds.), *A new literacies sampler* (pp. 49–65). New York: Peter Lang.
- Taylor, H. (2015). Google's Chromebooks make up half of US classroom devices sold. Retrieved from [www.cnn.com/2015/12/03/googles-chromebooks-make-up-half-of-us-classroom-devices.html](http://www.cnn.com/2015/12/03/googles-chromebooks-make-up-half-of-us-classroom-devices.html).
- Technorati. (2011). State of the blogosphere. Retrieved from <http://technorati.com/state-of-the-blogosphere>.
- Tsai, F., Kinzer, C., Hung, K., Chen, C. A., & Hsu, I. (2011). The importance and use of targeted content knowledge in educational simulation games. In M. Chang, W. Hwang, M. Chen, & W. Muller (Eds.), *Sixth International Conference on E-Learning and Games* (pp. 245–247). Berlin: Springer.
- U.S. Department of Education. (2016). *National education technology plan: Future ready learning: Reimagining the role of technology in education*. Washington, DC: Office of Educational Technology.
- White, A. (2016). Using digital think alouds to build comprehension of online informational texts. *The Reading Teacher, 69*(4), 421–425.



*Part IV*

TEACHING WRITING

## ***Chapter 9***

# Handwriting and Spelling

Rui Alexandre Alves

Teresa Limpo

Naymé Salas

R. Malatesha Joshi

**W**e can hardly discard handwriting or spelling if we want students to become literate. Accordingly, many literacy researchers have claimed that transcription skills (handwriting and spelling) are a necessary lever for writing development (Alves & Limpo, 2015a, 2015b; Berninger & Winn, 2006; Graham & Harris, 2000; Joshi, Treiman, Carreker, & Moats, 2008). We would like to further extend that mechanistic analogy by suggesting that transcription skills can be conceived as the fulcrum of the lever—that is, the place through which, by virtue of its location, load and effort can be juggled so to most effectively produce text and ultimately develop writing. In this analogy, load is the text to be written and effort is the mental counterpart implied in its production. This chapter’s purpose is to compile insights on how to effectively establish that fulcrum. “Give me a place to stand . . .,” said Archimedes famously. In written language, that place is twofold: one is handwriting instruction, and two is spelling instruction. We address each separately.

# **HANDWRITING**

Even in current highly technological societies, with individuals permanently connected through keyboards and touchscreen devices, in most countries handwriting is the first taught writing modality and the dominant one throughout schooling. Actually, most recent devices have converged to use multiple forms of input (e.g., gestures, keyboards, pens, and even voice assistants are now standard forms of input across smartphones and tablets; most notoriously, Apple, Google, Microsoft, and Samsung support handwriting recognition in their devices). Handwriting and pens seem to be catching up in the digital world. Across cultures, pens (or pencils) rather than keyboards are the preferred tool for learning to write and most texts produced at school are written by hand in the majority of subjects and grade levels (Santangelo & Graham, 2016). This focus on handwriting at the school level is supported by research. There is some empirical evidence showing the advantages of handwriting over typing for children's early literacy attainments (e.g., James & Engelhardt, 2012) and in adults taking class notes (Mueller & Oppenheimer, 2014). Thus, even in an age where children grow up surrounded by digital devices, the current pedagogical practices, as well as the evidence supporting the importance of learning to write by hand, provide justified reasons for handwriting to be taught and practiced from very early on.

## **The Importance of Teaching Handwriting**

Until becoming automatic, handwriting is a major constraint to writing performance. There is an increasing amount of research showing that low handwriting fluency is associated with poor writing performance not only in the primary grades but also in the middle grades (Graham, Berninger, Abbott, Abbott, & Whitaker, 1997; Limpo & Alves, 2013; Limpo, Alves, & Connelly, 2017). There are at least four ways through which poor handwriting skills can hamper text production and arrest the development of expertise in writing.

First, poor handwriting skills may result in less legible texts, which in turn may influence teachers' impressions about the quality of presented ideas as well as about the writing ability of the student. There is evidence that less legible texts are judged as being of poorer quality than more legible texts (Briggs, 1980; Greifeneder, Zelt, Seele, Bottenberg, & Alt, 2012). Reduced legibility is likely to make it difficult for readers to decipher what is written and fully understand the text. They may be forced to reread passages and stop frequently to decode the message, or simply neglect less legible portions of the text. Additionally, the extent to which a text is legible may also bias teachers' perceptions about the writing ability of the student, with poor penmanship being more likely ascribed to a poor writer.

Second, slow handwriting makes it more difficult for writers to keep pace with the speed at which language is formulated in their minds. This is well exemplified by the seminal finding that, with beginning and struggling writers, spoken texts are usually of better quality than written texts (Bereiter & Scardamalia, 1987; Graham, 1990; Hayes & Berninger, 2010). This means that slow writers struggle with the huge asymmetry of production rates between spoken and written languages, as the pace at which they are able to produce speech is considerably faster than the pace at which they can record it. Such disparity, reflected in the common complaint that "slow hands do not progress at the same speed as fast thought," can easily hamper text production. For example, writers may be forced to interrupt their writing frequently or may forget already developed ideas. This may reduce the amount of information written down and affect text coherence.

Third, until becoming automatic and fluent, handwriting requires considerable attentional resources (Bourdin & Fayol, 2000; Olive & Kellogg, 2002). Attention devoted to the execution of fine-motor movements to produce letters and words means less attention can be allocated to important high-level writing processes, such as idea generation and language formulation (McCutchen, 2000). Indeed, by limiting the writer's ability to enact other processes concurrently with transcription, slow and effortful handwriting may impede the recursiveness and interactivity among writing

processes that characterizes skilled writing (McCutchen, 1988). The high cognitive cost of nonefficient handwriting may additionally constrain the enactment of self-regulated strategic writing behaviors (Limpo & Alves, 2018). These behaviors are fundamental for producing high-quality texts, as they help writers set goals and action plans that orient writing, as well as monitor their effectiveness and adjust them when needed.

Fourth, the physical effort and cognitive demands associated with slow handwriting, sometimes coupled with poor instruction (Santangelo & Graham, 2016) and unsupportive writing environments (Alves & Limpo, 2015a; Camacho & Alves, 2017), may turn text production into a difficult, strenuous, and even painful activity. As a consequence, children may lose interest and enjoyment in writing, thus facing a potentially downward spiral conducting to low writing achievement, anxiety, avoidance behaviors, and arrested writing development (Berninger, Mizokawa, & Bragg, 1991; Berninger et al., 1997). Slow handwriting may also negatively affect students' self-efficacy for writing (Limpo & Alves, 2013). Indeed, given that young writers consider linguistic and mechanical factors as among the most important ingredients in good writing (Olinghouse & Graham, 2009), slow writers may be more prone to hold negative appraisals of their ability to compose text. Such negative beliefs are commonly associated with poor writing performance (Pajares, 2003).

Overall, given the importance of handwriting in shaping writing development, this foundational writing skill should be explicitly taught and systematically practiced as soon as possible. An adequate time for this is in the primary grades, when children start learning to write. However, it takes students a long time to develop handwriting at a level where it does not interfere with other writing processes. Research suggested that handwriting skill continues to increase well beyond the primary grades, at least until ninth grade (Alves & Limpo, 2015b; Graham, Weintraub, Berninger, & Schafer, 1998). Thus, age-appropriate handwriting instruction, mainly aimed at providing regular practice opportunities, is needed in the middle grades as well for some students. This seems even more relevant when slow

handwriting is identified in the teenage school years. Indeed, recent findings from a meta-analysis suggested that from kindergarten to ninth grade, students with and without handwriting difficulties benefit from explicit handwriting instruction (Santangelo & Graham, 2016). This meta-analysis reported that handwriting instruction was associated with impressive improvements not only on students' handwriting skills but also on the quality, amount, and fluency of their writing.

## **Assessment of Handwriting**

The assessment of handwriting is critical for teachers to define instructional needs, monitor progress throughout instruction and adapt it when appropriate, and assess the impact of instruction. Handwriting can be assessed in terms of legibility and fluency (Graham et al., 1998). Handwriting legibility can be defined as the extent to which written material is readable. There are several instruments available to assess children's handwriting (Feder & Majnemer, 2003). One of the most valid and reliable instruments is the Test of Legible Handwriting (TOLH; Larsen & Hammill, 1989). The TOLH provides a legibility score ranging from 1 to 9 (higher scores indicate more legible handwriting) by comparing a sample of a student's handwriting to a set of graded samples. The instrument relies on three handwriting samples collected in one copying task and two freewriting tasks.

Whereas legibility can be virtually measured in any writing sample, handwriting fluency is better measured outside text production, as the many processes involved in producing text (e.g., planning) may act as confounding factors in assessment. Fluency is measured through the number of legible letters or words produced accurately and quickly within a specified time. The alphabet and copy tasks provide two measures of handwriting fluency with well-established validity (Berninger et al., 1992; Graham et al., 1997) that are sensitive to handwriting instruction (Alves et al., 2016; Berninger et al., 1997; Graham, Harris, & Fink-Chorzempa, 2000). In the alphabet task, students are

asked to write the lowercase alphabet letters as quickly as possible during 15, 30, or 60 seconds. The final score is the number of correct letters written (i.e., legible and in the right alphabetical order). In the copy task, students are typically asked to copy a short sentence, preferably containing all alphabet letters, as quickly as possible during 90 seconds. The final score is the number of words (and/or letters) copied accurately. The administration and coding procedures of both tasks are straightforward and easy to implement, providing complementary information on students' handwriting fluency. Both primary and middle grade teachers can consider the inclusion of these tasks in their practice as powerful tools to assess students before, during, and after handwriting instruction. Furthermore, these measures can be readily collected with smartpens and online tools such as HandSpy (Alves, Limpo, & Leal, in press).

## **Best Practices in Teaching Handwriting**

A major question in the teaching of handwriting concerns the script that ought to be taught in primary school (i.e., cursive, manuscript, or both), as there is a large cross-country variability. For example, the United States introduces both styles (manuscript in grade 1 followed by cursive in grade 2 or 3). European countries, such as Portugal, teach only cursive, whereas Mexico teaches only manuscript. Research is yet to provide a definite answer about the best script to be introduced in the primary grades. There is currently no compelling evidence supporting the advantages, if any, of one script over the other. Actually, in a study with 600 children from grades 4 to 9 in the United States, there was no difference between handwriting legibility or fluency between students using manuscript and those using cursive (Graham et al., 1998). The fastest writers (40% of the sample) were those using a combination of manuscript and cursive. This finding is important because it supports anecdotal evidence showing that sooner or later all students end up developing their own handwriting style, often characterized by a combination

of manuscript and cursive letters. Indeed, considering the effortful nature of handwriting in the primary grades, the type of script used is not the most important consideration. Rather, it is critical to consider how handwriting automaticity will be supported to ease the process of putting words onto the page in a legible and fluent way, with individual expression.

Since the expressive nature of penmanship is a given due to the social nature of writing, even if it could be improved and individually tailored, a more concrete goal for teaching handwriting is to help students write words and connected text as legibly and fluently as possible (see [Table 9.1](#)). To achieve this goal, a critical component of handwriting instruction is handwriting practice (Graham, 2009). There is no empirical support for teaching motor skills (Santangelo & Graham, 2016) or providing any other type of sensory–motor training without explicit handwriting practice as a way to improve handwriting (Hoy, Egan, & Feder, 2011). Though the frequency and amount of handwriting practice may vary according to students’ age, handwriting skill, and instructional conditions (group vs. individual), it is recommended that during kindergarten and grades 1–3, handwriting instruction includes spaced practice for a total of 50–100 minutes a week (Graham, 2009). In the literature, one can find effective handwriting programs providing a total of 6.6–20 hours of instruction, through biweekly to daily lessons lasting 10–30 minutes (Alves et al., 2016; Berninger et al., 1997; Graham et al., 2000; Jones & Christensen, 1999; Limpo & Alves, 2018). While these are evidence-based programs, they are not a full handwriting curriculum.

**TABLE 9.1.** Examples of Activities and Exercises to Teach and Train Handwriting at Different Levels

Level	Activity	Examples of exercises
Isolated letters	Naming and forming alphabet letters	<ul style="list-style-type: none"> <li>• Reproducing letters in writing after a careful examination of letter models or after teachers model the motoric acts for producing the letter</li> <li>• Reproducing letters from memory after a time-varying exposure period to letter models</li> </ul>



		<ul style="list-style-type: none"> <li>• Combining repeated copies of letters with letter modeling</li> <li>• Using letter models with numbered arrows indicating the nature, order, and direction of letter strokes</li> </ul>
	Alphabet writing	<ul style="list-style-type: none"> <li>• Drawing a line to join the alphabet letters in order while naming them, so to reveal a drawing</li> <li>• Naming and/or writing the letter combining before, after, or before and after a given letter</li> <li>• Organizing lists of words in alphabetical order</li> <li>• Fast writing of the alphabet starting from the beginning or from a middle letter</li> </ul>
Words and sentences	Copying of words and sentences	<ul style="list-style-type: none"> <li>• Copying different colored words in order to sort them according to their color</li> <li>• Copying numbered words in the corresponding randomly numbered boxes</li> <li>• Filling the gaps in sentences by copying the missing words from a list, followed or not by copying the full sentence</li> <li>• Copying single sentences or groups of sentences</li> </ul>
	Generating words and sentences	<ul style="list-style-type: none"> <li>• Quickly generating and writing words containing specific letters and matching other constraints (e.g., semantic category)</li> <li>• Agreeing on the best sentence to describe a picture, which is then written down as quickly as possible</li> </ul>
Texts	Composing text	<ul style="list-style-type: none"> <li>• Writing as much as possible about motivating topics without other writing concerns (e.g., ideas quality, spelling, syntax)</li> </ul>

---

Because handwriting draws on the integration between orthographic and motor skills (Christensen, 2004), the teaching of handwriting can start by targeting the name and form of each letter of the alphabet. The name of the letter serves as a cue for retrieving the motor program for producing it in writing (Berninger & Graham, 1998). Therefore, students need to be able to name the letters of the alphabet, have an accurate representation of each letter in memory, match each letter name to the corresponding letter form, and reproduce each letter form in writing. When teaching letter names and forms, an important decision to make involves the order in which to introduce the letters. Though there is no definite answer to this issue, two criteria that may be worth considering are the letter-form difficulty and frequency, with easier

and more frequent letters being introduced first (Graham, 2009; Graham et al., 2000; Teixeira & Alves, 2015). Other criteria have also been reported, such as alphabetical order (Alves et al., 2016) or similarity between letter strokes (Christensen, 2005). Typically, easily confused (e.g., *u* and *v*) or reversible letters (*p* and *q*) are not recommended to be introduced next to each other. Besides letter order, it is also important that teachers ensure that all letters of the alphabet are practiced, paying careful attention to those letters that are a struggle for children. These letters may require extra practice during instruction and additional review later. A study in the United States showed that the most difficult lowercase manuscript letters in grades 1–3 seem to be, in descending order, *q*, *z*, *j*, and *k* (Graham, Weintraub, & Berninger, 2001).

To improve accuracy and fluency in naming, identifying, and accessing letters, teachers may either name letters and ask children to identify the corresponding form, or simply ask children to name each letter being taught (Graham et al., 2000). Effective practices specifically aimed at teaching and training letter forms include asking children to reproduce a letter in writing after examining a model letter or after teachers model the motoric acts for producing the letter. Though some evidence suggested that both practices are equally effective, at least with at-risk first graders (Berninger et al., 1997), a recent study with children in kindergarten (ages 5–6 years) suggested that combining repeated copy (i.e., motor training) with letter modeling (i.e., visual training) was more effective than motor-only or visual-only training (Vinter & Chartrel, 2010). In either case, self-verbalizations, such as having teachers or children explicitly verbalizing the steps involved in forming the strokes of each letter, are to be avoided (Graham, 1983). Other effective practices to teach letter naming and forming include the examination of letter models with numbered arrows indicating the nature, order, and direction of letter strokes, and the reproduction of letters from memory after a time-varying exposure period. Once combined, these two practices resulted in a particularly powerful tool to improve handwriting with transfer effects to text production (Berninger et al., 1997). It seems that the visual cues provided by the numbered arrows may create an accurate representation of a letter form

in memory, whereas the delayed handwriting may help to create efficient retrieval routines.

Another effective practice for teaching handwriting involves alphabet practice. This aims to promote fast access to representations of letter forms in memory as well as to automatize their retrieval and production in writing. Indeed, the majority of handwriting interventions that research has shown to be effective includes a component for students to acquire alphabet knowledge and develop accuracy and fluency in writing it (Alves et al., 2016; Berninger et al., 1997; Graham et al., 2000; Jones & Christensen, 1999; Limpo & Alves, 2018). Typically, the alphabet training occurs at the beginning of every handwriting lesson through a variety of exercises to avoid boredom and repetition. These exercises can be designed to target students' needs and instructional goals as well as to enhance students' motivation for the tasks. For example, children can be asked to complete a drawing by connecting the letters of the alphabet and naming them, to write and/or name the letters coming before or after a given letter, to organize a list of words in alphabetical order, and to write the alphabet starting from the beginning or from a middle letter (see [Figure 9.1](#)).



**FIGURE 9.1.** Examples of activities for alphabet practice used in Alves et al. (2016) and Limpo and Alves (2017).

In combination with exercises for isolated letter practice, students also need to receive letter writing in the context of words and sentences (Graham,

2009). This contextualized practice should be dominant soon after single letter forms are taught. A typical exercise involves the copying of words and sentences. The material to be copied should be carefully selected—it may contain the target letters of the lesson, letters that are difficult for children, or a particular combination of letters (Graham et al., 2000). Moreover, these exercises can additionally be used to work on other writing skills through a thoughtful selection of words and without overloading students' attention. For example, Limpo and Alves (2018) selected a set of 20 words containing alternations (i.e., different ways to represent a single phoneme) that are a struggle for children and embedded them in copying exercises. Students copied each word several times, but their attention was never directed to spelling. At the end of the intervention there were improvements in handwriting as well as on the spelling of these words. Similar copying exercises can be designed to teach handwriting skills together with vocabulary or syntax skills. Though during handwriting practice students' attention is directed only to fluency and legibility issues, after the exercise teachers may choose to discuss particular words used, such as adjectives or syntax constructions. This is not to say, however, that these exercises can replace explicit instruction for spelling, vocabulary, or syntax. It means that rather than asking students to do meaningless copying exercises, the words and sentences selected that were already used can expose students to the key features of good writing.

Besides the careful consideration of the material to copy, the development of these exercises should aim to promote students' engagement and sustained effort. This can be achieved by combining copying tasks with more challenging exercises. For example, Alves et al. (2016) demonstrated the effectiveness of a handwriting intervention that, in addition to alphabet exercises, combined copying with generation activities. In the copying exercises, students copied different color words in order to sort them according to their color, they copied a list of numbered words in randomly numbered boxes, they were given sentences with blanks and a list of the missing words to copy, or they copied sets of six to eight sentences. In the

generation exercises, students were asked to generate words containing a specific letter (task complexity was manipulated by specifying the number of words to be generated, the letter position within the word, and the semantic category of the word—e.g., names, animals, objects, jobs), or students were given a set of pictures and, for each one, they first agreed on the best sentence to describe it and then wrote the sentence as quickly and legibly as possible. These activities were designed to keep the instructional focus on handwriting, while simultaneously avoiding mindless, repeated copying, in contexts devoid of communication purposes.

Alphabet and copying exercises may be implemented under untimed or timed conditions. Untimed conditions may be useful to focus students on letter forms, whereas timed conditions may emphasize fluency and having children measure their own improvements. Handwriting fluency is thought to impose more constraints on text production than handwriting legibility (Santangelo & Graham, 2016). However, because legibility and fluency are inversely related, with increases in fluency being accompanied by declines in legibility (Graham & Weintraub, 1996), a balanced instructional attention to both handwriting dimensions is important. Therefore, teachers should attempt an optimal development of handwriting legibility and fluency, rather than promoting one at the expense of the other, knowing that with practice, fluency can increase without hampering legibility. Particularly for younger students, it might be helpful to implement alphabet and copying exercises with cue cards. Typically, these cards contain all letters of the alphabet marked with numbered arrows, such as the writing letters card developed by Berninger (1998). Children may use these cards when they are struggling with the correct form of a particular letter.

It is also recommended that the exercises focused on the fast and accurate production of letters, words, and sentences in isolation are combined with frequent composing opportunities. These allow students to practice handwriting in the context of authentic writing. For example, Berninger et al. (1997) included 3 minutes of composing practice followed by 3 minutes of sharing, which occurred at the end of every instructional lesson.

Alternatively, Alves et al. (2016) included a single lesson comprising 10 minutes of composing practice followed by 10 minutes of sharing, which occurred every three lessons throughout the intervention. In either case, children were asked to write as much as possible about motivating topics without other writing concerns, such as quality of ideas or spelling correctness. Allowing for more or less extended composing opportunities seems an important feature of handwriting instruction. Undoubtedly, having children write frequently is an effective method for promoting handwriting legibility and fluency (Graham, 2009).

## **Practices Supporting the Teaching of Handwriting**

Other general instructional practices supporting the effectiveness of handwriting instruction are worth mentioning. For example, Graham, Harris, and Fink-Chorzempa (2002) included a postpractice evaluation stage, in which students were either directed to circle the best-formed word, or to correct any miscue made during copying (see also Berninger et al., 1997). Limpo and Alves (2018) also included a self-monitoring component (see also Jones & Christensen, 1999): after writing the alphabet or copying a sentence, students counted the number of letters and words correctly written and registered them in a graph, which was used for students to monitor their own progress. Students may also be encouraged to specify goals for the task, such as trying to write three more letters than before (Graham, 2009), whose attainment may also be used to move instruction forward to the next stage (Christensen, 2005; Jones & Christensen, 1999).

Goal setting and self-monitoring are powerful aids in the teaching of handwriting, by allowing students to have a clear sense of their progress and the role of practice and effort on mastery. Patently, this does not preclude teachers also playing an active role in monitoring students' work—specifically, by providing regular and immediate feedback on their progress, helping them to define reasonable goals, and reinforcing their successful

efforts (Graham, 2009). Parents can also be good allies in this process, as suggested by an intervention fostering their involvement through praise and feedback on handwriting-related features of their children's texts (Camacho & Alves, 2017). Despite the potential benefits of goal setting, self-monitoring, teachers' feedback, and parents' involvement in practicing handwriting, more research is needed to ascertain the isolated effects of these general instructional procedures and their added value to handwriting practice.

## **Promoting Handwriting Beyond the Primary Grades**

Though the majority of the above-mentioned best practices rely on studies targeting primary grade children or even younger, available evidence also suggests that they may well be effective with middle grade students. Indeed, substantive improvements in middle graders' handwriting skill and writing performance after handwriting instruction have been reported (Christensen, 2005; Limpo, Parente, & Alves, 2018). For example, Limpo et al. (2018) implemented a handwriting intervention for students in fifth grade identified for slow handwriting fluency compared to their peers. In that implementation, they shortened a handwriting program designed for second graders (Limpo & Alves, 2018) and adapted it to match the needs and motivations of older students. This program combined explicit instruction with intensive and systematic practice in writing cursive letters, words, and sentences fluently and accurately, through fast-paced activities to write the alphabet and copy words or sentences. After 5 hours of handwriting practice (fifteen 20-minute lessons, three times a week), students' handwriting fluency increased to the level of their peers. Additionally, there were transfer effects to written composition and enhanced self-efficacy. These are encouraging results because the teaching of handwriting and the repertoire of best practices available cannot be limited to the primary grades. Handwriting takes years to become automatic and, for some children and adolescents, this is barely attained. For example, data from the study by Alves and Limpo

(2015b) indicated that 10% of fifth, sixth, and seventh graders displayed a handwriting fluency similar to the average performance of third graders. Having effective practices tailored to these older students' handwriting needs is particularly important to remediate writing difficulties. Teachers can use these practices to help their students to catch up with their peers, fully develop their text production abilities, and cultivate supportive beliefs about writing and themselves as writers.

In summary, among the plethora of skills involved in writing that children need to master, handwriting is necessarily one of the first skills to be targeted in writing instruction. After all, transcription is a necessary condition for written language as we know it. Though the teaching of handwriting is clearly more important in the primary grades, these skills need to be practiced until automaticity is achieved. As reviewed before, there is a large array of evidence-based practices for teaching handwriting, most of them relying on regular handwriting practice emphasizing legibility and fluency in writing letters, words, sentences, and texts. Regardless of the controversies in handwriting instruction, helping students to write legibly, quickly, and with style seems an affordable and reasonable main goal for teaching handwriting.

## **SPELLING**

Out of all the things one learns at school, few possess the significance and repercussions of spelling. Spelling is currently part of everyday communication—from social networks and instant messaging to e-mails, essays, or work-related pieces, we are constantly writing. People who make spelling mistakes are often mocked and may be considered unintelligent or uneducated. Thus, spelling is tightly linked, in people's minds, to intelligence and education. Even children perceive that spelling errors reflect poorly on an individual's academics. For instance, Wilde (1992) reported that children make statements like if you are a poor speller, "everybody's going to think



that you don't go to school . . . and your mother doesn't care" (p. 163). In a study of 7- to 11-year-old children judging stories written with 8% spelling errors and without spelling errors, children expressed that the stories with spelling errors were not written well and harder to read (Varnhagen, 2000). Further, students also classified students with spelling errors as worse students and not careful writers.

While no strong link has been found that connects intelligence to spelling, it *is* true that spelling is a key to academic success in a number of ways. First, it is a fundamental component of writing, both in the sense that a good written product contains no spelling mistakes—because, for example, the reader will not have difficulty understanding all of the words—but also because a writer who finds spelling effortful will arguably not be able to pay attention to other aspects of the writing process (such as keeping the text coherent, using precise vocabulary, etc.). Second, spelling is essential for reading, as good spelling is achieved when the writer has formed strong, stable orthographic representations of words, which can then be more easily identified when reading. As Shankweiler, Lundquist, Dreyer, and Dickinson (1996) noted, “although spelling is . . . not a component of reading, it provides a valuable indicator of the level of orthographic skill on which all literacy activities ultimately depend. Word recognition and all subsequent higher level processes that take place in reading are constrained by the ability to fluently transcode print into language” (p. 287). Further, there is a high correlation between reading and spelling on the order of about .8 (Ehri, 1997).

At first glance, teaching children to spell might seem like a daunting task. Particularly in English, as there is a general perception that the exemptions outnumber the rules. For instance, the sound /sh/ can be spelled in several ways: *sh* as in *shine*, *ci* as in *special*, *ce* as in *ocean*, *ch* as in *machine*, *ti* as in *nation*, *sh* as in *fashion*, *s* as in *sugar*, *ssi* as in *passion*, and the list goes on. Interestingly, elementary teachers worldwide experience a similar feeling, even those who teach to spell in much less “irregular” orthographies such as Spanish, Portuguese, or German, to name a few. Although research shows

that children learn to read and spell words up to two times faster in languages other than English (Caravolas & Bruck, 1993; Seymour, Aro, & Erskine, 2003), users of these languages also produce persistent spelling errors, usually involving very frequent words. It appears, then, that regardless of the orthography being taught, there is considerable difficulty in getting students to spell accurately, especially when it comes to words that do not fit the typical rules of a language.

Across languages, the most frequent approach for dealing with this perceived irregularity in spelling is to help students memorize as many words as possible. Some experts, including teachers, believe that good spelling derives from memorizing full words, so that they can be retrieved during writing. This belief derives, at least partially, from experiences undergone by literate adults. For example, some people feel the need to write down a word so that they can *see* whether it is spelled correctly. Also, we seem to be able to read words with scrambled letters, suggesting we identify whole words and not the individual letters. While the recourse to visual memory may seem adequate, even common sense, to many, it is actually not supported by research on literacy development. First, we *do* read every single letter on the page (Pelli, Farell, & Moore, 2003). Experiments have shown that while it is possible to identify words with transposed letters—“The *huose* in the mountain”—reading rates drop significantly (Rayner, White, Johnson, & Liversedge, 2003). Second, although children (and adults) are able to retrieve some words they might have memorized, this is not the most frequent or, most importantly, the most efficient spelling strategy. Rather, spelling requires extracting rules and patterns in the orthography at multiple levels of representation (Bahr, Silliman, Berninger, & Dow, 2012).

In addition, an overreliance on visual memory has a number of important drawbacks. From a cognitive point of view, it is exceptionally uneconomical, given that one would need to have thousands of letter-by-letter entries stored in long-term memory. Also, it might make things even more difficult at the initial stages, when children have read very little and thus encountered and stored only a few words. Finally, it can hardly result in producing

autonomous spellers, as their knowledge of correct spellings will always be limited to the words they have seen. This lack of generalization potential is crucial, since it may not only get in the way of spelling but also of vocabulary learning that, across schooling, chiefly derives from a deeper understanding of how words are formed.

Contrary to the general perception, however, English spelling is not that random: it is estimated that more than 90% of words are actually predictable (Hanna, Hanna, Hodges, & Rudorf, 1966). Such predictability requires, nevertheless, taking into account several levels of representation including—but not limited to—phonology. As we show in the rest of the chapter, not only are there several types of patterns that make spelling attainable but children are sensitive to them, sometimes without being formally taught. Drawing from developmental research on spelling, we show that spelling instruction in English, as well as in most alphabetic orthographies, must take advantage of children’s pattern-detecting abilities and help them discover its consistent associations, so that they become self-sufficient writers.

## **Phonology**

Initial spelling instruction typically teaches children to map individual sounds (i.e., phonemes) onto the letters of the alphabet. Thus, *phonology* is the first level of representation to be formally introduced, and rightfully so: it constitutes the basis of how alphabetic writing systems work. Acquiring the “alphabetic principle” (Byrne, 1998) constitutes a landmark in spelling development, and may be equated with cracking a fundamental, but tricky, code. Indeed, before attaining this principle, children go through a series of stages of discovery while trying to figure out how written language relates to oral language. Young children must first learn that the referents to which written language alludes are stable, as opposed to other systems of representation, such as drawing. For example, a drawing of a girl could also be interpreted as being the drawing of a doll, but if a label says “girl” it could

never also be used to refer to “doll” (Treiman, Hompluen, Gordon, Decker, & Markson, 2016). Moreover, children seem predisposed to believe that writing represents meaning, not sounds. For example, they believe that longer words stand for larger objects (Ferreiro & Teberosky, 1979), that a word written in red is more likely to mean “tomato” than “cucumber,” or that more letters should be used for “dog” than for “puppy” (Levin & Tolchinsky-Landsmann, 1989). Thus, acquiring the alphabetic principle is dependent on the child having grasped that the phonological unit that matters for spelling is the phoneme, and not whole words.

The importance of teaching spelling from the lens of phonology—that is, teaching *phonographic correspondences*—cannot be overstated. By teaching a relatively small number of associations,<sup>1</sup> children gain access to the essence of the writing system, which should then enable them to make further associations and even acknowledge exceptions. Most importantly, there is unequivocal evidence that phonological awareness sets the basis for spelling development (e.g., Caravolas et al., 2012; Ziegler et al., 2010).

## Morphology

There is an interesting paradox in spelling development: once children have incorporated the idea that writing words entails finding the right letter to represent a single phoneme, successful spelling development relies on children’s capacity to look for correspondences beyond the phonological level of representation. This is partly due to the fact that, while English is quite inconsistent in its phonographic mappings, it is strikingly regular in its representation of morphological information.

Morphemes are the smallest linguistic units that carry meaning. Some words are constituted by only one morpheme, such as *bear*, while others are made up of multiple morphemes, such as *unbearable*. A distinction is made between *root* or “base” morphemes—which carry the semantic weight of the word (e.g., *-bear* in *unbearable*)—and *affixes*—word segments that may be

found at the beginning (*prefix*) or end (*suffix*) of a word, such as *un-* and *-able*, respectively, in the example above. Both affixes and root morphemes may be pronounced differently in different words, due to phonological or etymological reasons. However, despite changes in pronunciation, morphemes are to a large extent invariable in spelling. Take, for example, the case of the past-tense morpheme: it is pronounced differently in the words *worked*, *played*, and *patted*, but it is consistently represented as *-ed*. As with affixes, root morphemes also have a strong tendency to preserve their spelling, despite changes in pronunciation. It is this kind of morphological knowledge that helps to spell *deal* and *dealt* correctly. Finally, morphological (as well as syntactic) information is perhaps the only way to choose between homophonous words (i.e., words that are pronounced the same, but that have different meanings), such as *their*, *they're*, and *there*. In sum, a deep understanding of the internal structure of words, or *morphological awareness* (MA), is an integral aspect of spelling accuracy. The contribution of MA to spelling was highlighted in a study by Siegel (2008), who found that in grade 6, MA made a greater contribution than phonological awareness to spelling and that MA was impaired among students with dyslexia.

By the time they start elementary school, children are already proficient users of most *inflectional* morphemes—that is, those that carry grammatical information like tense, *-ed* in the example above; number, *-s* as in *cats*; or possession, *'s* as in *John's*. They also use a number of derivational morphemes, which are those that change the grammatical category of the root to which they attach—for example, *-er* turns a verb into a noun, as in *helper*. Children's experience with morphemes in everyday communication makes them sensitive to this type of information and there is evidence that sometimes they resort to it when spelling. Deacon and Bryant (2005) carried out an experiment with children in grades 1–3. They compared how accurately children wrote the same sequence of letters, *-ing*, in two-morpheme words, as in *winning*, and one-morpheme words, as in *evening*. They found that children showed some awareness of morphological information and its constancy in spelling, given that they wrote the *-ing*

sequence accurately more often in two-morpheme words (where *-ing* provides morphonological information) than in one-morpheme words (where it is not a meaningful part of the word). The same tendency was found for other inflectional morphemes (e.g., *-er*, as in *brighter* vs. *ladder*), but did not apply to derivational morphemes. For example, children made a similar number of mistakes spelling *-al* in two-morpheme words like *musical* and in one-morpheme words like *metal*.

Resorting to the morphological level of representation may just be mandatory to spell accurately, at least in English. Luckily, early on, children show some awareness of how words are formed. However, there are significant individual differences in the degree of insight that children may display and, more importantly, in the extent to which they may understand the connections between morphological representations and writing. For these reasons, explicit teaching of morpheme-to-grapheme mappings seems a critical component of a spelling curriculum.

## Orthotactics

Children who grow up in a literate community are inevitably exposed to written language from the moment they are born. A consequence of that constant exposure is that, whether explicitly or inadvertently, they start to make sense of spelling even before realizing how it relates to speech; put differently, they try to understand the nature of spelling in and of itself. In this sense, children's sensitivity to *orthotactics*—that is, to the combinations of letters that are possible or “legal” in a given orthography—is vital, since it contributes enormously to making spelling predictable. In an effort to reveal the organization underlying English orthography, Kessler and Treiman (2003) compared estimates of English spelling consistency with and without factoring in orthotactic information. They found reports that only 8% of words in English are consistent when the rules that are inherent to the system are not taken into account—for example, the word *taken* could be spelled in

more than 5 million ways (Dewey, cited in Kessler & Treiman, 2003, p. 271). In contrast, when positional and contextual information is considered, more than 75% of spellings are consistent. For instance, the vowel sound /ai/ is 100% consistent when preceded by the sound /d/, and must be spelled *i\_e*, as in *dice*, *dine*, *dime*, *dire*, etc.<sup>2</sup>

Once again, children and adults detect these regularities. Even before they can spell phonologically, they display a preference for writing double consonants in word medial and final positions, rather than in word initial position. Similarly, when asked whether a string of letters is a “real” word in English—to test their ability to distinguish legal and illegal combinations—they reject a word like *ffaip* more often than a word like *paiff* or *paffel*; even 6- to 7-year-old children know that English words do not begin with *ck* (Treiman, 1993). This type of knowledge becomes more sophisticated with time, with children being able to indicate which letters may be doubled or may appear in certain positions, but not others. For example, they accept pseudo-words such as *geed* as legitimate, but reject words like *gaad* (Cassar & Treiman, 1997).

Children’s early sensitivity to orthotactic constraints should not be taken to mean that this information comes about naturally. There are several more complex, but nevertheless useful rules that may require years of experience with writing to be grasped, while others may be unattainable without explicit instruction. Thus, spelling instruction must allocate time and resources to teach these patterns (Treiman & Wolter, 2018). However, given the high number of built-in orthotactic rules in English spelling, teachers should select judiciously which set of rules to present to students. A first criterion is the generalization potential of the pattern. Some contexts and positions are more useful than others to disambiguate among possible spellings—for example, taking a stressed vowel into account considerably increases the consistency of the preceding or following consonants, whereas knowing the sound of the initial consonant is not particularly helpful to decide the spelling of the following vowel (Kessler & Treiman, 2003). A second criterion is the level of difficulty: research shows that the extraction of orthotactic regularities follows

a developmental trend. Children find it easier to use information from a sound that occurs before, rather than after, the sound they want to spell (Deacon, Conrad, & Pacton, 2008), even though, as we have mentioned, the former is generally a less efficient strategy than the latter. Besides these nuances, the fundamental educational implication is that children are able to obtain information from the regularities in the system itself and use it to spell. This means that they are able to take advantage of these regularities without having to resort to memorization of whole-word patterns.

## Etymology

In Spanish, the term *water* (from *water closet*) is a borrowing that designates both the toilet bowl and the bathroom. Most Spaniards pronounce it /'ba.ter/ and, as the word became part of everyday vocabulary, its written form also became fixed. Rather than keeping the English written form, however, its correct spelling is *váter* thus, coinciding perfectly with its pronunciation and making it fairly transparent.<sup>3</sup> In this way, Spanish spellers can, in principle, rely to a great extent on their knowledge of phonographic correspondences.

In sharp contrast to Spanish, English spelling is characterized by a strong conservatism, usually choosing to maintain the original spelling of borrowed words and refusing to alter the spelling of terms for which pronunciation has changed over time, so that some words have been spelled in the same way sometimes for centuries. Thus, becoming a proficient speller in English entails being able to interpret cues of the older pronunciation of Anglo-Saxon words (e.g., the now silent *h* in *why*, *who*, *what*, *when*) and knowing the meaning and spelling of common words of foreign origin (e.g., that *geo* means “earth,” *photo* means “light,” or that *graph* means “written/drawn”).

Importantly, however, English spelling conservatism has a number of advantages: first, words are more easily recognized when reading them. For example, the homophones *right*, *rite*, and *write* do not even require context to be identified. In addition, it is essential for word learning, in at least two ways:



first, familiarity with one segment of the word allows understanding the meaning of other related terms. For example, if one knows that *trans-*, which comes from a Latin preposition meaning “across,” understanding words like *transaction*, *transoceanic*, *translate*, *transport*, etc., becomes much easier. Second, it signals that two or more words are related, so that speakers can rely on their knowledge of one term to extend it to others from the same family, despite misleading pronunciations, as in the case of *fraction*, *fractal*, and *fracture*, all deriving from Latin’s *frangere*, meaning “to break.” Therefore, factoring in etymology in the English spelling curriculum should have a drastic, positive effect in children’s perception of its internal organization.

## Assessment of Spelling

Assessment should lead to instruction and assessing spelling errors requires phonological, morphological, etymological, and orthotactic principles. Traditionally, in schools in the United States, spelling ability is assessed by dictating a list of words and then scoring their output as right or wrong. This method of scoring does not help in terms of what kind of instruction to provide to children. For instance, a student who spells *cat* as KT has a better orthographic knowledge than a student who spells the same word as MB. At the present time, both students are given 0 points and perhaps asked to write the word 10 times. However, student 1 needs different types of instruction than student 2, who does not even have the basic knowledge of letter–sound correspondences. Similarly, a student who spells *health* as HEALTH needs instruction in morphological aspects, as *health* is derived from the morpheme *heal*, even though the pronunciation has changed. Knowledge of word origin and grammatical categories are also important in spelling English words. A student who spells *phonics* as FONICS needs instruction in etymology as words of Greek origin with the /f/ sound is spelled with *ph*. Words ending with sounds of /est/ are spelled with *est* in adjectives like *fastest* and *hardest* and spelled with *ist* for nouns like *pharmacist* and *chemist*. Knowing these

principles helps in becoming a better speller rather than by rote memorization (see [Table 9.2](#)).

**TABLE 9.2.** Sources of Spelling Knowledge and Examples of Teaching Techniques

Type of spelling mistake	Description	Examples	Teaching examples
Phonographic	Knowledge of sound-to-letter correspondences. Typical mistakes include writing an implausible letter, and omitting or adding a letter that leads to an unpronounceable string.	FOK for <i>fork</i> INTRAJOOST for <i>introduced</i> SEEGGL for <i>seagull</i>	<ul style="list-style-type: none"> <li>Any activity to enhance letter-sound and letter-name knowledge.</li> <li>Counting the number of sounds in a word and moving a token for each sound to impress on children the connection between speaking and writing.</li> </ul>
Morphological	Knowledge of morpheme-to-letter(s) correspondences, or how the orthography maps onto morphemes.	WORKT for <i>worked</i> PLAYD for <i>played</i> PONYZ for <i>ponies</i>	<ul style="list-style-type: none"> <li>Activities to increase students' morphological awareness and the internal structure of words (e.g., breaking words down into morphemes, finding common morphemes in different words).</li> <li>Teaching the meanings of common affixes.</li> <li>Activities to reflect on how morphemes convey meaning (e.g., sorting out words, creation of new words, discussing shifts in meaning when changing morphemes; Carlisle, 2010).</li> </ul>
Orthotactic	Knowledge of legitimate and illegitimate letter sequences or how the graphic context affects spelling.	ACKTOR for <i>actor</i> BACKT for <i>baked</i> FORCK for <i>fork</i>	<ul style="list-style-type: none"> <li>Early grades: explaining common patterns, such as /k/ before <i>a</i>, <i>o</i>, <i>u</i>, or any consonant is spelled <i>c</i> and before <i>e</i>, <i>i</i>, and <i>y</i> is spelled <i>k</i>. The teacher can list a number of words beginning with <i>c</i> and <i>k</i> and the letters that follow them. This allows children to “discover” the common patterns instead of rote memorization. A similar activity</li> </ul>

			could be done with soft and hard g sounds.
			<ul style="list-style-type: none"> <li>• Teaching the “floss rule”: final /f, l, s/ are spelled <i>ff</i>, <i>ll</i>, and <i>ss</i>, respectively, if the preceding vowel is short in one-syllable words (e.g., <i>puff</i>, <i>kiss</i>, <i>pull</i>).</li> </ul>
Etymological	Knowledge of the fact that words that share a common origin will often be spelled similarly.	FONE for <i>phone</i> MANALOGUE for <i>monologue</i> ODDITORY for <i>auditory</i>	<ul style="list-style-type: none"> <li>• Earlier grades: teaching common grapheme variations due to etymological origin (e.g., <i>two</i>, <i>twice</i>, <i>twin</i>; <i>photograph</i>, <i>phone</i>; Devonshire, Morris, &amp; Fluck, 2013). Later grades: showing patterns in Greek- and Latin-derived words, and words from foreign languages.</li> </ul>

---

## Teaching Spelling from a Multiple-Representations Perspective

Although English spelling is clearly multidimensional, it is not often treated as such if one looks at how it is usually taught at school. Traditional teaching of spelling draws, to a large extent, on training children’s phonological and memory skills. We have mentioned in detail that there is a substantial, robust basis to advocate for the pivotal role that phonology plays in spelling development (e.g., Treiman, 2004). Nevertheless, drawing solely on phonology could be harmful, particularly in an orthography like English, as it could preclude children from looking for regularities elsewhere. Rather, children should be made aware of the multitude of ways in which language is encoded in the orthography.

Admittedly, a teaching method that capitalizes on phonics quickly arrives to a point at which it cannot explain the spelling of a vast number of words on the basis of phonology. Often, those tokens are deemed unexplainable exceptions that must be memorized to spell correctly. Teachers who trust that enhancing memory will make for better spellers use different systems,

typically some version of the Friday test—that is, a list of words are learned throughout the week for Friday’s test, as well as other techniques to help children memorize specific words (Masterson & Apel, 2010). Just as it happens in other domains, memory is likely to have a role in spelling development, and there is some evidence that it does. The cover, copy, and compare (CCC) method, for example, is a teaching technique that targets children’s memorization of the spelling of words and teaches students to self-correct their mistakes in order to improve spelling. A study showed that children who received CCC training spelled learned items correctly more often than a control group, and that, in some cases, some generalization to untaught items occurred (Skinner, McLaughlin, & Logan, 1997). Certainly, good spelling requires some degree of rote memorization (e.g., the midword spelling of the word *muscle*), but any generalizations that might take place are due to children’s mere exposure to written words, which is bound to allow for pattern detection. In other words, children will keep on detecting patterns in spelling, whether or not the method used by their teachers focus their attention to them. Crucially, this type of incidental learning will not be as effective as the explicit teaching of spelling patterns (Cordewener, Bosman, & Verhoeven, 2015).

The logical question that arises is concerned with *when* should each level of representation be taught? A general guideline is provided in [Table 9.3](#). Given the wealth of research pointing out the vital importance of phonological skills and letter knowledge for learning to spell (e.g., Caravolas et al., 2012), the earlier stages are characterized by focusing on training these skills. These precursor abilities are not only required for early spelling development (Tolchinsky, Liberman, & Alonso-Cortés Fradejas, 2015) but set the stage for subsequent literacy achievements (Juel, 1995). Plus, they provide children with a vital insight into the core functioning of the system—that is, the alphabetic principle (Byrne, 1998). Common orthographic patterns should be introduced soon, as well as the more frequent morpheme-to-grapheme correspondences (e.g., writing of *-ed* in regular verbs), as children are sensitive to nonphonological regularities of the orthography from early on

(e.g., Defior, Alegría, Titos, & Martos, 2008; Rieben, Ntamakiliro, Gonthier, & Fayol, 2005). Later stages should focus primarily on more complex context-dependent rules, spelling of derivational morphemes, and on showing how etymological relationships between words are evident in their spelling, regardless of variations in pronunciation.

**TABLE 9.3.** Suggested Instructional Recommendations for Spelling at Various Grade Levels

#### Kindergarten

Phonological awareness and letter-name and letter-sound knowledge should be emphasized.

Phonological awareness activities may include count the number of syllables and number of sounds in a word; count the number of sounds by slowly moving a token for each sound.

By the end of kindergarten, quickly name the letters in a random order on a chart and give the sounds of letters with one frequent sound such as /b/, /d/, and /f/. In addition, plentiful opportunities to write will help students connect speaking and writing.

#### Grade 1

Anglo-Saxon words with regular consonant and vowel sound–letter correspondences.

One-syllable words with one-to-one correspondences such as the short vowels and the consonant sounds /b/, /d/, /f/, /g/, /h/, /l/, /m/, /n/, /p/, /s/, and /t/.

A few common patterns for sounds that have more than one spelling: /k/ before *a, o, u*, or any consonant is spelled *c* (e.g., *cap, cot, cub, class, club*) and before *e, i, or y* is spelled *k* (e.g., *kept, kiss, skit*).

Other common patterns: when a long vowel sound in the initial or medial position is followed by one consonant sound, *e* is added to the end of the word (e.g., *name, these, five, rope, cube*).

“Floss rule”: after a short vowel, a final /f/ is spelled *ff*, final /l/ is spelled *ll*, and final /s/ is spelled *ss* (as in *stiff, well, and grass*). Some common exceptions to point out are *if, this, us, thus, yes, bus, and his*.

Once students are secure with the spelling of the first three sounds, they can add /z/ as in *fizz*.

#### Grade 2

More complex Anglo-Saxon letter patterns and common inflectional endings.

Students learn to spell one-syllable words with patterns such as

- Final /k/ after a short vowel in a one-syllable word is spelled *ck* (e.g., *back, peck, sick, sock, duck*).
- Final /k/ after a consonant or two vowels is spelled *k* (e.g., *milk, desk, book, peek*).
- Final /ch/ after a short vowel in a one-syllable word is spelled *tch* and *ch* after a consonant or two vowels, such as in *catch, pitch, match, bench, pouch*; the words *which, rich, much, and such* are exceptions.
- Final /j/ after a short vowel in a one-syllable word is spelled *dge* and *ge* after a long vowel, a consonant, or two vowels (e.g., *badge, fudge, age, hinge, scrooge*).
- Initial and medial /au/ is spelled *ou* and final /au/ is spelled *ow* (e.g., *out, found, cow, how*).

Inflectional endings *-ing* and *-ed*. Spelling derivatives with these endings may require doubling or

dropping a letter. When a word ends in one vowel, one consonant, and one accent (all one-syllable words are accented), and a suffix that begins with a vowel is added, the final consonant is doubled (e.g., *hopping*, *running*, *beginning*, *stopped*, *bagged*). When a word ends in a final *e* and a suffix that begins with a vowel is added, the final *e* is dropped (e.g., *hoping*, *naming*, *saved*, *joked*).

### Grade 3

Multisyllable words.

Unstressed vowel schwa (as in *sofa* and *alone*).

Common prefixes and suffixes.

More complicated patterns such as using *c* for both the final /k/ after a short vowel in a word with more than one syllable (e.g., *public*, *lilac*, *fantastic*) and for the medial /s/ in a multisyllabic word after a vowel and before *e*, *i*, or *y* (e.g., *grocery*, *recess*, *recite*).

Also words with common suffixes that may require changing a letter—for example, changing *y* to *i* when a suffix that does not begin with *i* is added to a word ends in a consonant and a final *y* (e.g., *happiness*, *babies*, *plentiful*).

### Grade 4

Latin-based prefixes, suffixes, and roots—for example, *vis* (*television*), *audi* (*auditorium*), *duc* (*conductor*), *port* (*transportation*), and *spect* (*spectacular*).

### Grades 5–7

Greek combining forms—for example, *photo* (*photography*), *phono* (*symphony*), *logy* (*biology*), *philo* (*philosophy*), *tele* (*telescopic*), and *thermo* (*thermodynamics*).

---

*Note.* Many of these activities are developed from the materials published by the Neuhaus Education Center.

These guidelines should not be taken as a suggestion that spelling develops in discrete stages. Rather, the take-home message is to acknowledge the importance of providing spelling instruction that capitalizes on all levels of representation across the elementary school years. While knowledge of phonographic mappings usually characterizes the earlier stages, teachers should not be wary of drawing students' attention to other sources of information relevant for spelling from early on.

Indeed, there is an increasing consensus that children, rather than progressing in a stage-like manner, are sensitive to the various sources of regularities in *overlapping waves* (Rittle-Johnson & Siegler, 1999). Devonshire, Morris, and Fluck (2013) showed that teaching children about levels of representation beyond phonology, in combination with instruction

on phonographic mappings, works for children as young as 5. In their study, young elementary school children (in grades 1 and 2) were taught about orthotactic regularities, such as the fact that all words contain a vowel or that the sequence *uv* is illegal in English. They also learned about how words are formed, and were introduced to the terms *prefix*, *suffix*, and *base word*. Moreover, they were taught basic etymology, so they learned that some letters (e.g., *w*) are silent in a set of words (*two*, *twice*, *twelve*, *twin*) because they are related (p. 89). The children in the study showed that they could use phonological, as well as morphological, orthotactic, and etymological information to spell, and were better spellers compared to children who were taught using a phonics-only approach.

Finally, one should not forget that the ultimate goal of being a good speller is to automatize this skill, so that it does not become a burden when communicating ideas through writing. In this sense, research seems to suggest that spelling instruction can—and probably should—be embedded within writing instruction programs with a larger scope, thus combining text composition with spelling instruction (e.g., Berninger et al., 2002; Limpo & Alves, 2018). This makes for perhaps more meaningful tasks, and prepares children to cope with the multiprocedural nature of written composition.

To sum up, spelling instruction would benefit from a shift in focus toward what learners are actually capable of doing—that is, a developmental, multirepresentations approach to spelling ought to be adopted in the elementary school curriculum. Given children’s natural pattern-detecting skills, limiting spelling instruction to the phonological level might lead children to overly rely on this type of information and to disregard critical sources of regularity.

## CONCLUSION

While we treated handwriting and spelling as separate entities in this chapter, the take-home message is that in practical terms, they need to be addressed

more or less at the same time and integrated in an explicit instruction practice. Handwriting and spelling are closely intertwined, so that a gesture risks being purely arbitrary and meaningless without the language, and a language without the gesture is invisible. Usually, teachers know this very well and master the integration of these foundational skills. As shown by the reviewed best practices in this chapter, teachers who excel in teaching transcription understand well that handwriting is about persistence and strenuous practice, and that spelling is about knowing your own language. Thus, transcription is about practice and erudition. Consequently, effective teachers are the ones who develop their coach and sage qualities. With those qualities and a curriculum, any teacher can use transcription to leverage the admirable literate world for every child.

#### ACKNOWLEDGMENTS

Preparation of this chapter benefited from networking at COST Action IS1401 European Literacy Network ([www.is1401eln.eu](http://www.is1401eln.eu)) and was supported by the Portuguese Foundation for Science and Technology (Grant No. SFRH/BPD/100494/2014).

#### REFERENCES

- Alves, R. A., Leal, J. P., & Limpo, T. (in press). Using HandSpy to compare real-time characteristics of low- and high-quality texts in grade 2. In E. Lindgren & K. P. H. Sullivan (Eds.), *Observing writing: Logging handwriting and computer keystrokes*. Leiden, the Netherlands: Brill.
- Alves, R. A., & Limpo, T. (2015a). Fostering the capabilities that build writing achievement. In P. McCardle & C. Connor (Eds.), *Reading intervention: From research to practice to research* (pp. 209–220). Baltimore: Brookes.
- Alves, R. A., & Limpo, T. (2015b). Progress in written language bursts, pauses, transcription, and written composition across schooling. *Scientific Studies of Reading, 19*, 374–391.
- Alves, R. A., Limpo, T., Fidalgo, R., Carvalhais, L., Pereira, L. A., & Castro, S. L. (2016). The impact of promoting transcription on early text production: Effects on bursts and pauses, levels of written language, and writing performance. *Journal of Educational Psychology, 108*, 665–679.
- Bahr, R. H., Silliman, E. R., Berninger, V. W., & Dow, M. (2012). Linguistic pattern analysis of misspellings of typically developing writers in grades 1–9. *Journal of Speech, Language, and Hearing Research, 55*, 1587–1599.
- Bereiter, C., & Scardamalia, M. (1987). *The psychology of written composition*. Hillsdale, NJ: Erlbaum.



- Berninger, V. W. (1998). *Process Assessment of the Learner (PAL): Guides for reading and writing intervention*. San Antonio, TX: Psychological Corporation.
- Berninger, V. W., & Graham, M. (1998). Language by hand: A synthesis of a decade of research on handwriting. *Handwriting Review, 12*, 11–25.
- Berninger, V. W., Mizokawa, D. T., & Bragg, R. (1991). Theory-based diagnosis and remediation of writing disabilities. *Journal of School Psychology, 29*, 57–79.
- Berninger, V. W., Vaughan, K. B., Abbott, R. D., Abbott, S. P., Rogan, L. W., Brooks, A., et al. (1997). Treatment of handwriting problems in beginning writers: Transfer from handwriting to composition. *Journal of Educational Psychology, 89*, 652–666.
- Berninger, V. W., Vaughan, K., Abbott, R. D., Begay, K., Coleman, K. B., Curtin, G., et al. (2002). Teaching spelling and composition alone and together: Implications for the simple view of writing. *Journal of Educational Psychology, 94*(2), 291.
- Berninger, V. W., & Winn, W. (2006). Implications of advancements in brain research and technology for writing development, writing instruction, and educational evolution. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (pp. 96–114). New York: Guilford Press.
- Berninger, V. W., Yates, C. M., Cartwright, A. C., Rutberg, J., Remy, E., & Abbott, R. D. (1992). Lower-level developmental skills in beginning writing. *Reading and Writing: An Interdisciplinary Journal, 4*, 257–280.
- Bourdin, B., & Fayol, M. (2000). Is graphic activity cognitively costly?: A developmental approach. *Reading and Writing: An Interdisciplinary Journal, 13*, 183–196.
- Briggs, D. (1980). A study of the influence of handwriting upon grades using examination scripts. *Educational Review, 32*, 186–193.
- Byrne, B. J. (1998). *The foundation of literacy: The child's acquisition of the alphabetic principle*. Hove, UK: Psychology Press.
- Camacho, A., & Alves, R. A. (2017). Fostering parental involvement in writing: Development and testing of the program Cultivating Writing. *Reading and Writing: An Interdisciplinary Journal, 30*, 253–277.
- Caravolas, M., & Bruck, M. (1993). The effect of oral and written language input on children's phonological awareness: A cross-linguistic study. *Journal of Experimental Child Psychology, 55*, 1–30.
- Caravolas, M., Lervåg, A., Mousikou, P., Efrim, C., Litavský, M., Onochie-Quintanilla, E., et al. (2012). Common patterns of prediction of literacy development in different alphabetic orthographies. *Psychological Science, 23*, 678–686.
- Carlisle, J. F. (2010). Effects of instruction in morphological awareness on literacy achievement: An integrative review. *Reading Research Quarterly, 45*, 464–487.
- Cassar, M., & Treiman, R. (1997). The beginnings of orthographic knowledge: Children's knowledge of double letters in words. *Journal of Educational Psychology, 89*, 631.
- Christensen, C. A. (2004). Relationship between orthographic–motor integration and computer use for the production of creative and well-structured written text. *British Journal of Educational Psychology, 74*, 551–564.
- Christensen, C. A. (2005). The role of orthographic–motor integration in the production of creative and well-structured written text for students in secondary school. *Educational Psychology, 25*, 441–453.

- Cordewener, K. A., Bosman, A. M., & Verhoeven, L. (2015). Implicit and explicit instruction: The case of spelling acquisition. *Written Language and Literacy*, 18(1), 121–152.
- Deacon, S. H., & Bryant, P. (2005). What young children do and do not know about the spelling of inflections and derivations. *Developmental Science*, 8, 583–594.
- Deacon, S. H., Conrad, N., & Pacton, S. (2008). A statistical learning perspective on children's learning about graphotactic and morphological regularities in spelling. *Canadian Psychology*, 49, 118.
- Defior, S., Alegría, J., Titos, R., & Martos, F. (2008). Using morphology when spelling in a shallow orthographic system: The case of Spanish. *Cognitive Development*, 23, 204–215.
- Devonshire, V., Morris, P., & Fluck, M. (2013). Spelling and reading development: The effect of teaching children multiple levels of representation in their orthography. *Learning and Instruction*, 25, 85–94.
- Ehri, L. C. (1997). Learning to read and learning to spell are one and the same, almost. In C. Perfetti, L. Rieben, & M. Fayol (Eds.), *Learning to spell: Research, theory, and practice across languages* (pp. 237–268). Mahwah, NJ: Erlbaum.
- Feder, K. P., & Majnemer, A. (2003). Children's handwriting evaluation tools and their psychometric properties. *Physical and Occupational Therapy in Pediatrics*, 23(3), 65–84.
- Ferreiro, E., & Teberosky, A. (1979). *Los sistemas de escritura en el desarrollo del niño* [Literacy before schooling]. México: Siglo XXI.
- Graham, S. (1983). The effect of self-instructional procedures on LD students' handwriting performance. *Learning Disability Quarterly*, 6, 231–234.
- Graham, S. (1990). The role of production factors in learning disabled students' compositions. *Journal of Educational Psychology*, 82, 781–791.
- Graham, S. (2009). Want to improve children's writing?: Don't neglect their handwriting. *American Educator*, 33, 20–40.
- Graham, S., Berninger, V. W., Abbott, R. D., Abbott, S. P., & Whitaker, D. (1997). Role of mechanics in composing of elementary school students: A new methodological approach. *Journal of Educational Psychology*, 89, 170–182.
- Graham, S., & Harris, K. R. (2000). The role of self-regulation and transcription skills in writing and writing development. *Educational Psychologist*, 35, 3–12.
- Graham, S., Harris, K. R., & Fink-Chorzempa, B. (2000). Is handwriting causally related to learning to write?: Treatment of handwriting problems in beginning writers. *Journal of Educational Psychology*, 92, 620–633.
- Graham, S., Harris, K. R., & Fink-Chorzempa, B. (2002). Contribution of spelling instruction to the spelling, writing and reading of poor spellers. *Journal of Educational Psychology*, 94, 669–686.
- Graham, S., & Weintraub, N. (1996). A review of handwriting research: Progress and prospects from 1980 to 1994. *Educational Psychology Review*, 8, 7–87.
- Graham, S., Weintraub, N., & Berninger, V. W. (2001). Which manuscript letters do primary grade children write legibly? *Journal of Educational Psychology*, 93(3), 488–497.
- Graham, S., Weintraub, N., Berninger, V. W., & Schafer, W. (1998). Development of handwriting speed and legibility in grades 1–9. *Journal of Educational Research*, 92, 42–52.
- Greifeneder, R., Zelt, S., Seele, T., Bottenberg, K., & Alt, A. (2012). Towards a better understanding of the legibility bias in performance assessments: The case of gender-based inferences. *British Journal of Educational Psychology*, 82, 361–374.

- Hanna, P. R., Hanna, J. S., Hodges, R. E., & Rudorf, E. H. (1966). *Phoneme-grapheme correspondences as cues to spelling improvement* (USDOE Publication No. 32008). Washington, DC: U.S. Government Printing Office.
- Hayes, J. R., & Berninger, V. W. (2010). Relationships between idea generation and transcription: How the act of writing shapes what children write. In C. Bazerman, R. Krut, K. Lunsford, S. McLeod, S. Null, L. A. Rogers, et al. (Eds.), *Traditions of writing research* (pp. 166–180). New York: Routledge.
- Hoy, M. M. O., Egan, M. Y., & Feder, K. P. (2011). A systematic review of interventions to improve handwriting. *Canadian Journal of Occupational Therapy, 78*, 13–25.
- James, K. H., & Engelhardt, L. (2012). The effects of handwriting experience on functional brain development in pre-literate children. *Trends in Neuroscience and Education, 1*, 32–42.
- Jones, D., & Christensen, C. A. (1999). Relationship between automaticity in handwriting and students' ability to generate written text. *Journal of Educational Psychology, 91*, 44–49.
- Joshi, R. M., Treiman, R., Carreker, S., & Moats, L. (2008). How words cast their spell: Spelling instruction focused on language, not memory, improves reading and writing. *American Educator, 32*(4), 6–16, 42–43.
- Juel, C. (1995). The messenger may be wrong, but the message may be right. *Journal of Research in Reading, 18*, 146–153.
- Kessler, B., & Treiman, R. (2003). Is English spelling chaotic?: Misconceptions concerning its irregularity. *Reading Psychology, 24*, 267–289.
- Larsen, S., & Hammill, D. (1989). *Test of Legible Handwriting*. Austin, TX: PRO-ED.
- Levin, I., & Tolchinsky-Landsmann, L. (1989). Becoming literate: Referential and phonetic strategies in early reading and writing. *International Journal of Behavioral Development, 12*, 369–384.
- Limpo, T., & Alves, R. A. (2013). Modeling writing development: Contribution of transcription and self-regulation to Portuguese students' text generation quality. *Journal of Educational Psychology, 105*, 401–413.
- Limpo, T., & Alves, R. A. (2018). Tailoring multicomponent writing interventions: Effects of coupling self-regulation and transcription training. *Journal of Learning Disabilities, 51*(4), 381–398.
- Limpo, T., Alves, R. A., & Connelly, V. (2017). Examining the transcription-writing link: Effects of handwriting fluency and spelling accuracy on writing performance via planning and translating in middle grades. *Learning and Individual Differences, 53*, 26–36.
- Limpo, T., Parente, N., & Alves, R. A. (2018). Promoting handwriting fluency in fifth graders with slow handwriting: A single-subject design study. *Reading and Writing, 31*(6), 1343–1366.
- Masterson, J. J., & Apel, K. (2010). Linking characteristics discovered in spelling assessment to intervention goals and methods. *Learning Disability Quarterly, 33*(3), 185–198.
- McCutchen, D. (1988). "Functional automaticity" in children's writing: A problem of metacognitive control. *Written Communication, 5*, 306–324.
- McCutchen, D. (2000). Knowledge, processing, and working memory: Implications for a theory of writing. *Educational Psychologist, 35*, 13–23.
- Mueller, P. A., & Oppenheimer, D. M. (2014). The pen is mightier than the keyboard: Advantages of longhand over laptop note taking. *Psychological Science, 25*, 1159–1168.
- Olinghouse, N. G., & Graham, S. (2009). The relationship between the discourse knowledge and the writing performance of elementary-grade students. *Journal of Educational Psychology, 101*, 37–50.
- Olive, T., & Kellogg, R. T. (2002). Concurrent activation of high- and low-level production processes in

- written composition. *Memory and Cognition*, 30, 594–600.
- Pajares, F. (2003). Self-efficacy beliefs, motivation, and achievement in writing: A review of the literature. *Reading & Writing Quarterly*, 19, 139–158.
- Pelli, D. G., Farell, B., & Moore, D. C. (2003). The remarkable inefficiency of word recognition. *Nature*, 423(6941), 752.
- Rayner, K., White, S. J., Johnson, R. L., & Liversedge, S. P. (2006). Reading words with jumbled letters: There is a cost. *Psychological Science*, 17, 192–193.
- Rieben, L., Ntamakiliro, L., Gonthier, B., & Fayol, M. (2005). Effects of various early writing practices on reading and spelling. *Scientific Studies of Reading*, 9, 145–166.
- Rittle-Johnson, B., & Siegler, R. S. (1999). Learning to spell: Variability, choice, and change in children's strategy use. *Child Development*, 70, 332–348.
- Santangelo, T., & Graham, S. (2016). A comprehensive meta-analysis of handwriting instruction. *Educational Psychological Review*, 28, 225–265.
- Seymour, P. H., Aro, M., & Erskine, J. M. (2003). Foundation literacy acquisition in European orthographies. *British Journal of Psychology*, 94, 143–174.
- Shankweiler, D., Lundquist, E., Dreyer, L. G., & Dickinson, D. D. (1996). Reading and spelling difficulties in high school students: Causes and consequences. *Reading and Writing: An Interdisciplinary Journal*, 8, 267–294.
- Siegel, L. S. (2008). Morphological awareness skills of English language learners and children with dyslexia. *Topics in Language Disorders*, 28(1), 15–27.
- Skinner, C. H., McLaughlin, T. F., & Logan, P. (1997). Cover, copy, and compare: A self-managed academic intervention effective across skills, students, and settings. *Journal of Behavioral Education*, 7(3), 295–306.
- Teixeira, C., & Alves, R. A. (2015). Development and evaluation of a Portuguese early literacy programme. *Cultura y Educación*, 27, 271–300.
- Tolchinsky, L., Liberman, G., & Alonso-Cortés Fradejas, M. D. (2015). Explaining first graders' achievements in spelling and word separation in shallow orthographies. *Journal of Writing Research*, 6, 279–316.
- Treiman, R. (1993). *Beginning to spell*. New York: Oxford University Press.
- Treiman, R. (2004). Phonology and spelling. In T. Nunes & P. Bryant (Eds.), *Handbook of children's literacy* (pp. 31–42). Dordrecht, the Netherlands: Springer.
- Treiman, R., Hompluem, L., Gordon, J., Decker, K., & Markson, L. (2016). Young children's knowledge of the symbolic nature of writing. *Child Development*, 87, 583–592.
- Treiman, R., & Wolter, S. (2018). Phonological and graphotactic influences on spellers' decisions about consonant doubling. *Memory and Cognition*, 46, 614–624.
- Varnhagen, C. K. (2000). Shoot the messenger and disregard the message?: Children's attitudes toward spelling. *Reading Psychology*, 21, 115–128.
- Vinter, A., & Chartrel, E. (2010). Effects of different types of learning on handwriting movements in young children. *Learning and Instruction*, 20, 476–486.
- Wilde, S. (1992). *You can read this!: Spelling and punctuation for whole language classrooms, K–6*. Portsmouth, NH: Heinemann.
- Ziegler, J. C., Bertrand, D., Tóth, D., Csépe, V., Reis, A., Faisca, L., et al. (2010). Orthographic depth and its impact on universal predictors of reading: A cross-language investigation. *Psychological Science*,

---

<sup>1</sup> The number of associations to be taught depends on the degree of consistency of sound-to-letter mappings.

<sup>2</sup> Kessler and Treiman (2003) based their conclusions on the analysis of more than 900 one-syllable words taken from kindergarten and grade 1 textbooks. Therefore, the figures and statements should be taken with caution, as they do not apply to English as a whole. However, they are key to understanding early spelling phenomena.

<sup>3</sup> The sound /b/ in Spanish is inconsistent, as it can be spelled as either *b* or *v*, given that there is no labial fricative /v/ sound, but only a bilabial stop consonant /b/ sound.

# **Chapter 10**

## **Sentence Construction**

Bruce Saddler

Children acquire numerous academic competencies throughout their school experiences—however, the ability to translate their thoughts into writing may be the most complex. Writing is an essential tool for communication and an important tool for learning across all content areas. When a writer creates any composition, from a book report to a biography or to a personal narrative, he or she must orchestrate a wide spectrum of physical and mental processes including *planning* what to say; *generating* text through handwriting, dictation, or electronic means; and *revising* the text to make improvements (Flower & Hayes, 1981). Each of these processes requires high levels of skill and will by the writer. He or she has to know what to do and must want to do it.

A writer who can compose effectively has developed a writing toolkit stocked with the skills needed to effectively plan, generate, and revise his or her texts, including transcription involving the subword level (handwriting) and word level (spelling; Berninger, Nagy, & Beers, 2011), grammar/syntax, vocabulary, and text structure. Such a writer complements these tools with a strong motivation and sense of self-efficacy that provides the emotional and cognitive push he or she needs to complete a writing task, despite the challenges and complexities encountered during the process.

Of all the tools a writer stocks his or her toolkit with, one of the most basic, yet most critical, is the ability to construct sentences. A *sentence* is defined in terms specific to written language, in which idea units are marked by capitalization and punctuation (Fayol, 1997). The sentence, although a foundational structure of any language, can nevertheless provide profound compositional challenges. Each sentence a writer creates requires a construction process that parallels the tasks needed to create a composition. In fact, a sentence can require so much thought and planning that it resembles a “composition in miniature” (Flower & Hayes, 1981). For example, the last sentence you just read required that I formulate an idea (“I need to say how difficult a sentence is to create”), retrieve words to match my idea (“Should I use the word *require* or is that too strong?”), mentally arrange and rearrange words into grammatically acceptable syntactical structures (“I could start the sentence with ‘When a writer creates’ and then build from there”), translate those structures into readable text, and then manipulate the text as needed to fine-tune the message. At times, because of the multiple complexities involved, the construction of each sentence can test a writer’s ability. But to create a composition, the complexity level is even higher, as a writer has to continually perform such mental gymnastics while plowing through this process over and over, logically and creatively analyzing and manipulating each individual sentence along the way, so that they not only sound right individually but that they fit well within a multisentence text until a satisfying end is reached. Thus, constructing a multisentence composition relies on not only word and syntactic levels of language during translation but also on discourse-level structures for deciding what to write for the next sentence in reference to (1) an earlier topic and (2) what might be coming next within the overall scheme (Berninger, Fuller, & Whitaker, 1996).

Helping a developing writer learn to effectively craft sentences is an essential but complex task that requires direct, systematic instruction. In this chapter, I present a research-based method of systematic sentence-level instruction called “sentence combining.” My goals for this chapter are to provide reasons for teaching sentence construction skills directly, offer an

explanation for why sentence-combining instruction is an effective technique, and discuss methods and ideas for including sentence-combining practice within the overall writing program. I also provide two classroom examples to illustrate what sentence combining might look like within a classroom, and, finally, offer suggestions on effective implementation.

## **RATIONALE FOR DIRECT INSTRUCTION OF SENTENCE CONSTRUCTION SKILLS**

For a writer to construct or reformulate sentences, he or she must have knowledge of “syntax,” or the level of structure provided in a language for organizing multiple words into sentence structures (Arfé, Dockrell, & De Bernardi, 2016; Berninger, Abbott, Nagy, & Carlisle, 2010). Both readers and writers rely on meaningful syntactic orderings of words as well as the knowledge of punctuation marks to create sentence boundaries (Ahmed, Wagner, & Lopez, 2014).

Initially, a child learns the syntax of a language (or how words are supposed to be put together) through oral communication with other language users. Later, this oral knowledge is transferred to written language either before or during early school experiences. When more formal writing experiences commence, young writers learn to express themselves through different syntactical “types” of sentences (simple, compound, complex, and compound–complex) and that sentences perform various functions within a composition (declarative, imperative, interrogative, exclamatory). However, writers need to go well beyond this basic awareness of what a sentence is and the functions a sentence performs. They must develop enough facility with controlling and manipulating syntax to generate a variety of sentences that are clear, energetic, forceful, interesting, coherent, grammatical, and (as many writers fondly remember being told by their teachers) revealing of a “complete thought.”

Developing such syntactical facility begins with formulating basic noun–



verb pattern sentences (“The dog ran”) and expands through the school years to include longer, more complex syntactical structures (“Although the dog ran away, we were unsure of exactly why he ran or where he was going”). Next, the writer must take his or her knowledge of individual sentence construction and logically string together enough sentences to build a paragraph—the paragraphs then turn into a composition. This process requires the writer to engage his or her attention, processing abilities, and memory (Des Roches et al., 2016; White, Alexander, & Greenfield, 2017). However, the flexibility that makes language beautiful also makes it tricky. The idea, word, and syntactical choices available in a given sentence can represent potential entanglements that can derail this process for any writer. In fact, many of the sentences in this chapter “derailed,” or at least slowed, my writing process as I stopped, searched, and considered better ways to say what I was thinking.

Sentence construction skills are essential for several reasons. First, knowledge of effective writing formats at the sentence level allows writers to translate their thoughts into text. Second, constructing well-designed, grammatically correct sentences may make the material students write easier for others to read and comprehend. A story crafted with one simple sentence after another without variety quickly becomes boring. Likewise, a story written with excessively long, complex sentences can be difficult to follow. In either case, if grammatical issues are present because of malformed sentences, the reader’s mind is distracted from the writer’s intent (Saddler & Graham, 2005).

Writers need to be skilled enough with the process of sentence construction to be able to effectively communicate their thoughts through a variety of linguistic structures (Drijbooms, Groen, & Verhoeven, 2017). Because syntactical control is an important yet difficult skill to learn for many writers, any increase in ability may occur only through direct instruction methods (Datchuk, 2017; Martlew, 1983). Such methods would include deliberate, stimulating language experiences geared toward “cognitively nudging” or accelerating the usage of various syntactical patterns. Learning

these patterns are best not left to chance—instead, writers would benefit when teachers provide direct and systematic practice in constructing sentences (Saddler & Graham, 2005). This direct method would be a kind of sentence-building program designed to increase the writer’s syntactical control by providing systematic and purposeful practice manipulating syntax—first through writing a variety of clear, precise, syntactically mature sentences—and then larger units of prose (Willis, 1967).

## SENTENCE COMBINING

Only one method of teaching sentence construction skills has received the sustained attention of researchers. This method, called sentence combining, was developed in the 1960s, when researchers and teachers were looking for alternatives to teaching formal grammar (parts of speech, sentence diagramming). Since then, more than 80 studies conducted during the last 40 years have demonstrated, with few exceptions, that sentence combining is an effective method for helping students produce more syntactically mature sentences (e.g., Cooper, 1973; Crowhurst & Piche, 1979; Hillocks, 1986; Hunt, 1965; Lee & Lee, 2017; Limpo & Alves, 2013; O’Hare, 1973; Saddler & Asaro, 2008; Saddler, Behforooz, & Asaro, 2008; Saddler & Graham, 2005). (*Syntactical maturity* is the ability to write a variety of complex and compound sentences within a story.)

Sentence combining is a highly disciplined writing practice (Daiker, Kerek, & Morenberg, 1979) that, as a curriculum supplement, provides direct and specific practice in manipulating and rewriting basic phrases or clauses into more varied and syntactically mature forms. For example, if a student characteristically composes simple kernel sentences such as “My dog is fat. My dog is black,” he or she can learn through sentence-combining practice to combine or embed these kernel sentences into more syntactically complex and mature sentences, such as “My dog is fat and black” or “The fat black dog is mine,” depending on what idea in the sentence he or she wishes to

emphasize. Likewise, if a student produces sentences that are overly complex or ambiguous, he or she can learn to de-combine the sentences back into their basic kernels and then recombine them into a more cohesive and understandable whole.

Although this type of instruction may seem unnecessarily simple, there are strong theoretical principles supporting sentence-combining practice. First, writers need instruction in formulating a concept of what a written sentence is and what syntactical options are possible when producing a sentence. Sentence-combining practice can help children develop a metalinguistic awareness about syntactical choices made when designing a piece of writing by helping them mindfully think about the sound of their language. Second, once the sentence formation and reformation process becomes more familiar through sustained, systematic practice, the overall cognitive strain a writer experiences while writing is reduced, allowing attention to shift to other writing tasks such as awareness of audience needs, what constitutes good writing, or how to navigate the writing processes. Third, gains in *syntactical fluency*, the ability to produce a variety of sentences, lead to quality writing by making a composition more enjoyable to read (Strong, 1986).

Sentence-combining practice is valuable for writers at all levels because it represents a very unique type of “controlled composition exercise” that directly parallels tasks writers routinely perform while writing. There is a central part of the writing process where writers do exactly what sentence-combining practice asks—namely, to take a set of already written sentences or sentences that are still mental images alone and transform or manipulate them in order to improve them. Every writer has to convert his or her mental ideas into physical syntactical arrangements, and the more knowledge a writer has of syntactical variety, the greater his or her ability with this task. For example, highly skilled professional authors who have spent many long hours working and reworking their syntax have internalized a vast array of syntactical options. For professional authors, these resources can be drawn upon as needed to help convey thoughts and ideas in a way that seemingly

mere mortal writers cannot approach. In our classrooms, younger writers, less skilled writers, and writers with learning or language-based disabilities often do not possess this storehouse of syntactical forms for support.

When a writer does not possess well-formed knowledge of syntactical options that can be rapidly drawn upon when needed, two problems could occur in his or her writing. First, he or she may default to simpler, more familiar syntactical patterns, leading to writing filled with sentences that look and sound similar. Second, the writer could also attempt to create more complex syntactical constructions he or she is unfamiliar with forming, creating a tangled jumble of thought that is difficult for a reader to interpret.

Sentence-combining exercises can help with both of these situations by prompting students to use syntactical options in their writing through practice in consciously controlling and manipulating syntax (Saddler, 2005, 2012). The exercises provide a skill-based experience with syntactical manipulation that parallels what writers actually do when refining their text—namely, combine, change, add, rearrange, and delete words and ideas. Through the process of de-combining and recombining sentences, students can learn to untangle, tighten, and rewrite sentences that may be too complex for a reader to easily understand. Instead of constructing longer sentences, the value of sentence combining may reside in making sentences and whole discourse better through employing a variety of syntactical forms—the goal being clarity of thought instead of complexity. Therefore, sentences can be shorter if they are more effective in getting the writer’s message across to the reader.

Although much support exists for sentence combining as a curricular approach in the literature, additional recognition of the importance of sentence construction skills in general is found in the Common Core State Standards (CCSS; National Governors Association Center for Best Practices & Council of Chief State School Officers [NGA & CCSSO], 2010). There are two particular areas of the CCSS that can be directly impacted by sentence combining practice. First, the CCSS suggest that writers should “use words, phrases, and clauses as well as varied syntax to link the major sections of the

text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims” (p. 42), and that they should “use a variety of transition words, phrases, and clauses to convey sequence, signal shifts from one time frame or setting to another, and show the relationships among experiences and events” (p. 43).

The CCSS (NGA & CCSSO, 2010) also suggest a second area of writing that sentence combining can directly effect: style. *Style* in writing is literally a writer’s way with words (Nemans, 1995). Deciding on the best syntactical arrangements in a given piece of writing relates directly to a writer’s particular style. Five different writers, if given a particular topic and a specific set of data about that topic, would likely craft five uniquely formed compositions, each with a particular style. That style sets them apart from other writers. Hemingway’s style, for example, plain and direct, is far removed from Hugo’s intensely descriptive and expansive prose. For these writers, their prose has a certain rhythm and pattern of emphasis. Yet each is highly effective.

Style is prominently mentioned in the CCSS. For example, the CCSS suggest that writers in grades 6–12 should “produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience” (NGA & CCSSO, 2010, p. 43). Furthermore, the CCSS state that writers need to “establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing” (p. 45).

In the next section, I present two classroom vignettes of sentence-combining instruction at different grade levels to illustrate how such language experiences can be included in writing process classrooms. The first example depicts how sentence combining can be included in a second-grade classroom, while the second illustrates a tenth-grade class.

## **INSTRUCTIONAL RECOMMENDATIONS**

## Example 1: Second-Grade Class

This class consisted of children with a range of writing abilities including several children who struggled with various aspects of writing. The teacher, Ms. Asaro, instituted sentence-combining practice to help these children construct better sentences and better stories.

Many of the students in Ms. Asaro's classroom tended to create very short sentences that sounded similar. Not only were many of the students writing sentences that were short, simply constructed, and lacking in descriptive words, but many also used a very repetitive subject–verb–object pattern that gave the reader the impression of immature writing and made their stories choppy and difficult to read. Others produced massive run-on sentences connected by a long series of *and*'s, while still others scattered sentence fragments throughout their compositions.

These difficulties on the sentence level affected the overall quality of their stories. Although Ms. Asaro used a variety of writing prompts and always allowed the children a choice in what they wrote about, their stories were typically short and rather boring. She believed that many of her students could say more in their stories, but because they lacked the skill to write well-constructed, interesting sentences, they could not accurately translate their ideas and emotions into text. Based on her analysis of her students' writing strengths and needs, she decided to supplement her writing workshop time with sentence-combining instruction.

Ms. Asaro followed a learn–see–do structure in her lessons (see [Figure 10.1](#) for a description of the overall instructional steps). She began by introducing the exercises as an activity that could help writers create more interesting sentences that sound better to readers. She suggested that skilled writers frequently rework their sentences to help convey their message better and explained that, even in her own writing, she would often change her sentences around to decide whether she could write her ideas in a better way.

Teach sentence-combining exercises in a learn–see–do structure using these steps:

1. Teacher modeling of how and why combinations are made.
2. Scaffolded practice in which the teacher guides students to develop multiple solutions to a problem.
3. Independent practice during which the students are creating solutions to a problem that are discussed and supportively evaluated by the whole class.

**FIGURE 10.1.** Instructional steps.

Ms. Asaro started with a whole-class discussion by projecting a pair of simple kernel sentences on the overhead projector and modeling how to combine them. To help everyone understand the basic process of combining sentences, she chose two sentences that were as similar as possible, except for the words to be combined: “The dog is little. The dog jumped high.” She suggested that, for these exercises, there is usually more than one combination possible and not to worry about making mistakes because mistakes were opportunities for learning. Then, she read both sentences out loud and said, “Hmmm . . . well, one way to put these two sentences together would be to say, ‘The little dog jumped high.’” She wrote the new sentence on the overhead transparency and explained her reasoning in combining the sentences in the way she chose and why she believed the new combination sounded better. She showed that, when she combined the sentences, she moved words or parts around, deleted or changed words or parts, and/or added words or parts to the sentences to make them sound better and convey her ideas more clearly.

Ms. Asaro then performed several additional combinations while increasing the amount of discussion and quality judgments the students provided and decreasing her own input. Her goal was to prompt the students to rely on the knowledge of English they had developed from years of listening and reading to decide on the correctness and sound quality of a combination, which is exactly what she wanted them to do when they wrote stories. The discussion that commenced led to some interesting opinions about why a certain combination sounded better and why adding a word here

or there made the thought clearer. Even students who seldom participated in class discussions added their ideas to the mix.

After this introductory session, Ms. Asaro began all of the subsequent sessions with oral practice. First, she reasoned that when combining sentences the ear must hear alternatives to be able to choose the sentence that sounds best (Strong, 1976, 1986). She realized that in her own writing she often reread a passage of text out loud to hear the sound. Second, her students' handwriting and spelling skills were still developing, and, as a result, the physical act of writing impeded the speed with which they could write sentences. Practicing orally circumvented this difficulty, saved precious class time, and allowed for additional practice opportunities with the skill being learned.

Oral practice was included by arranging her class in pairs, presenting kernel sentence clusters on the overhead, and asking the pairs to discuss the kernels and provide examples of combinations orally. She randomly called on pairs to give their combinations and wrote several different examples on the overhead. These were then read aloud to determine which sounded best.

Although writing is sometimes viewed as a solitary activity, Ms. Asaro believed that much of the potential power of sentence-combining exercises resided in playing with language within a group environment of idea exchanges. She felt that when many students approached an identical writing task at once, they became aware of the solutions available from other writers close to their level of maturity and experience, so, during these oral exercises, she always encouraged group discussions, feedback, evaluation, reflection, and praise.

Following oral practice, Ms. Asaro would have a brief partner practice session where students worked together to write out combinations for several additional kernel sentence clusters. The students frequently wrote their responses on a transparency and then presented their versions on the overhead. Ms. Asaro always asked for several possible solutions for each problem and discussed each thoroughly, praising success and supporting improvement as needed.



## ***Sources for Material***

Although Ms. Asaro's district did not possess a curriculum for sentence combining, finding sources for exercise content was actually fairly simple. Initially, she created kernel sentences from a collection of short stories the class was reading by reducing a passage into very simple short sentences (see [Figure 10.2](#) for an example). Then the kernels were rewritten by students working in pairs. The new versions were read by each pair to the class and followed by group discussions of each version.

Any textual source can be developed into a sentence-combining exercise by reducing or "decombining" the passage into basic kernel sentences that can be easily recombined. Make kernels for each sentence in the original text straightforward and simple, and create logical cues to help with recombining. For example:

Original passage from *Les Misérables* by Victor Hugo (p. 55):

*He seated himself near the fireplace and stretched his feet out towards the fire, half dead with fatigue.*

Decombed passage:

He seated himself.

He sat near the fireplace.

He stretched his feet out.

He stretched them towards the fire.

He was half dead with fatigue.

**FIGURE 10.2.** De-combining textual passages.

Ms. Asaro also found that classroom activities or school events could be sources of inspiration, along with the lives and interests of her students. Newspapers and magazines also furnished interesting content for her to develop sentence-combining exercises. Many of these sources offered a bonus by providing her students with information on a new concept or reinforcing a lesson from a science or social studies unit.

## ***Types of Exercises***

When developing exercises from these sources, Ms. Asaro followed two guidelines (Strong, 1976, 1986). First, she set up the exercises so that the base clause came first, followed by one or more modifying sentences. For example:

BASE SENTENCE

The bird flew.

MODIFYING SENTENCE

The bird was blue.

COMBINATION

The blue bird flew.

Second, she used two types of clues to prompt or focus the children on the important information they needed to keep from the second sentence. The first clue was an underlined word:

The professor had written many books.

The professor was wise.

This problem resulted in the combination:

The wise professor had written many books.

The second type of clue was a connecting word enclosed in parentheses at the end of the sentence to be combined:

Kristie fell over the laundry basket.

She lost her balance. (*because*)

This problem resulted in a combination such as:

Kristie fell over the laundry basket because she lost her balance.

After the students were comfortable with these exercises, Ms. Asaro eliminated the clues. Without the clues, the students had to decide what important material in the second sentence to include within the first when the two were combined.

Once she realized that her students were comfortable with combining two sentences, she began to ask them to combine longer sequences of sentences (without clues) that could be combined in multiple ways. For example:

The dog barked.

The dog was brown.

It was in a cage.

It was angry.

This group of sentences elicited many interesting combinations and provided a fun conversation concerning which of the versions sounded best. For example:

The brown dog barked because it was in a cage.

The angry brown dog was barking in its cage.

When combining multiple sentences, Ms. Asaro prompted her students to add additional descriptive words to the completed sentence. For example:

Barking angrily, the huge brown dog walked around its cage.

See [Figure 10.3](#) for additional examples of exercises.

Sentence-combining exercises move from basic problems that offer only a limited number of possible solutions to paragraph and longer problems that can be combined in many different ways. There are two types of exercises: cued and open.

#### **Cued Exercises**

Cued exercises are the most basic. They offer a specific clue in the form of an underlined or a key word or words placed in parentheses that guide the student to combine the kernels in a particular way. For example:

*Underlined clue:*

The day was cold.

The day was wet.

*Possible solution:*

The day was wet and cold.

*Key word(s) in parentheses:*

The man wrote the story.

He had something to say. **(because)**

Possible solution:

The man wrote the story because he had something to say.

### **Open Exercises**

Open exercises are generally more complex because they involve sets of kernels without any type of cue provided. Without cues a writer has to choose the information to keep and to discard. For example:

The boy swung the bat.

The bat was made of maple.

Possible solution:

The boy swung the maple bat.

Once students are comfortable with combining two kernel sentence clusters without clues, introduce exercises that require combining sequences of three or more kernel sentences without clues. For example:

The horn sounded.

The horn was shrill.

The sound startled Mary.

The sound made the cat run away.

Possible solution:

The shrill horn sounded, startling Mary and making the cat run away.

**FIGURE 10.3.** Types of exercises.

## ***Skill Sequence***

Initially, Ms. Asaro relied on skill sequence suggestions created by Cooper (1973; see [Table 10.1](#)) as a guide and adjusted the topics to coincide closely with the needs of her students within their own compositions. Ms. Asaro believed that a writer's own work is the best arena to learn any writing skill. Although the contrived exercises were effective in increasing the variety and overall quality of the sentences her students wrote, she wanted to move away from this format as rapidly as possible. As soon as her students understood and were comfortable with combining sentences, she began asking them to work and rework the sentences within a current piece of their writing. Such tailoring of the skills she taught made her teaching time more effective and the skills themselves more relevant to her students at their individual stages of

understanding and need.

**TABLE 10.1.** Possible Sequence of Sentence-Combining Exercises

---

1. Inserting adjectives and adverbs

Examples: The man ate the veggie burger.

The man was starving.

The starving man ate the veggie burger.

The man ate the veggie burger.

He ate hungrily.

The man ate the veggie burger hungrily.

2. Producing compound subjects and objects

Examples: Bruce wanted to read.

Mary wanted to read.

Bruce and Mary wanted to read.

Kristie wanted pasta.

Kristie wanted broccoli.

Kristie wanted pasta and broccoli.

3. Producing compound sentences with *and* and *but*

Examples: Maren wanted to play outside.

Sarah wanted to play inside. (but)

Maren wanted to play outside, but Sarah wanted to play inside.

4. Producing possessive nouns

Examples: I like the kitten.

It is Kevin's.

I like Kevin's kitten.

5. Producing sentences with adverbial clauses using connecting words (*because*, *after*, *until*, and *when*)

Examples: We went to school.

We wanted to learn to read. (because)

We went to school because we wanted to learn to read.

6. Producing sentences with relative clauses

Examples: The student will be first.

The student is the closest to the door. (who)

The student who is the closest to the door will be first.

7. Inserting appositives

Examples: Steve spoke to the class.

Steve is a great storyteller.

Steve, a great storyteller, spoke to the class.

---

*Note.* For a more detailed discussion on sequencing sentence-combining exercises, see Cooper (1973).

To provide group practice that focused on a specific skill, Ms. Asaro projected a paragraph from one of her students on the overhead projector and asked the class to suggest ways the sentences could be improved. She paired up her students and provided a paper copy of the paragraph to each pair. She challenged them to talk together to discover how the paragraph could be changed. After they had written down their ideas, the class read various versions out loud and discussed how each was different from the original text.

Ms. Asaro believed that using her students' own work was the most natural way to engage them at their level of need and provide direct resolution of problems associated with a current piece of writing. In addition, since in any written work sentences build on one another to create a unified whole, her students could explore how the effect a change in rhythm of one sentence might have on others. Also, because the answer to what makes a good sentence depends mostly on the purpose of that sentence within the context of a composition, allowing them to practice selecting options within their own writing made sense.

### ***Judging Correctness***

During the practice sessions, the concern Ms. Asaro most often faced was gauging "correctness." Her students wanted to establish objective criteria to help them test the correctness of different sentence combinations, perhaps because they were more familiar with being told something was right or wrong rather than being told, "That's good, but there might be a better way to say it."

Although our language does have rules that govern syntax, Ms. Asaro believed that using complex grammatical terminology to judge correctness

would have been counterproductive. She stressed effectiveness as a much better indicator of merit than correctness. She felt that gauging effectiveness encouraged risk taking by welcoming mistakes as opportunities for discussion and problem solving. Within this context, mistakes became sentences that could be formed in better ways. This view was especially beneficial for her less skilled writers, who were often unwilling to take risks with their writing. In addition, emphasizing effectiveness helped her students understand that there is often not one right answer in writing—rather, there may be multiple solutions that require introspection to decide on the best option.

Ms. Asaro found three standards (Nemans, 1995) helpful in aiding her students to gauge the effectiveness of responses: clarity and directness of meaning, rhythmic appeal, and intended audience. Initially, she modeled and discussed the standards, then directed student pairs to use the standards to rate an exemplar paper followed eventually by each other's writing.

### ***Measuring Improvement***

Although Ms. Asaro felt that her students were improving, she began to look for evidence that sentence combining was making a difference and exactly what that difference was. In what ways was her students' writing changing? Was the time she was investing in sentence combining justified?

After analyzing her class's stories from before and after sentence-combining instruction, there were two areas in which Ms. Asaro noticed improvement. The first was a reduction of punctuation errors. As she had often taught, punctuation helps organize sentence elements. What she did not anticipate was that, through the combining–de-combining–recombining process, her students would have hands-on practice using punctuation elements. As they increased the complexity of their sentences, they learned, for example, that commas were needed to set off elements from each other and that they could create rhythmic appeal within a sentence. They talked about when and where punctuation was needed and where it was not.

Overall, their compositions became much cleaner in terms of punctuation and more appropriate usage, which led to a marked decrease in both fragments and run-on sentences.

The second benefit was in the overall quality of the stories they wrote. Her students' writing became more enjoyable for her to read. They had far fewer repetitive subject–verb–object sentences and run-ons, leading to a more satisfying rhythm to their writing and pieces that simply sounded better.

These improvements did not occur overnight. Sentence combining was not a quick fix; it took time and effort. Ms. Asaro had to dedicate instructional time to teaching sentence combining, but she did not allow the practice to detract from her other writing tasks. She kept the sessions short—no more than 10–15 minutes, several times per week—and the practice lively, believing that if the sessions became drudgery to teach, they would be even more so to learn.

## **Example 2: Tenth-Grade Class**

The second example involves teaching sentence combining to a tenth-grade social studies class. In this class, four students had identified disabilities, but many more struggled with various aspects of writing. The teacher, Mr. Nibali, wanted to improve his students' ability to write essays about historical figures and to help them remember more about the period of history they were studying.

Mr. Nibali realized that his students' writing needed assistance in several areas. Many of his students produced papers filled with run-on sentences and fragments. They frequently used the connectors *and*, *but*, and *or* to create long sentences or failed to include punctuation where it was needed. Few of his students invested effort in revising their papers.

### ***Run-On Sentences and Sentence Fragments***



Mr. Nibali realized that his students' run-ons and fragments might be occurring because they had difficulty understanding when and where to use punctuation. He analyzed their writing to determine the kinds of errors being made and found that the run-on sentence mistakes fell into one of two categories: (1) failing to use periods to separate thoughts that could stand alone, and (2) using too many conjunctions to connect ideas within a single sentence.

Mr. Nibali believed that his students often failed to add needed punctuation because they were trying to create sentence variety. As they did not understand or had not specifically practiced how to create grammatical complexity in stories, they ended up with run-ons. In order to provide support for teaching correct punctuation, he first explained to his class that a sentence is like an island that can stand alone (Saddler & Preschern, 2007). Then, he provided the students with two sentences to combine and explained how each sentence could stand alone because it had a subject, a predicate, and modifiers. Next, he asked the students for examples of ways to combine the sentences without using a connecting word such as *and*, *but*, or *or*. This process was repeated during mini-lessons at least three times per week. In addition to his students' papers, he found that his social studies textbook provided great content for the creation of exercises.

Mr. Nibali used a similar activity to help eliminate run-on sentences that used conjunctions to connect too many ideas. When introducing the activity, he wrote the overused conjunction on a picture of a bridge (Saddler & Preschern, 2007). Then he explained to students that conjunctions, specifically *and*, *but*, and *or*, work as bridges to link ideas. When there are too many bridges in a sentence, it becomes difficult for the reader to cross and understand. He then wrote a run-on sentence (e.g., "George Washington went to the river and then he got into the boat and then he sailed across the wide river with his troops") on the board and replaced all the *ands* with pictures of bridges to help students visualize this. Once his students saw how run-ons could be confusing, they began to understand the purpose and function of these conjunctions. Mr. Nibali noticed that this realization caused

a decrease in the number of run-on sentences his students wrote.

## ***Revising***

Mr. Nibali believed it was important to integrate the sentence-combining exercises with other components of the writing process as soon as possible because the quicker any learned skill taught during a mini-lesson was integrated into actual writing, the greater the likelihood that the skill would actually be adapted into his students' writing toolbox. One way he found to incorporate sentence-combining skills directly into the writing process in a meaningful way was during revising (see MacArthur, [Chapter 12](#), this volume).

Before Mr. Nibali began sentence-combining practice, he believed that his students mainly saw the revision process as one of editing. They seemed to operate under a least-effort strategy, meaning they changed what was easiest to change. He noticed that they would conduct “housekeeping” by fixing spelling, capitalization, formatting, and perhaps punctuation rather than engaging in real revising—namely, molding the sound of text to make a message clearer or providing an audience with what they need to know.

He began to include lessons on revising using the sentence-combining skill being practiced. For example, he would place a student's writing sample on the overhead projector and look for specific places in the essay where a conjunction could be used to connect two shorter sentences, or where a phrase could be embedded to create a better-sounding sentence or to add variety.

While conducting these lessons, Mr. Nibali would think out loud and model the thought process involved in choosing to make a certain combination. He used a variety of self-statements to help his students “see” what he was thinking. For example, he would say, “What do I have to do here?” to define the problem. He also used “Does that make sense?”; “Is that the best way that part can sound?”; and “Can I say that better?” as self-

evaluations, and “I really like the sound of that part” for self-reinforcement.

After modeling the revision process, Mr. Nibali began to have the students edit their own pieces of writing using the sentence-combining skills being practiced. The goal was for them to find two or three places to add sentence variety. For example, if a lesson had been taught on writing more sophisticated paragraphs through the use of participial phrases, he had the students either choose a sentence that could be embellished using a participial phrase or identify two sentences that could be combined to create one sentence with a participial phrase. If necessary, he would help them find places to make changes.

After his students had proofread a previous paper, Mr. Nibali had them write a new one. In this new piece, he required students to include at least two sentences that targeted the writing goal. For example, if they were working on cause-and-effect subordinate clauses, he required them to include two sentences that correctly used either *because*, *since*, *so*, or *even though* for transition words.

Another great way Mr. Nibali found to have students increase their sentence-combining and revising skills was to have them proofread each other's work. He arranged students in pairs and had them search for one sentence they thought was well written in their partner's work and one place in which there could be a revision using the sentence-combining skill being practiced. He then allowed the students about 10–15 minutes to work as he circulated and provided assistance as needed. He then prompted the students to provide one positive comment and one suggestion to their partners.

After several weeks of brief sentence-combining practice sessions, Mr. Nibali noticed that the amount of revisions climbed in his students' work. Because he kept the rough drafts his students produced, he was able to notice that they were changing words, adding phrases and clauses, and reworking entire sentences far more frequently and effectively.

## **CONCLUSIONS AND RECOMMENDATIONS**

As the research suggests, sentence combining is an effective technique to increase students' ability to manipulate syntax and, as these vignettes suggest, sentence combining is also a highly teachable activity that can be readily integrated into a classroom writing workshop approach.

Because of the importance of expressive syntax in written communication (Komesidou, Brady, Fleming, Esplund, & Warren, 2017), sentence combining is valuable to a classroom teacher. Sentence combining does not require special materials, curriculums, or extensive knowledge on a teacher's part to incorporate, and usually will not require lengthy lessons for students to acquire the ability to complete the exercises. The exercises are easy to make, teach, and grade, and can provide valuable information about the ability level of students to create a particular construction when faced with a syntactical situation.

To improve the effects of sentence combining, begin by considering syntax only with short, simple sentences existing outside of the context of a larger language picture, and then move to paragraph and whole-discourse analysis. This is beneficial because the exercises are then encountered in a fairly sequential fashion from simple to more complex, thus allowing students to incrementally and systematically improve their ability to handle creating, reading, judging, and modifying sentences (Gebhardt, 1985). Do not be alarmed if the exercises at first glance seem far simpler than "real" writing. This initial simplicity is purposeful and will help writers build confidence and comfort with combining.

Generally, effective sentence-combining instruction relies heavily on teachers initially modeling decision-making skills with students, such as how, why, and when certain combinations are made. A "learn-see-do" instructional structure with an emphasis on explicit modeling of the decisions required when combining the kernel clusters is ideal, as it helps show the students how to combine rather than telling them about combining. Before attempting the "do" on their own, students should practice with teacher support while receiving feedback from teachers or peers. Although some students may need more instruction and guided practice, most students will

take to the exercises naturally if taught in this manner.

Even though teacher direction is extremely important initially, the exercises work very well within an environment of self-discovery. To support this, a classroom environment should be one that encourages open discussion and community support and where everyone writes, every voice is heard, and everyone has a stake in another's improvement.

In terms of how much time to actually invest in sentence combining, keep in mind that developing "syntactic maturity" and an improved facility to select effective structures for a given rhetorical context calls for frequent, short sessions within your writing curriculum dedicated to systematic sentence-combining practice (Saddler, 2012). At first, students who do not recognize that combining sentences is something they naturally carry out in their writing have likely not consciously considered just what they are doing when they rework their sentences. For these children, time spent with the exercises can help them become consciously aware of the subconscious process they are engaged in both during the exercises and then, more importantly, during the actual composing process.

Finally, bear in mind that although sentence-combining exercises have proven effective in increasing the syntactical fluency of writers, they represent only one component within a writing program. They cannot meet every challenge writers will face during the composing process, nor can they help with other critical writing tasks such as planning. Therefore, it would be a mistake to rely on them exclusively. However, even with these limitations in mind, when sentence-combining exercises are used as one skill-building component of a well-rounded writing program that includes ample time for writing, conferencing between peers and teachers, mini-lessons to increase skills, ample teacher modeling, and choice in writing assignments, they can provide essential knowledge for writers to use as they craft and shape their message (Graham & Perin, 2007; Strong, 1976). They are a strong stylistic resource (Butler, 2011) that can certainly well complement other research-validated writing practices.

## REFERENCES

- Ahmed, Y., Wagner, R., & Lopez, D. (2014). Developmental relations between reading and writing at the word, sentence, and text levels: A latent change score analysis. *Journal of Educational Psychology, 106*, 419–434.
- Arfé, B., Dockrell, J. E., & De Bernardi, B. (2016). The effect of language specific factors on early written composition: The role of spelling, oral language and text generation skills in a shallow orthography. *Reading and Writing, 29*(3), 501–527.
- Berninger, V., Abbott, R., Nagy, W., & Carlisle, J. (2010). Growth in phonological, orthographic, and morphological awareness in grades 1 to 6. *Journal of Psycholinguistic Research, 39*, 141–163.
- Berninger, V., Fuller, F., & Whitaker, D. (1996). A process approach to writing development across the life span. *Educational Psychology Review, 8*, 193–218.
- Berninger, V., Nagy, W., & Beers, S. (2011). Child writers' construction and reconstruction of single sentences and construction of multi-sentence texts: Contributions of syntax and transcription to translation. *Reading and Writing, 24*, 151–182.
- Butler, P. (2011). Reconsidering the teaching of style. *English Journal, 100*(4), 77–82.
- Cooper, C. R. (1973). An outline for writing sentence combining problems. *English Journal, 62*, 96–102.
- Crowhurst, M., & Piche, G. L. (1979). Audience and mode of discourse effects on syntactic complexity in writing at two grade levels. *Research in the Teaching of English, 13*, 101–109.
- Daiker, D., Kerek, A., & Morenberg, M. (1979). Using open sentence combining exercises in the college composition classroom. In D. Daiker, A. Kerek, & M. Morenberg (Eds.), *Sentence combining and the teaching of writing* (pp. 160–169). Conway: University of Central Arkansas.
- Datchuk, S. (2017). A direct instruction and precision teaching intervention to improve the sentence construction of middle school students with writing difficulties. *Journal of Special Education, 51*, 62–71.
- Des Roches, C. A., Vallila-Rohter, S., Villard, S., Tripodis, Y., Caplan, D., & Kiran, S. (2016). Evaluating treatment and generalization patterns of two theoretically motivated sentence comprehension therapies. *American Journal of Speech–Language Pathology, 25*, 743–757.
- Drijbooms, E., Groen, M. A., & Verhoeven, L. (2017). Children's use of evaluative devices in spoken and written narratives. *Journal of Child Language, 44*, 767–794.
- Fayol, M. (1997). On acquiring and using punctuation: A study in written French. In J. Costermans & M. Fayol (Eds.), *Processing interclausal relationships: Studies in the production and comprehension of text* (pp. 157–178). Mahwah, NJ: Erlbaum.
- Flower, L. S., & Hayes, J. R. (1981). A cognitive process theory of writing. *College Composition and Communication, 32*, 365–387.
- Gebhardt, R. (1985). Sentence combining in the teaching of the writing process. In D. A. Daiker, A. Kerek, & M. Morenberg (Eds.), *Sentence combining: A rhetorical perspective* (pp. 202–212). Carbondale: Southern Illinois University Press.
- Graham, S., & Perin, D. (2007). A meta-analysis of writing instruction for adolescent students. *Journal of Educational Psychology, 99*, 445–476.
- Hillocks, G. (1986). *Research on written composition*. Urbana, IL: ERIC Clearinghouse on Reading and Communication Skills.
- Hunt, K. W. (1965). *Grammatical structures written at three grade levels* (Research Report No. 3).

- Champaign, IL: National Council of Teachers of English.
- Komesidou, R., Brady, N. C., Fleming, K., Esplund, A., & Warren, S. F. (2017). Growth of expressive syntax in children with fragile X syndrome. *Journal of Speech, Language & Hearing Research*, 60, 422–434.
- Lee, H., & Lee, J. (2017). Reassessment of sentence combining and decombining: The effects of sentence manipulation activities on reading comprehension. *English Teaching: Practice and Critique*, 16, 55–71.
- Limpo, T., & Alves, R. (2013). Teaching planning or sentence-combining strategies: Effective SRSD interventions at different levels of written composition. *Contemporary Educational Psychology* 38, 328–341.
- Martlew, M. (1983). *The psychology of written language: Developmental and educational perspectives*. New York: Wiley.
- National Governors Association Center for Best Practices & Council of Chief State School Officers. (2010). *Common Core State Standards for English language arts & literacy in history/social studies, science, and technical subjects*. Washington, DC: Authors. Retrieved from [corestandards.org](http://corestandards.org).
- Nemans, B. S. (1995). *Teaching students to write*. New York: Oxford University Press.
- O'Hare, F. (1973). *Sentence combining*. Champaign, IL: National Council of Teachers of English.
- Saddler, B. (2005). Sentence combining: A sentence-level writing intervention. *Reading Teacher*, 58, 468–471.
- Saddler, B. (2012). *Teacher's guide to effective sentence writing*. New York: Guilford Press.
- Saddler, B., & Asaro, K. (2008). Beyond noun-verb: The use of sentence combining to improve sentence writing ability. *Insights on Learning Disabilities*, 5(2), 41–50.
- Saddler, B., Behforooz, B., & Asaro, K. (2008). The effects of sentence combining instruction on the writing of fourth grade students with learning disabilities. *Journal of Special Education*, 42, 79–90.
- Saddler, B., & Graham, S. (2005). The effects of peer-assisted sentence combining instruction on the writing of more and less skilled young writers. *Journal of Educational Psychology*, 97(1), 43–54.
- Saddler, B., & Preschern, J. (2007). Improving sentence writing ability through sentence-combining practice. *Teaching Exceptional Children*, 39(3), 6–11.
- Strong, W. (1976). Close-up: Sentence combining. *English Journal*, 24, 56–65.
- Strong, W. (1986). *Creative approaches to sentence combining*. Urbana, IL: ERIC Clearinghouse on Reading and Communication Skills and the National Council of Teachers of English.
- White, L. J., Alexander, A., & Greenfield, D. B. (2017). The relationship between executive functioning and language: Examining vocabulary, syntax, and language learning in preschoolers attending Head Start. *Journal of Experimental Child Psychology*, 164, 16–31.
- Willis, H. (1967). *Structural grammar and composition*. New York: Holt, Rinehart & Winston.

# Chapter 11

## Planning

Debra McKeown  
Erin FitzPatrick

Planning is meant to be the first stage in the writing process, but it is a step students frequently skip or rush. As Claudia said in *From the Mixed-Up Files of Mrs. Basil E. Frankweiler* (Konigsburg, 1967), “Five minutes of planning are worth fifteen minutes of just looking,” or in this case, just writing (p. 144). Planning precedes and coincides with the process of drafting and characterizes skillful writing (Graham, 2006).

One of the most widely used models of writing is the cognitive model introduced by Hayes and Flower in 1980. In this model, they identified three recursive and interactive processes in writing: planning, translating, and revising. In this chapter, we focus on the first process: planning. Setting goals, producing ideas, and organizing ideas are all part of the planning process (Berninger & Swanson, 1994). Planning may take place before or during writing and occurs iteratively throughout the writing process, applied to a part or the text as a whole.

To help guide our approach to writing instruction, it may help to understand the differences between expert and novice writers. Scardamalia and Bereiter (1986) found that expert writers use strategies to generate ideas using their own memories as well as outside sources. Expert writers know



basic genre structures and use this knowledge to organize their ideas. Finally, expert writers have writing goals and develop their writing plans to meet those goals. How does this help us improve our writing instruction? It tells us we need to teach our students strategies for generating ideas (both from memory and using outside sources), teach genre structures and ways to organize ideas within a structure, and teach students to set goals for planning their writing.

Let us ensure we have shared knowledge of the term *planning* (this is also where early writing lessons should begin—by developing background knowledge). What is planning? Planning is engaging in the selection, collection, and organization of ideas in preparation for and throughout the writing process. This may include dissecting the writing prompt or assignment to understand the expectations, conducting research on the topic, taking notes, discussing ideas with others, and brainstorming. A plan can be an outline, clustered notes, a web, storyboard, or any other organized grouping of ideas that address the assignment, genre, and audience required. Planning is iterative and recursive. After a draft, writers will often return to planning to gather more information, for example, and then work the new information into the plan to be included in the revised draft. Planning is also sometimes called prewriting, but for our purposes, we use the term *planning* as a catchall.

Research indicates that planning activities positively impact writing outcomes. One way to see the effectiveness of researched interventions is to consult meta-analyses, a scientific method of determining the overall effect of an intervention. In a meta-analysis, researchers collect all the studies conducted on the same intervention and calculate an effect size (ES) for each. Then they aggregate the results to determine an overall ES. Meta-analyses are useful tools for teachers as they show what interventions have and have not been effective in what contexts. It is simple to understand the numbers, too. An ES of 0.3 is considered small, but has a positive effect on student outcomes. In fact, most education interventions have an ES of about 0.3. A moderate effect is around 0.5 and a strong effect is 0.8 and above.

Below, we begin by describing strategies instruction, its components, and the research that supports the use of these strategies. Then, we present commonly used planning strategies along with the evidence base, if any. Where possible, we provide the ES so readers can easily understand expected impact. Finally, we address two important, complex, and often high-stakes writing tasks along with evidentiary support to aid teachers in providing effective instruction.

## STRATEGIES INSTRUCTION

A *learning strategy* was defined by Schumaker and Deshler (2006) as “an individual’s approach to a task. It includes how a person thinks and acts when planning, executing, and evaluating performance on a task and its outcomes” (p. 122). Learning strategies can be employed in day-to-day life. Do you use associations to remember people’s names at a party? That is a learning strategy. Learning strategies are also prevalent in school settings. Students use a learning strategy when they visualize key components of narrative text as they are reading—creating a movie in their heads—to better facilitate comprehension. Young writers use a learning strategy when they ask questions of their writing (or themselves) to stretch their sentences to be more detailed and complete. Using a revision checklist to revise the work of a peer is also a learning strategy. When teachers provide direct, explicit instruction in these strategies, it is called *strategies instruction*. Strategies instruction in writing typically includes modeling (with think-alouds), genre instruction, and scaffolded support to help students reach independent use. One example of strategies instruction is the Cognitive Strategies Instruction in Writing (CSIW) model (Englert, Raphael, Anderson, Anthony, & Stevens, 1991). In this instructional model, students are taught text structure, how to plan and recognize the needs of the audience, and are given opportunities to practice with peers and independently. Studies of the CSIW, like other strategies instruction, have resulted in positive student outcomes.

Providing direct and explicit instruction in how and when to use learning strategies, such as how to plan, draft, and revise, has a positive impact on student learning. Examples of planning strategies may include brainstorming, planning for a specific genre, and using graphic organizers. Graham (2006) concluded that teaching novice writers strategies for planning is imperative to produce strong and lasting effects on composition skills. In a meta-analysis on elementary writing interventions, prewriting/planning had an ES of 0.54, a moderate positive effect (Graham, McKeown, Kiuvara, & Harris, 2012). In a meta-analysis on secondary writing interventions, prewriting/planning had an ES of 0.32, a small to moderate effect on student writing outcomes (Graham & Perin, 2007). A larger ES was found in studies where planning was explicitly taught as an instructional strategy, while a lower ES was associated with studies in which time was given to plan, but there was no explicit instruction. While instruction in planning improves writing outcomes, simply giving students time to plan without instruction on how to plan has limited impact for middle and high school students and no impact for upper elementary students (Limpo & Alves, 2013). In most studies demonstrating a positive effect from planning, the students were *taught* how to plan. Yet, in the hundreds of hours we have spent observing writing instruction, we have commonly found that planning is not taught, is not taught *explicitly*, is not modeled, and is often not required or assessed.

Below, we present an effective strategies instruction model, self-regulated strategy development (SRSD), along with components of strategies instruction broadly and SRSD specifically, that have positively impacted student writing performance.

## **Self-Regulated Strategy Development**

Strategies instruction is an effective approach to teaching writing, but there is a way to make it even more impactful: add *self-regulation* instruction. Self-regulation is the ability to consistently evaluate one's own response to a

situation and engage in strategies to produce the desired response. Including self-regulatory strategies in writing instruction means students are better able to persist in the complex and demanding task of writing through the entire writing process. Teachers ensure students have the background knowledge to employ the writing strategies and teachers use the strategies as they think aloud through each step while also using self-regulatory strategies throughout (e.g., getting started, persisting through the task, task identification, goal setting, self-evaluation). Meta-analyses indicate that adding self-regulation strategies to writing strategy instruction improves its effect, an increase of 0.58 for elementary students and 0.48 for middle and high school students.

SRSD is one model of writing strategy instruction that includes self-regulation (Harris, Graham, & Mason, 2003). SRSD is an evidence-based writing intervention (Baker, Chard, Ketterlin-Geller, Apichatabutra, & Doabler, 2009). The six recursive steps of the SRSD framework are (1) develop background knowledge, (2) discuss it, (3) model it, (4) memorize it, (5) support it, and (6) independent performance. To *develop background knowledge*, teachers present the vocabulary and concepts required to complete the writing task. In *discuss it*, teachers and students discuss the vocabulary, the purpose of the genre, genre parts, and typically, they will dissect example essays to discern genre parts. In *model it*, the teacher models using the strategy and writing an essay in the genre, soliciting input from students when appropriate. In this stage, teachers model self-regulatory strategies by using self-statements (e.g., getting started, problem definition, goal setting, self-evaluation). While *memorize it* is the next stage, it actually starts from the beginning and runs throughout instruction. Students are taught to memorize, and thus internalize, important information such as genre parts. In SRSD, these memorized genre parts are used to build a plan for writing. After teachers model, they provide scaffolded support (*support it*) for students to complete the writing task increasingly independently, frequently reminding students to use self-regulatory strategies. Finally, they reach *independent performance*.

SRSD consistently has the highest ES of all writing interventions

(elementary ES = 1.17, middle and high school ES = 1.14; Graham, Harris, & McKeown, 2013; Graham & Perin, 2007). This means teachers who provide direct, explicit instruction in strategies for writing can generally expect positive results, and if self-regulation strategies are integrated, those results should increase further. Studies featuring SRSD writing instruction have spanned from second grade well into college and have been extended across a variety of populations including low-performing writers, students with emotional and behavioral disorders, students with learning disabilities, and students with attention-deficit/hyperactivity disorder (ADHD). It has also been used in several genres and different settings. As more than 120 studies of SRSD writing instruction have been conducted, only select studies are outlined here.

De La Paz and Graham (1997) found that students in grade 5 receiving instruction in advanced planning and dictation produced essays greater in length, completeness, cohesiveness, and quality. Reid, Hagaman, and Graham (2014) reviewed studies to gauge the impact of SRSD on students with ADHD in grades 2–11 and found SRSD to have a profound effect on writing outcomes resulting in essays greater in completeness (genre elements increased 199–376% after instruction), length, and quality, as well as increased time spent planning and writing.

Benedek-Wood, Mason, Wood, Hoffman, and McGuire (2014) evaluated SRSD writing instruction for quickwrites. Students were asked to write brief and rapid explanations in response to probes based on middle school science content. Researchers found improvements in organization, quality, and length for students with and without learning disabilities. Additionally, Benedek-Wood et al. found that students' science knowledge was improved and students were positive about the instruction.

## **Genre Structure**

Explicit instruction in genre structure is a common element of strategy

instruction and an essential component of SRSD. Teaching students all of the elements and characteristics of a genre is essential prewriting instruction. When students have adequate background knowledge of the genre and are able to identify essential components specific to that genre, they are prepared to successfully include all of those necessary parts in essays or stories of their own.

### ***Instruction***

One way to support students in utilizing genre structure is to introduce a genre-based mnemonic (see [Table 11.1](#) for examples), sometimes paired with graphic organizers. Teachers can create their own mnemonics and there are also examples used in research and classrooms around the world. Mnemonics are handy tools to help students remember what parts to include in a writing task, but they must be taught and cannot stand alone in place of writing instruction. Mnemonics can help students internalize essential requirements of a genre and reduce the cognitive load when writing in that genre. They give a skeleton of what is required and simplify the planning process.

**TABLE 11.1.** Genre-Based Mnemonics Used in SRSD Research

Purpose	Mnemonic	Genre parts	Reference
Planning	STOP	Stop and Think Of the Purpose	Troia, Graham, & Harris (1999)
	LIST	List Ideas and Sequence Them	
Planning	RAFT	Role Audience Format Topic	Santa et al. (1988)
Persuasive	TREE	Topic, Reasons—three or more Examples/Explanations, Ending	Graham & Harris (1989)
Persuasive	STOP	Suspend judgment Take a side	De La Paz & Graham (1997)

		Organize ideas Plan more	
	DARE	Develop a topic sentence Add support Reject opposition End with conclusion	
Narrative	W4H2	Who/what/when/where? How does it end? How does the character feel?	Harris, Graham, & Mason (2006)
Informative	TIDE <sup>2</sup>	Topic introduction Important evidence Detailed examination End Elaborations	Benedek-Wood, Mason, Wood, Hoffman, & McGuire (2014)
Informative citing text-based evidence	TONES	Topic Outline answers Note citations Explain your evidence Summarize for a strong ending	FitzPatrick (2017)

### ***Evidence Base***

All studies of SRSD included explicit instruction in genre structure—there are also other studies more narrowly focused on genre instruction. Bui, Schumaker, and Deshler (2006) evaluated an organizer that featured narrative genre elements including introduction, main event, conclusion, and emotion and found fifth-grade students with and without learning disabilities increased their planning time following instruction when using the organizer. Read (2010) offered a model for planning following implementation of a classroom practice using mentor texts as scaffolds that moved students through the writing process. Read referred to the process as inquire, model, shared writing, collaborative writing, and independent writing. The instruction was focused on fourth-grade integrated literacy, using inquiry during read-alouds to introduce a new genre prior to introducing the genre in

writing lessons that included a prewriting organizer focused on essential genre parts. Bishop, Sawyer, Alber-Morgan, and Boggs (2015) evaluated middle school students' with autism spectrum disorder use of a graphic organizer for framing elements of the persuasive genre and found improvement in correct word sequences, total words written, and analytic quality scores.

## Modeling

You might be thinking, “Planning happens mostly in my head. How can I teach students to *think* about what they want to write?” It is hard to teach a thinking process, but researchers have found that using *think-alouds* is effective. When modeling, we speak aloud all the things we are thinking—the ideas, the process, doubts, frustrations, encouragement, and more ideas (see [Table 11.2](#) for an example). Much like teaching genre structure, modeling broadly fits in strategies instruction and is also a key factor of SRSD instruction.

Most teachers report that they model how to write, including how to plan to write. But what does modeling mean? When we have observed modeling in the classroom, it has never been a “full model,” from generating ideas all the way to final draft, but rather small snippets of the required activities. Yet, when can we expect students to observe someone planning and writing a complete essay from start to finish if not in a classroom setting? Would they see this in their homes or on television? Not likely. As researchers, we write for a living and hold writing sessions in our homes on a regular basis. Yet, our children will never see us go through the entire planning or writing process; it is too vague and often unobservable in action.

If we want students to see how to plan and write—the entire process—then we must model it for them. Yes, *the entire process*. Students need to see the struggle, the thinking, the pondering, the messiness of it all—because most struggling writers believe good writers are born, not honed through



practice. They need to see that writing is hard and laborious, even for their charismatic and talented teacher (see <https://iris.peabody.vanderbilt.edu> and [srsdonline.com](https://srsdonline.com) for examples of modeling).

It might be helpful to read an excerpt from a lesson that included the TONES mnemonic. (See [Table 11.2](#) for an introduction to the TONES mnemonic that supports students in effectively citing evidence from source text.) This is a meta-script—that is, teachers may study this to understand how the lesson might unfold, but there is no expectation of the teacher using these very same words as each classroom presents a unique context and instruction should be differentiated appropriately for learners. This meta-script addresses how to model planning while using self-statements. To begin, you might say:

“I am going to show you how to use TONES to plan and write a good informational essay citing text-based evidence. You might be able to help me! When I write, I talk to myself; normally I do this in my head, but today I will talk aloud so you can hear how I talk myself through the planning and writing process. For example, when I look at my writing prompt [show students the prompt], I might think in my head, ‘What is it I have to do? I know! I have to write a good informational essay citing text-based evidence.’ I need to make sure I understand the writing prompt, include answers to all the questions, use citations from the passage to prove my answers are right, include transition words, and sum it up with a strong conclusion. That’s how I’ll write an informational essay citing text-based evidence that makes sense and is fun to read and write.”

**TABLE 11.2.** An Example of a Plan for Think-Aloud Modeling Using the TONES Strategy

Genre part	Associated metascript for each genre component
Topic	<p>“What topic will I write about? I know. I need to reread the prompt.” Reread it out loud.</p> <p>“What does it ask me to write about? Is that the only thing? Who will be reading this?”</p> <p>Talk out loud. Create brief notes.</p>
Outline	<p>“Good! I like this idea! Now I better figure out the answers to all of the questions in the</p>

answers	<p><i>prompt. Let my mind be free. How can I answer these? What did the text say about this? What ideas did I get from what we read? What can I teach my reader?</i>” Remind students to generate their answers not from their own opinions, but from the information they can support by using text citations.</p>
Note citations	<p><i>“Those are great answers! I know those from reading. Now I need to find evidence in the text to prove my answers are correct. I’m a careful reader. What good points agree with my already good answers?”</i> Talk out loud and write notes, finding at least one example/detail from the text to support each answer you originally chose. Use self-statements to talk yourself through the careful rereading and selection of citations. Also, be sure examples of academic vocabulary are included in your plan. Point out all the academic vocabulary already included. Ask students whether they have further suggestions.</p> <p>As an extension when students are ready, you may have them search for any information that is an alternative to what they believe and provide it as a counterpoint. For instance, students may write, “While the evidence I have provided demonstrates that _____, there is also some evidence in the article that suggests. . . .”</p>
Explain your evidence	<p><i>“For each one of those citations, I want to really explain to the reader how that proves my answer. I need to make a clear connection so he or she really understands me.”</i> Talk out loud and write notes for each citation linking it back to your original answers. Use self-statements to make strong connections to show how the text evidence proves your answers. Some ways to connect your evidence to your topic are “I chose this evidence because it proves . . .”; “These examples clearly demonstrate that. . . .”</p>
Summarize for a strong ending	<p><i>“What do I need to do next? I need to have a strong conclusion that states my main topic again, summarizes my points, and explains the importance.”</i> Talk out loud and write notes for a strong ending.</p> <p>After generating notes for all the parts, state, “<i>Now I can look back at my notes and see whether I can add more notes for my paper.</i>” Model adding more notes (e.g., an extra detail, or adding something to make more sense, or a very specific vocabulary word). Use coping statements such as “<i>My hand is getting really tired, but I’m almost done. If I continue using my strategy, my essay will really be a success!</i>”</p> <p>Next, state, “<i>I can also decide on good transition words I want to use in the paper.</i>” Write them on the graphic organizer. Model adding the transition words.</p> <p>Finally, model checking your notes for all the genre elements.</p>

Display TONES charts. Explain that you are going to write a good informational essay citing text-based evidence today. You need a strategy—

ask students to tell you the strategy: TONES. You will use TONES to help you organize and plan your informational essay citing text-based evidence. State:

“I will use this page to make and organize my notes. You can help me.”

Tell students they, too, will do this the next time they write a paper. Briefly review the parts of TONES in the graphic organizer. Model making notes using TONES. State:

“This helps me plan my paper. I can write down ideas for each part.”

Students can help you in the next steps.

## **Understanding the Writing Requirements**

When presented with a writing task, students should first work to understand the requirements. If writing to a prompt, students need to read the prompt (or have it read to them) and understand what is being asked. Prompts will contain information about the topic. They may also provide guidance on what the genre is, what to include, who the audience is, and formatting. Often, prompts provide some genre elements as well. When analyzing the prompt or assignment requirements, students should be taught to identify the topic, style, audience, and formatting requirements (length, handwritten/typed, and form, such as letter, speech, article, or essay).

### ***Instruction***

Teachers can help students analyze the writing task by providing explicit instruction, modeling, and guided practice with a variety of prompts similar to those students are likely to encounter. For example, teachers might teach students to circle the topic, underline and number the required parts, box any format requirements, and note the genre. To model, the teacher would first

share the prompt and read it aloud. While reading, the teacher would think aloud about what each section meant for the writing plan. The genre and audience would be noted and briefly discussed. Finally, formatting requirements—a *letter* or a *speech*?—would be indicated. Teachers can model prompt analysis multiple times with each genre as needed. Students may work in pairs or individually to mark up the prompts. Knowing and understanding the requirements is an important first step in the writing process.

### ***Evidence Base***

Prompt analysis is often included in strategies instruction and SRSD. Two studies included a measure linked to prompt analysis, but neither isolated the skill. In these studies, students improved in analyzing and responding to a prompt (similar to those used in the state writing assessment) when they were taught to analyze the prompt and clearly mark the requirements (Kiuahara et al., 2013; McKeown, Brindle, Harris, Graham, & Collins, 2016). Careful prompt analysis resulted in students accurately responding to the prompt more frequently and responding to more components of the prompt. Teaching students to use a strategy to analyze a prompt can be particularly useful in preparation for high-stakes writing assessments.

### **Question Asking**

Asking questions of the writing task and of oneself can be a useful strategy for planning. Questioning can be used with a whole group, a small group, or individually for any genre and is useful to start ideas flowing, to develop a topic, and to narrow a topic. Teachers must instruct students how to use questioning to plan—it is not enough to simply display potential questions. We must explicitly teach, model, and scaffold the use of questioning.

## ***The Journalist's Five Ws***

The journalist's five W's (*Who? What? Where? When? Why?*) are a common set of planning questions for students at all writing skill levels. Since teachers often use the five W's for reading comprehension, these questions will likely be familiar to students and thus a comfortable start to utilizing question asking to plan their own writing. Students can use these questions to brainstorm ideas and to flesh out slivers of ideas.

## ***Four Bedford Questions***

*The Bedford Handbook* (Hacker & Sommers, 2016), a prevalent text on college campuses, includes questions that can be tailored for students of all ages. The four Bedford questions can be especially useful for narrowing and focusing ideas. The questions are (1) Is my topic relevant to my audience? (2) Do I know enough about the topic to write the paper? Can I find adequate research if I do not? (3) Does my topic fit the prompt? and (4) Can I make a clear thesis and provide relevant arguments regarding my topic?

## ***Feasibility Questions***

Even when writing to prompts, there is a degree of freedom in choosing what to write. It could be taking a position on an issue, choosing what ideas to highlight in an informational text, or what portion of an experience to consider in a personal narrative. Before students work on a plan, they may benefit from considering whether the topic is feasible. Once students have a few ideas under consideration, they may ask themselves the following questions: (1) What do I know about the subject? (2) From what source is my knowledge of the subject [e.g., personal experience, books, movies]? Do I have sources I can cite, if needed for the genre? Do I have access to the sources? (3) Do I know enough to meet the requirements of the task? and (4) Can I think of enough examples or details to make the topic interesting to the

reader? If not, do I have the time to gain additional information? Where can I find additional information?

### ***Evidence Base***

Questioning is often included in strategies instruction; studies isolating its effect were not found. Brunstein and Glaser (2011) embedded questions into SRSD writing instruction in the narrative genre and found that the supportive questioning strategy directly impacted the quality of fourth graders' story plans and that planning directly impacted story quality. Englert and colleagues (1991) included self-questions to aid students in planning. Questioning was included in the comprehensive writing program, which resulted in strong positive results (Englert et al., 1991). In one study, Knudson (1988) found that too much facilitation specifically associated with question asking resulted in mechanical, fill-in-the-blank responses. Thus, teachers must be cognizant of the degree of supports and appropriate scaffolding necessary for their students, and continuously look for evidence that the supports can be withdrawn, allowing the students to generate their own questions and be more responsible for their own writing.

## **COMMONLY USED APPROACHES**

The following practices are commonly used in writing instruction, but are not well researched. While these approaches are not typically included in strategies instruction, they can be. They could also be embedded in a writing workshop or writing process model.

### **Talk It Out**

Writing is a social act (Graham, 2018). We can use the social context to help students plan their writing. Do you have students who like to talk more than

they like to write? If so, leverage that interest. Let them talk to get the writing juices flowing, to gather their thoughts, and clarify both the task and what they might like to write. Talking it out can be used in small groups or individually with students of all skill levels.

### ***Instruction***

To use talk in planning, after introducing a new writing assignment, teachers will organize students in pairs (which work best) or small groups. Then, ask students to talk about the topic/assignment. They may talk about what they know, want to know, need to know, do not want to know, love, fear, or hope about the topic. Encourage peers to ask clarifying questions. These questions can help a writer determine the elements that may be interesting or confusing for his or her audience. Talking may help with forgetfulness. A student may ask, “I had a good idea after we talked about sandwiches—what did I say?” Following the discussion, students can formulate a written plan.

If a student is working alone on an assignment, talking it out can still be used; students can talk out loud to themselves. It may sound silly, but it can work quite well to have a discussion with oneself, aloud. It can be made less awkward and more useful if recorded. Then, the spontaneous and fleeting thoughts said aloud can be captured. Students can listen to the recording to discern useful ideas to formulate a plan for writing. One can also imagine having a discussion between two people about the topic. Creating a mental movie of this interaction, with topic-relevant dialogue, can be helpful to stimulate and organize ideas about a topic.

Talking it out can be used to generate and narrow ideas. It can be especially useful after students have read, observed, or experienced something relevant to the writing task. Talking it out allows them to process what they learned, and how it might connect to their task.

### ***Evidence Base***

Chen, Park, and Hand (2016) found that talking and writing might serve as epistemic tools facilitating greater understanding of the argumentation and critique in elementary students. Chen and colleagues also found that fifth-grade students moved from using only talk or writing, to using both sequentially and then both simultaneously, resulting in more successful critique skills. The final stage of marrying the two skills of talk and writing fostered more complex cognitive function and provided better support for their critique. Abbott (1989) found that talking used as prewriting with remedial high school students resulted in a less threatening academic environment, increased confidence, a fostering of writing identity, and supported students in separating essential from nonessential information. Blackburn-Brockman (2001) referred to talking as a prewriting strategy for adolescents' persuasive writing, stating that talk reinforced resolve, clarified details, and suggested it may generalize to literature circles and capstone writing assignments.

## **Brainstorming**

Brainstorming is a technique used to generate good ideas for writing. Like freewriting, brainstorming is credited with bringing subconscious ideas to the conscious mind for use in writing exercises. Brainstorming can be used with a whole group, a small group, or individually. It works best when there is at least a vague idea or a topic already defined. Through brainstorming, students can determine what aspect of the topic they want to explore further and what inspires them. This is not a strategy that would usually be employed on a timed test.

### ***Instruction***

To brainstorm, teach students to write down all the ideas they have related to the topic. This is usually done in a rapid-fire format without censorship—all



ideas are recorded. There is no evaluation or concerns about feasibility. The goal with brainstorming is to generate many ideas. After all the ideas are out of the mind and on a list, students review the ideas. In this process, ideas that are important or interesting can be starred. Others can be crossed off. Similar or related ideas can be linked together. Ideas can be grouped, subgrouped, and regrouped as needed. Ideas can also be ranked by preference, relevance, feasibility, or any other desired classification. Preferred ideas can then be recorded as potential writing topics for future use.

Brainstorming can be used with children of all ages and skill levels. Younger children may need to share ideas orally while an adult or more skilled peer writes the ideas. Younger or less skilled children may need help grouping and linking ideas.

### ***Evidence Base***

Harris and Graham (1985) taught two 12-year-old students to brainstorm ideas to include in stories written in response to picture prompts. They also learned self-control strategy training. Results indicated student writing increased both length and quality as a result of the intervention. One extension of brainstorming offered by Rodrigues (1983; conceptual only, not a study) is brain writing, wherein students write their thoughts down on paper, periodically move their papers to the center of a group and select another paper whereupon the student who now has the paper extends the thought of the first person. The first author collects his or her paper, synthesizes the ideas, discarding at will, and begins writing.

### **Cluster/Web/Mind Map**

Clustering, also known as mapping or mind mapping, is used to think about a topic in different ways and to record what is already known about the topic. Like brainstorming and freewriting, clustering is a stream-of-consciousness

activity. It can be used individually, in pairs, in small groups or with a whole group, and with all ages and skill levels, with support.

### ***Instruction***

It is a good idea for teachers to model how to cluster. One starts with a topic in mind, which is usually written in the middle of a page. Think aloud and ask students to contribute, writing down all the ideas everyone can think of related to the subject. Record them using the entire paper or space to cluster ideas around the main topic. If one idea triggers another, they can be linked together with lines, and groups of ideas, or clusters, can be circled. For a more structured approach to clustering, one can use larger and smaller circles to represent major and minor points, connected by lines. Clustering is a way to show, graphically, the relationship between ideas and to the topic. One might think of clustering as a graphic form of outlining.

### ***Evidence Base***

Using SRSD instruction, students were taught to brainstorm what they knew and need to know about a topic to write a report (MacArthur, Schwartz, Graham, Molloy, & Harris, 1996). Then, they were taught to organize those ideas into a semantic web showing relationships between the ideas. The quality of student reports improved as a result of the intervention. Rodrigues (1983; conceptual only, not a study) considered the use of collective notebooks in which students collect ideas on a topic for a week, and then work as a group to consolidate their thoughts into clustered topics. Rodrigues suggested that this can be used as a starting point for developing new topics.

### **Freewriting**

Elbow (1973) developed freewriting as a strategy to increase the flow of ideas

and to develop writing fluency. Freewriting can help students illuminate topics in which they are interested and wish to write about in the future. It is not usually a good strategy for writing to prompts or on timed tests. Proponents of freewriting subscribe to the idea that subconsciously, we know our passions and interests and that freewriting can bring those to the conscious mind.

### ***Instruction***

To freewrite, students get comfortable with whatever writing method they prefer (e.g., paper and pen or pencil, computer, tablet) and set a timer for a short period (5 minutes is common). Then, they are to write anything that comes to mind, without censorship, consideration of spelling, grammar, neatness, feasibility, or even completing a thought. The goal is to free the mind, record the thoughts that pass through it, and write as much as possible in the allotted time. Students can make lists, start on a story, write music lyrics, record main ideas, feelings, pet peeves, favorite recipes, or even write, “I don’t know what to write” over and over. Just write! Once the time is completed, students read what they wrote, rest for a minute, and then repeat the process usually twice more. Freewriting can be done at any time and once a small collection of freewrites are available, the student may begin to discern emerging patterns. From these patterns, or sometimes a single gem of an idea, students can begin to keep a curated list of writing topics they can draw from in the future. Students may need support finding patterns.

Freewriting is best used with students who have fluid handwriting. The physical act of writing is laborious, so freewriting can be too much of a chore to be useful, given the hierarchy of demands in play. In these cases, students may want to use a keyboard (if that is comfortable for them) or another strategy, such as talk it out, not requiring physical writing.

### ***Evidence Base***

Rodrigues (1983; conceptual only, not a study) discusses visual synectics, a prewriting freewriting strategy in which students freely associate with an object or photograph. Students consider similarities between the selected topic and another object or concept—comparing the many ways the *A* in *The Scarlet Letter* is similar to Washington’s wig or the similarities between the federal government’s environmental policy and windowpanes. In both cases, students are asked to free their minds and deeply consider different facets of the objects. Additionally, Rodrigues extends this work into analogizing paper topics, requiring students to find an object or concept that can serve as an analogy to the essence of the writing.

## **Outlining**

While a short writing task can be organized using a simple list, more complex or detailed tasks may need clustering/webbing or outlining. Outlining is a way to organize ideas in a sequential and hierarchical manner (e.g., general to specific). Students may be intimidated by outlining, especially when presented with Roman numerals and levels of indentions, but outlines can be written using Arabic numbers and/or letters or even organized with bullets.

## ***Instruction***

Students need to see an outline being constructed multiple times to develop familiarity with the form. Teachers can use the outline form across content areas and scaffold instruction in how to utilize outlines effectively. For younger students, it can be helpful to provide them with a partially completed outline (starting with only two levels) and then work together to complete the blank areas. For older students, teachers can begin with a simple two-level outline form and collaboratively develop a more complex outline. As with other planning tools, outlining can be paired effectively with the study of genre parts. In fact, just as teachers can use or create genre-specific graphic

organizers, outline frames can be genre specific as well.

### ***Evidence Base***

Kirkpatrick and Klein (2009) evaluated the Information, Aspect, Paragraph, Number (IAPN) table. Students in grades 7 and 8 collected information for compare–contrast essays and organized the information by aspect. The aspects were then labeled with a general paragraph title allowing multiple aspects to be paired together. Paragraphs were numbered in a logical sequence. Students improved in structural and holistic writing quality at posttest (Kirkpatrick & Klein, 2009).

### **Storyboard/Drawing**

Storyboarding is creating a visual sequence. It can be useful for laying out a narrative or any sequence of ideas that would be best represented by drawings. Also, some students prefer to express themselves in graphic form and storyboarding is a great way for these students to plan.

### ***Instruction***

To teach students storyboarding, one can use paper and pencil or computer. If using paper, students can fold their papers into quarters or sixths to create panels. Then, number each panel and proceed to sketch the sequence of the story or essay. If using computers, presentation programs can be used along with graphic art to create the storyboard.

### ***Evidence Base***

There is little exploration of visuals in writing. Some work has been done with students illustrating a story after it was written (Graves, 1983) and visuals

have been used as a stimulus for stories and essays (e.g., Darlington, 1992; Harris & Graham, 1985). We located three studies that employed the use of visual planning. Bailey, O'Grady-Jones, and McGown (1995) taught 25 second graders to use a storyboard template created in PowerPoint to plan compositions. Students were taught to use graphic art and words to plan. Their writing was scored for length and the students were queried on preference. Raw data indicated students wrote far more after using the storyboard and preferred using the computer to plan their writing. Dunn (2013) evaluated elementary students with learning disabilities and their response to a strategy called *Ask, Reflect, Text* (ART) that helped improve story content and quality. Students were taught to ask themselves a series of seven questions; reflect on their answers and illustrate story-content responses with art media (e.g., paints, colored markers, play dough); then from this illustration, generate their text. All participants improved in story content and quality. Harrington (1994) described implementing storyboards as a prewriting strategy with reports of high motivation and social validity as well. After instruction, elementary students sustained the practice without prompting.

## **Technology for Planning**

Using computer-based applications (apps) can facilitate the organization of ideas generated and collected during planning activities. Apps are flexible mechanisms for organizing and modifying the ideas for any writing task. Popular apps include Inspiration (Kidspiration for younger students; Windows/Mac, tablet app, and web based), Writer's Helper (Windows only), and MindMeister (web based, free), but there are plenty of others available both for a fee and for free. With just a short lesson, upper elementary and older students could also use Prezi (web based, free), presentation tools (e.g., PowerPoint, Keynote), or the outline function in common word processing programs (e.g., Word, Pages) to gather and organize ideas. In all the apps,

adding and deleting ideas is easy and the structure automatically adjusts to the changes.

### ***Instruction***

Teachers need to teach students to use the apps, but the time invested early can pay dividends for the rest of the year. To teach students to use apps, it is helpful for students to have their own device to follow as the teacher demonstrates how to use the programs.

Some apps such as Inspiration/Kidspiration and Prezi have the ability to flip between a web and outline format with just the click of a button. That means students who are more linear thinkers can construct a plan in an outline format while others could use the web or mapping format. Another benefit of being able to easily view the information in two different formats is to facilitate teacher evaluation of student plans. It can be unwieldy for anyone except the creator to evaluate a complex concept map, but if it is organized neatly (as the software does) and turned into an outline, teachers may find it easier to offer constructive feedback.

### ***Evidence Base***

Unzueta (2009) evaluated use of a computer graphic organizer on the persuasive writing compositions of Hispanic middle school students with specific learning disabilities and found an improvement in planning and persuasive compositions with regard to number of supporting details planned, percentage of supporting details transferred, planning time, writing fluency, syntactical maturity in number of *T* units (smallest word group still defined as a grammatically correct sentence), and overall organization of the composition. Rowley and Meyer (2003) studied the effects of a computer tutor for writers with 471 high school students and found writing achievement gains of up to one letter grade, improved ability, completion,

and achievement of related learning objectives. Anderson, Quinn, and Horney (1996) discussed computer-based concept mapping and suggested it as effective in supporting synthesis from brainstorming and organizing information.

## **Writing from the Plan**

Once students make a plan, one might assume they would consult the plan when writing the first draft. Our observations across scores of classrooms have shown otherwise. Many times, if students are not explicitly taught how to refer to and use the plan when drafting, they set the plan aside—*never once consulting the plan as they draft*. They might spend 20 minutes constructing a beautifully laid out plan with interesting ideas clearly organized and then write about something completely different. We have seen it happen year after year, which seems to indicate that for some students, there is a disconnect between the plan and its role in drafting. Therefore, as with all strategies and skills, *we must explicitly teach students to use the plan*.

### ***Instruction***

Once a plan has been created with the class, the teacher can announce enthusiastically that it is now time to write the first draft. It can be fun to ask students what they think should happen next, and animated teachers might act as if they might crumple up the plan or toss it in the trash, hoping that students will interrupt and encourage the teacher to use the plan. Engaging in funny scenes can help create longer-lasting memories for students and it lightens the mood of the room as well. We like to demonstrate using the plan to write by having the plan on the left and the blank page for the draft on the right, both projected for easy viewing by the class. Teachers would then consult the first line of the plan and talk out loud about how to take that idea and turn it into a good sentence—but not a perfect sentence since this is just a



draft. Once a sentence is written, the teacher, perhaps with grand flourish and drama, crosses out that line on the plan and moves on to the next section of the plan. This sequence is repeated until the draft is completed. It is important to model that we do not always use all planned ideas and we sometimes think of new ideas as we write. It is okay to use those new ideas even though they were not on the original plan. That is what good writers do—good writers plan, write, and revise all the time at every stage of the writing process.

Back to the main point, though, is to let students see that we read the plan, write about it on the draft, cross out ideas on the plan—read, write, cross out—read, write, cross out. It can help to talk up the satisfaction of crossing off ideas that are finished in the draft. It is also an excellent way to track progress to completion and get in a little fraction practice as well (e.g., “How far along are we? We are one quarter of the way finished!”). This skill can be taught with a whole group, a small group, or individually. In the whole-group setting, teachers can also pass out copies of the plan and project the draft for all to view. In this scenario, each student can cross off each section of the plan as it is written in the draft. If the plan was written on large paper or the board, a student can assist by crossing off sections as the teacher drafts.

### ***Evidence Base***

We located no studies on writing from the plan. This phenomenon was observed and documented during multiple classroom studies, but was not measured.

## **SPECIAL WRITING TASKS**

### **Writing from Source Text**

While not an instructional method, writing from source text is an important writing task that requires special attention. New curricular standards have

shifted focus to the use of textual evidence across several genres for students from early elementary through high school (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010). Students are expected to read multiple texts, sometimes in varying genres, and synthesize information across the texts. Students are then expected to craft essays including required elements of the genre supporting their thinking with text-based evidence—that is, information students glean from sources to reinforce their response to the writing prompt.

In summary, students are asked to read several texts and sometimes view videos, retain the new learning across the multiple readings/viewings, integrate information across readings into their understanding, assess all the features of the writing prompt, choose the most salient examples and evidence to cite or summarize to display their understanding without including extraneous material, and then, *finally*, draft an essay appropriately targeted to their audience. Does that sound like a task that would benefit from a solid plan?

### ***Instruction***

To support students in planning when they are asked to write from source text, marry reading instruction and genre instruction. Always encourage students to thoroughly read the prompt to initiate their understanding of what is being asked of them. After dissecting the prompt for salient details such as the number of questions, the specific aims of the questions, and the targeted audience, model how to read the articles with these aims in mind. You should facilitate close reading procedures with a focus on highlighting and note taking for pertinent details related to the prompt's aims. This will require extensive modeling for the students with specific focus on disregarding superfluous details.

Students may then craft a plan. The TONES strategy (FitzPatrick, 2017) was created specifically for planning writing in response to source text (see

Table 11.2). First, help students select the *Topic*, essentially how to respond appropriately to the prompt. Then for each question or demand in the prompt, support students as they *Outline* answers to the questions posed. At this point, model how to respond to each question/directive mentioned in the prompt with a thoughtful topic/thesis sentence. Next, demonstrate and then support students as they *Note* citations. During this part of the instruction, you will demonstrate how to use the critical details found in the text to support your topic/thesis sentence. Model returning to the source text, glancing at the important information you highlighted and noted, and transferring those details onto the planning document. After students have chosen the evidence they will use to support their topic, model *Explaining* how that specific evidence is responsive to the prompt. Too often, students include extraneous details from the source text, but do not meaningfully respond to the prompt. At other times, the students have a logical connection between the evidence they included, but it is not obviously clear for the audience. By adding a simple line about how the evidence is linked to the prompt topic, the writing becomes more cohesive and often, more convincing. Finally, demonstrate how to restate the topic to reinforce the focus of the paper and *Summarize* the evidence to create a strong ending.

### ***Evidence***

Research indicates that learning new information, incorporating it into preexisting knowledge, and applying the new learning has proven challenging for students (Gunning, 2003). FitzPatrick (2017) studied the impact of informational writing instruction that incorporated textual evidence in a single-case design with a fifth-grade inclusive educator and eight students. At the end of the study, students' writing was higher in quality, showed evidence of strategy use, and was longer in length. An unanticipated, but delightful, result was a reduction in plagiarism. Students attributed this to having a strategy for success. Mason, Davison, Hammer, Miller, and Glutting (2013)

also had students write in response to source text and found fourth-grade students with and without learning disabilities improved in reading comprehension, created more organized essays with more informational units, and increased total words written. In both studies, students reported being pleased with the instruction.

## **Standardized Assessments**

While most high-stakes writing assessments direct students to plan their writing, the time limits often prohibit the prewriting/planning stage in the writing process (Schuster, 2004). Schuster suggests that maybe the tests should be renamed drafting assessments rather than writing assessments as there is no time allotted for ideation, planning, revision, or editing—all the other aspects of the writing process. Also, as more states move to online/computer testing, students are faced with typing on a small screen and often without adequate tools for planning.

It may be helpful to provide students with explicit instruction on how to plan for the state writing exams, within the testing time constraints, using the materials and conditions they would have access to under testing conditions. Four studies of SRSD instruction have included explicit instruction in planning for state writing exams (FitzPatrick, 2017; Kiuvara et al., 2013; McKeown et al., 2016, 2018). All four studies resulted in increased student performance in student writing, but the results cannot be explained solely by the planning instruction since the intervention was the full SRSD instructional model.

## **CONCLUSION**

Many common planning strategies used in classrooms have a limited evidence base. Strategies instruction, and specifically SRSD for writing instruction, which incorporates a comprehensive approach to planning and

writing across genres, rests on a broad foundation of empirical evidence. Planning must be explicitly taught, modeled, and scaffolded until students are capable of carrying full responsibility for designing and achieving success in creating their own compositions.

Planning is an important stage in the writing process. By including essential elements of the genre and meaningful details in the plan, students are able to free their minds to be creative throughout the drafting stage and better manage the cognitive load associated with thoughtful composition. At the most basic level, a child's written composition is his or her offering into the world as filtered through his or her lived experience. It is the child's authentic creation—his or her contribution. Architects create detailed blueprints to breathe their artistic visions into reality; in the same way, budding authors should form plans to guide their words as they are drafted into being. A detailed plan provides a foundation for success. More broadly, teaching planning skills will serve your students in the area of writing and beyond. After all, success does not just happen. It is the result of well-made plans.

## REFERENCES

- Abbott, S. (1989). Talking it out: A prewriting tool. *English Journal*, 78(4), 49–50.
- Anderson, L. I., Quinn, C. K., & Horney, M. A. (1996). Computer-based study strategies for students with learning disabilities. *Journal of Learning Disabilities*, 20, 461–484.
- Bailey, M., O'Grady-Jones, M., & McGown, L. (1995). The impact of integrating visuals in an elementary creative writing process. In R. E. Griffin, D. G. Beauchamp, J. M. Hunter, & C. B. Schiffman (Eds.), *Eyes on the future: Converging images, ideas, and instruction: Selected readings from the annual conference of the International Visual Literacy Association* (pp. 135–144). Chicago: International Visual Literacy Association.
- Baker, S. K., Chard, D. J., Ketterlin-Geller, L. R., Apichatabutra, C., & Doabler, C. (2009). Teaching writing to at-risk students: The quality of evidence for self-regulated strategy development. *Exceptional Children*, 75, 303–318.
- Benedek-Wood, E., Mason, L. H., Wood, P. H., Hoffman, K. E., & McGuire, A. (2014). An experimental examination of quick writing in the middle school science classroom. *Learning Disabilities: A Contemporary Journal*, 12, 69.
- Berninger, V. W., & Swanson, H. L. (1994). Modifying Hayes and Flower's model of skilled writing to

- explaining beginning and developing writing. In J. S. Carlson (Series Ed.) & E. C. Butterfield (Vol. Ed.), *Advances in cognition and educational practice: Vol 2. Children's writing: Toward a process theory of the development of skilled writing* (pp. 57–81). Greenwich, CT: JAI Press.
- Bishop, A. E., Sawyer, M., Alber-Morgan, S. R., & Boggs, M. (2015). Effects of a graphic organizer training package on the persuasive writing of middle school students with autism. *Education and Training in Autism and Developmental Disabilities, 50*, 290–302.
- Blackburn-Brockman, E. (2001). Prewriting, planning, and professional communication. *English Journal, 91*(2), 51–53.
- Brunstein, J. C., & Glaser, C. (2011). Testing a path-analytic mediation model of how self-regulated writing strategies improve fourth graders' composition skills: A randomized controlled trial. *Journal of Educational Psychology, 103*, 922–938.
- Bui, Y., Schumaker, J. B., & Deshler, D. (2006). The effects of a strategic writing program for students with learning disabilities in inclusive fifth-grade classes. *Learning Disabilities Research & Practice, 21*(4), 244–260.
- Chen, Y., Park, S., & Hand, B. (2016). Examining the use of talk and writing for students' development of scientific conceptual knowledge through constructing and critiquing arguments. *Cognition and Instruction, 34*(2), 100–147.
- Darlington, S. R. (1992). Visual literacy as the basis for writing experiences. *Journal of Visual Literacy, 11*(2), 77–92.
- De La Paz, S., & Graham, S. (1997). Strategy instruction in planning: Effects on the writing performance and behavior of students with learning difficulties. *Exceptional Children, 63*(2), 167–181.
- Dunn, M. (2013). Using art media during prewriting: Helping students with dysgraphia manage idea generation before encoding text. *Exceptionality, 21*, 224–237.
- Elbow, P. (1973). *Writing without teachers*. New York: Oxford University Press.
- Englert, C. S., Raphael, T. E., Anderson, L. M., Anthony, H. M., & Stevens, D. D. (1991). Making strategies and self-talk visible: Writing instruction in regular and special education classrooms. *American Educational Research Journal, 28*, 337–372.
- FitzPatrick, E. F. (2017). *Practice-based professional development for self-regulated strategy development: Teaching students with learning disabilities and other struggling writers to pen informational essays citing text-based evidence in an inclusive setting*. Doctoral dissertation. Retrieved from Scholarworks.
- Graham, S. (2006). Writing. In P. Alexander & P. Winne (Eds.), *Handbook of educational psychology* (2nd ed., pp. 457–478). Mahwah, NJ: Erlbaum.
- Graham, S. (2018). A writer(s)-within-community model of writing. In C. Bazerman, A. N. Applebee, V. W. Berninger, D. Brandt, S. Graham, J. V. Jeffrey, et al. (Eds.), *The lifespan development of writing* (pp. 272–325). Urbana, IL: National Council of Teachers of English.
- Graham, S., & Harris, K. R. (1989). Improving learning disabled students' skills at composing essays: Self-instructional strategy training. *Exceptional Children, 56*, 201–214.
- Graham, S., Harris, K. R., & McKeown, D. (2013). The writing of students with LD and a meta-analysis of SRSD writing intervention studies: Redux. In L. Swanson, K. R. Harris, & S. Graham (Eds.), *Handbook of learning disabilities* (2nd ed., pp. 405–438). New York: Guilford Press.
- Graham, S., McKeown, D., Kihara, S., & Harris, K. R. (2012). A meta-analysis of writing instruction for students in the elementary grades. *Journal of Educational Psychology, 104*, 879–896.

- Graham, S., & Perin, D. (2007). *Writing Next: Effective strategies to improve writing of adolescents in middle and high schools: A report to the Carnegie Corporation of New York*. Washington, DC: Alliance for Excellence in Education.
- Graves, D. H. (1983). *Writing: Teachers and children at work*. Exeter, NH: Heinemann Educational Books.
- Gunning, T. G. (2003). *Building literacy in the content areas*. Boston: Allyn & Bacon.
- Hacker, D., & Sommers, N. (2016). *The Bedford handbook* (10th ed.). Boston: Bedford/St. Martin's.
- Harrington, S. L. (1994). An author's storyboard technique as a prewriting strategy. *The Reading Teacher*, 48, 283–286.
- Harris, K. R., & Graham, S. (1985). Improving learning disabled students' composition skills: Self-control strategy training. *Learning Disability Quarterly*, 8, 27–36.
- Harris, K. R., Graham, S., & Mason, L. (2003). Self-regulated strategy development in the classroom: Part of a balanced approach to writing instruction for students with disabilities. *Focus on Exceptional Children*, 35(7), 1–16.
- Harris, K. R., Graham, S., & Mason, L. (2006). Improving the writing, knowledge, and motivation of struggling young writers: Effects of self-regulated strategy development with and without peer support. *American Educational Research Journal*, 43, 295–340.
- Kirkpatrick, L. C., & Klein, P. D. (2009). Planning text structure as a way to improve students' writing from sources in the compare–contrast genre. *Learning and Instruction*, 19, 309–321.
- Kiuhara, S., Harris, K. R., Graham, S., Brindle, M., McKeown, D., & Gilbert, J. (2013, February). *The effectiveness of practice-based professional development at Tier 1: SRSD with an on-demand writing task*. Panel presentation at the Pacific Coast Research Conference, Coronado, CA.
- Knudson, R. E. (1988). The effects of highly structured versus less structured lessons on student writing. *Journal of Educational Research*, 81, 365–368.
- Konigsburg, E. L. (1967). *From the mixed-up files of Mrs. Basil E. Frankweiler*. New York: Atheneum Books.
- Limpo, T., & Alves, R. A. (2013). Modeling writing development: Contribution of transcription and self-regulation to Portuguese students' text generation quality. *Journal of Educational Psychology*, 10, 401–413.
- MacArthur, C., Schwartz, S., Graham, S., Molloy, D., & Harris, K. (1996). Integration of strategy instruction into whole language classrooms: A case study. *Learning Disabilities and Practice*, 11, 168–176.
- Mason, L. H., Davison, M. D., Hammer, C. S., Miller, C. S., & Glutting, J. J. (2013). Knowledge, writing, and language outcomes for a reading comprehension and writing intervention. *Reading and Writing: An Interdisciplinary Journal*, 26, 1133–1158.
- McKeown, D., Brindle, M., Harris, K. R., Graham, S., & Collins, A. A. (2016). Illuminating growth and struggles using mixed methods: Practice-based professional development and coaching for differentiating SRSD instruction in writing. *Reading and Writing: An Interdisciplinary Journal*, 29, 1101–1140.
- McKeown, D., FitzPatrick, E., Brown, M., Brindle, M., Owens, J., & Hendrick, R. (2018). Urban teachers' SRSD implementation for persuasive writing following practice-based professional development: Positive effects mediated by compromised fidelity. *Reading and Writing*, 1–24.
- National Governors Association Center for Best Practices & Council of Chief State School Officers.

- (2010). *Common Core State Standards for English language arts and literacy in history/social studies, science, and technical subjects*. Washington, DC: Authors. Retrieved from [www.corestandards.org](http://www.corestandards.org).
- Read, S. (2010). A model for scaffolding writing instruction: IMSCI. *The Reading Teacher*, 64, 47–52.
- Reid, R., Hagaman, J. L., & Graham, S. (2014). Using self-regulated strategy development for writing expression with students with attention deficit hyperactivity disorder. *Learning Disabilities: A Contemporary Journal*, 12, 21–42.
- Rodrigues, R. (1983). Tools for developing prewriting skills. *English Journal*, 72(2), 58–60.
- Rowley, K., & Meyer, N. (2003). Effects of a computer tutor for writers on student writing achievement. *Journal of Educational Computing Research*, 29, 169–187.
- Santa, C. M., Havens, L., Nelson, M., Danner, M., Scalf, L., & Scalf, J. (1988). *Content reading including study systems: Reading, writing, and studying across the curriculum*. Dubuque, IA: Kendall/Hunt.
- Scardamalia, M., & Bereiter, C. (1986). Research on written composition. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 778–803). New York: Macmillan.
- Schumaker, J. B., & Deshler, D. D. (2006). Teaching adolescents to be strategic learners. In D. D. Deshler & J. B. Schumaker (Eds.), *Teaching adolescents with disabilities: Accessing the general education curriculum* (pp. 121–156). Thousand Oaks, CA: Corwin Press.
- Schuster, E. H. (2004). National and state writing tests: The writing process betrayed. *Phi Delta Kappan*, 85(5), 375–378.
- Troia, G. A., Graham, S., & Harris, K. R. (1999). Teaching students with learning disabilities to mindfully plan when writing. *Exceptional Children*, 65(2), 235–252.
- Unzueta, C. H. (2009). *The use of a computer graphic organizer for persuasive composition writing by Hispanic students with specific learning disabilities*. Unpublished master's thesis, Florida International University, Miami, FL.



## ***Chapter 12***

# Evaluation and Revision

Charles A. MacArthur

**R**evision is an important aspect of the composing process that is included in some form in nearly all approaches to writing instruction from writing workshop in elementary classrooms to first-year college composition. From an instructional perspective, revision is important for two reasons. First, proficient writers revise frequently both during writing and after completing a draft (Hayes, 2004; MacArthur, 2016). When writers revise, they have an opportunity to think about whether their text communicates effectively to an audience, to improve the quality of their prose, and even to reconsider their content and perspective and, potentially, transform their own understanding. In contrast, students at the elementary and secondary school levels generally do little substantive revising (Fitzgerald, 1987; MacArthur & Graham, 2016). To become proficient writers, students must learn to revise effectively.

Second, in an instructional context, revising provides an opportunity for teachers to guide students in learning about the characteristics of effective writing in ways that will not only improve the current piece but that will also carry over to future writing (MacArthur, 2016). In learning to revise, students get feedback from readers on their work, learn to evaluate their writing, and discover new ways to solve common writing problems. Thus, revising is a way to learn about the craft of writing.

The purpose of this chapter is to provide guidance to teachers on ways to help their students develop revising skills and to teach revising in a way that improves overall writing ability. The information in the chapter is based on research on revising processes and on instructional methods. The chapter has three sections. First, I describe cognitive models of revising to provide a framework for understanding what students need to develop. Second, I review research on instructional methods for revising. Finally, I provide classroom examples of revising instruction that incorporate approaches to teaching and supporting revision based on the research.

## **COGNITIVE MODELS OF REVISING**

What do proficient writers do when they revise? Answers to this question can help us understand what less proficient writers need to learn and can inform the design of instruction. The most prominent models of the cognitive processes involved in writing have been developed (and revised) by Hayes and colleagues (Hayes, 2004; Hayes, Flower, Schriver, Stratman, & Carey, 1987) and Bereiter and Scardamalia (1987). The discussion here is based on those models with an emphasis on the most instructionally relevant aspects. I would like to make several points about revising processes.

First, theoretical models of revising use a broad definition of revising that includes “changes made at any point in the writing process” (Fitzgerald, 1987, p. 484). Thus, revision includes mental evaluation and revision of sentences before writing them, changes in text during writing, and even changes in plans, as well as evaluation and revision of completed drafts. In practice, teachers and even researchers view revision more narrowly as changes to text already written. Teachers have the greatest opportunity to teach students about good writing when students evaluate and change what they have already written. However, it is worthwhile keeping in mind that what students learn while revising can be applied during writing in ways that are not visible to the teacher.

Second, proficient writers have relatively sophisticated conceptions of and goals for revising. They see revising as a matter of evaluating all aspects of their writing that affect whether they have achieved their goals and purposes. They keep their overall purposes and audience in mind as they evaluate the organization and content of their paper as well as the language and errors. They look not only for problems in their writing but also for opportunities to expand their ideas and communicate more clearly. Some expert writers make revision even more central to their composing processes (Galbraith & Torrance, 2004). Instead of planning extensively, they write quickly to explore their ideas and then evaluate what they have written to identify useful ideas to explore in future drafts. This approach to writing is what Murray (1991) had in mind when he wrote that “writing *is* revising, and the writer’s craft is largely a matter of knowing how to discover what you have to say, develop, and clarify it, each requiring the craft of revision” (p. 2).

In contrast, struggling writers have limited conceptions of revising and unclear goals and purposes for writing. They have narrow conceptions of revising as correcting errors and making a neat copy (MacArthur, 2016; McCutchen, Francis, & Kerr, 1997). In addition, they may not have clear goals and purposes for their writing as a whole. It is possible to get students to make more substantive revisions simply by giving them specific goals for revising. For example, in one study (Graham, MacArthur, & Schwartz, 1995), students with learning disabilities (LD) made more substantive revisions and improved their papers when given a simple goal to add ideas to make their papers more interesting. In another study (Midgette, Haria, & MacArthur, 2008), middle school students produced better persuasive essays when given a goal to revise with a specific audience in mind that would disagree with their position.

Third, revising requires all the skills involved in good reading comprehension (Hayes, 2004; MacArthur, 2016). The writer must distance him- or herself from the writing and critically evaluate the text. To make changes in the text as a whole, for example, the writer must construct the gist of the text by attending to the main ideas and organization. Or to identify

problems of clarity, the writer must read as a reader and evaluate whether the content is clear with reasonable inferences. Without good reading skills, writers may read into the text their intended meanings and fail to see problems with the text as it actually exists. Reading comprehension skills parallel revision skills at all levels of text from overall organization to the sentence level. The difference is just the purpose for reading—to understand versus to identify problems and improve the text.

Fourth, proficient writers have extensive knowledge about criteria for good writing and about typical writing problems. Like English teachers, they know to look for an interesting lead, clear thesis, and good paragraph structure. They may automatically detect some kinds of problems in grammar and clarity. Their knowledge includes general criteria as well as criteria specific to particular kinds of texts. For example, in revising a persuasive essay, writers know that a good essay should consider opposing positions in a respectful way and marshal arguments against them (see Ferretti & Lewis, [Chapter 6](#), this volume). This knowledge of evaluation criteria and typical problems helps them to detect and diagnose specific problems in their texts. In contrast, younger and less proficient writers know little about evaluating writing. Typical upper elementary school students, when asked why they like one paper more than another, cite length and conventions, topic, and general characteristics, such as “It’s funny” (MacArthur, Graham, & Schwartz, 1991). When they do detect problems, they often decide to rewrite the sentence rather than diagnose and fix the problem.

Finally, proficient writers have solid metacognitive, self-regulation skills. They can switch flexibly to evaluation and revision during writing when they notice problems or have a new idea. When revising a draft, they can manage the multiple processes involved—keeping audience and purpose in mind while critically reading the text and considering possible revisions. In contrast, less proficient writers have difficulty managing the complexity of the writing process. Thus, they may restrict their revising to problems at the sentence level.

These cognitive aspects of revising—goals and conceptions of revising,

critical reading skills, knowledge of evaluation criteria, and self-regulation—are connected to the types of revising instruction that research has found to be effective.

## **RESEARCH ON REVISING INSTRUCTION**

In this section, I review research on several instructional approaches or methods. Further research is needed, but the findings are generally consistent across instructional studies and with research on revising processes.

### **Teacher Feedback**

The most common approach to teaching writing, whether in high school and college composition courses or in elementary school writing workshops, is to provide feedback to students and ask them to revise. Feedback can be provided by teachers, peers, or more recently by computers (see Wilson, [Chapter 14](#), this volume). A recent review of research on formative assessment confirmed that feedback, in general, has positive effects on student writing (Graham, Harris, & Hebert, 2011). In particular, verbal feedback from teachers or feedback on learning skills and strategies has positive effects. An earlier review by Hillocks (1986) found that written feedback from teachers was generally ineffective. From a practical perspective, the effects probably depend on the nature of the feedback. Feedback that is supportive, that explains problems and makes specific suggestions, and that helps students reflect on the rhetorical purpose of the writing is more effective (Beach & Friedrich, 2006). Teacher feedback provided in conferences may be more effective. Frequent teacher conferences are a key component of process approaches to writing instruction, which generally have positive effects when teachers receive professional development (Graham & Perin, 2007).

## Peer Review

Peer review is a common feature of writing process classrooms, and it is often recommended as a way of providing student writers with an audience of readers who can respond to their writing, identify strengths and problems, and recommend improvements. Peers can provide feedback that is more frequent and immediate than teachers. On the other hand, peer review presents difficulties as well. When peers are asked to engage in peer review without specific guidance, they often are reluctant to criticize one another or are unable to provide significant help because their own evaluation and revision skills are limited.

However, when peer revising is integrated with instruction in evaluation and revision, peer interaction can be effective. Two recent reviews of writing research (Graham et al., 2011; Graham & Perin, 2007) found positive effects for peer review. For example, Boscolo and Ascorti (2004), in a study of elementary and middle school students, focused on the issue of clarity or comprehensibility—that is, understanding what readers might find difficult to understand. Students wrote personal narratives and worked in pairs to evaluate and revise them using the following procedure: The student serving as editor read until he or she found an unclear point, asked the author for clarification, and then discussed with the author how to fix the text until a change was agreed on and made. The students improved their ability to identify comprehension problems in text and their own ability to write text without such problems.

Peer review is a reciprocal process, and students may learn as much from giving feedback as from receiving it. Giving feedback requires students to read critically and apply evaluation criteria. Two studies with college students (Cho & MacArthur, 2011; Lundstrom & Baker, 2009) found that experience giving feedback helped students to improve the quality of their own papers. A recent study has extended these findings to upper elementary students (Philippakos & MacArthur, 2016). In this study, all students were given a rubric for evaluating persuasive writing and shown how to apply it to evaluate

strong and weak papers. Then one group used the rubric to evaluate papers written by unknown peers and to make suggestions for improvement. One control group read the same papers, and a second control group read unrelated material. The reviewers improved the quality of their own writing compared to both control groups. This study has practical instructional implications. It is easy and time efficient to give students the opportunity to apply evaluation rubrics to papers written by unknown peers, and it helps them to improve their own papers. The instructional examples at the end of the chapter incorporate this method.

## **Evaluation Criteria and Self-Evaluation**

At the center of skill in revision is knowledge of evaluation criteria and the ability to apply them to one's own writing. Some research has directly taught students to apply specific criteria, or rubrics, to evaluate and revise their papers. Hillocks (1986), in his meta-analysis of writing instruction studies, reported that six studies using this approach found moderately strong effects on revision and writing quality. The recent review by Graham and colleagues (2011) confirmed the positive effects of self-evaluation. In addition, teaching self-evaluation is a key part of the strategy instruction methods described below.

Two factors seem to be important in designing instruction in evaluation and revision. First, specific evaluation criteria seem more effective than general criteria such as content and organization (MacArthur, 2016). One way to make criteria specific is to teach them within particular genres. For example, in teaching about narratives, one might make content and organization more specific by using evaluation criteria such as “Are the characters clearly described?”; “Does the plot include clear attempts to solve a problem?”; and “Does the story show how characters feel?” Specific criteria are easier for students to learn and easier to use in making revisions. Then, as students learn about various genres, they will come to understand that

organization and content are always important criteria, but that they are applied differently depending on the type of writing. Specific evaluation criteria are not always genre related. For example, criteria of clarity (“Is there anything difficult to understand?”) and detail (“Where could I add information to make it more interesting?”) are also specific enough to teach.

Second, it is important not only to teach students to evaluate their papers but also to give support and practice in applying the criteria in making specific revisions. One way to practice such application is to display papers with particular kinds of problems on a chart or overhead and then model and discuss how to apply a particular evaluation criterion and revise the paper to improve it. For example, in teaching the criteria of clarity, the teacher might display papers with missing information or unclear referents and guide students to find the problems by asking questions about the content. Then the teacher and students could collaboratively generate sentences that would clarify the content. Students may need extensive practice to learn to apply the criteria and to make revisions to solve problems.

## **Critical Reading**

A few studies have improved revising skills by asking students to read texts critically and identify comprehension problems. For example, Holliway and McCutchen (2004) had students write descriptions of tangram figures (i.e., shapes of people, animals, etc. made from geometric blocks). Then one group received feedback on the accuracy of their descriptions while a second group read other students’ descriptions and tried to use them to identify one tangram figure from a group of four similar figures. Students who had the reading experience were better able to revise their own descriptions and to write better first-draft descriptions as well. This study demonstrated the importance of critical reading, but it used a rather artificial writing task.

Another study investigated the effects of being a reader on the more common task of writing a persuasive letter (Moore & MacArthur, 2012).



Students met in small groups to discuss a set of three persuasive letters that varied in quality. Their task was to discuss the letters and evaluate whether they were persuasive and why; the discussion was structured with a few questions about audience and purpose. Compared to a control group that spent the same amount of time practicing writing additional persuasive letters, this group of collaborative readers made more substantive revisions to their writing, resulting in improved overall quality.

## **Word Processing**

Computers are powerful and flexible writing tools that can support writing in many ways, particularly for struggling writers (MacArthur, 2006; Morphy & Graham, 2012). They can ease the physical process of writing, enable students to produce error-free final copies, support publication, and make revision possible without tedious recopying. However, using a word processor by itself has not been shown to result in more or better revision. Word processing in combination with writing instruction does appear to have modest positive effects on writing quality, especially for struggling writers. Furthermore, research that has focused specifically on teaching revising strategies in combination with use of a word processor has found improvements in revising and writing quality. It is easier to teach revising strategies if students can do the revisions on a word processor because students are less reluctant to apply revising strategies they have learned.

## **Strategy Instruction**

One of the most extensively studied and effective approaches to teaching revising is cognitive strategy instruction. Two recent reviews of research on strategy instruction (Graham, 2006; Graham, Harris, & McKeown, 2013), which combined included seven studies that taught revising strategies and another 16 that taught a combination of planning and revising, both found

large effects of strategy instruction on the amount of revision and writing quality. Most of the studies in these reviews included teaching students to self-evaluate their writing using specific criteria, often related to genre or text structure.

Most studies of instruction in strategies for revision include multiple components. They often include instruction in specific evaluation criteria. Many of them involve interaction with peers or teachers in peer response groups or teacher conferencing. Some involve word processing and some involve teaching strategies for both planning and revising.

The earliest study (to my knowledge) to integrate planning and revising strategies was the work by Englert, Raphael, Anderson, Anthony, and Stevens (1991) on the Cognitive Strategy Instruction in Writing (CSIW) program. The CSIW was designed to teach expository writing to upper elementary school students in classrooms that included students with LD. Students learned planning and revising strategies for writing different types of expository texts (e.g., explanation and compare–contrast). In the planning strategy, students identified the topic, audience, and purpose; brainstormed content; and organized the content using a graphic organizer appropriate for the particular text structure. In the editing and revising steps, students evaluated their text alone and with a peer using a set of evaluation questions that included criteria related to the specific text structure. For example, for compare–contrast writing, evaluation questions asked whether the paper told how the two things were the same and how they were different. “Think sheets” were used to scaffold the planning and revising strategies until students internalized them. The strategies were taught over the course of a year in classroom settings that emphasized peer collaboration, teacher scaffolding, and extensive dialogue about writing processes. Teachers modeled the strategies, and peers discussed their writing and applied the revising strategy in peer review. Students with and without LD made gains in the quality of their expository writing.

A few studies have focused specifically on strategies for revision. For example, in a recent study (De La Paz & Sherman, 2013), students in an

inclusive classroom learned a strategy for revising argumentative essays using evaluation criteria based on the genre elements of an argumentative essay (thesis, reasons, elaborations, conclusions). All types of students, including typical students, English learners, and students with LD, made gains in substantive revisions and overall writing quality.

My colleagues and I have conducted research on writing strategy instruction with college basic writers (MacArthur, Philippakos, & Ianetta, 2015) and elementary students (Philippakos, MacArthur, & Coker, 2015), in both cases placing a strong emphasis on learning self-evaluation. The overall approach draws on the self-regulated strategy development model of Harris and Graham (2009), and on Englert and colleagues' (1991) use of text structure, or genre elements, to connect planning and revising strategies. Students learn strategies for planning, drafting, and evaluating/revising their writing together with self-regulation strategies (e.g., goal setting, progress monitoring, task management). Learning self-evaluation builds knowledge about the features of good writing and is itself a key form of self-regulation. Two components of our instructional approach are key to developing self-evaluation strategies. First, near the beginning of each unit of instruction, teachers and students discuss strong and weak examples of student writing in the genre. The teacher explains the genre evaluation criteria and models applying them to the examples with collaboration from students. Second, after students have finished planning and drafting, in preparation for peer review, teachers use papers written by unknown peers to model the evaluation process, applying the criteria and making suggestions and some actual revisions; then students collaboratively evaluate papers and discuss the process. They are then prepared to apply what they learned to peer review of one another's papers and to self-evaluation. With this sort of preparation, students can learn as much from giving feedback as from receiving it; the process of giving feedback is very similar to self-evaluation.

## **Summary of the Instructional Research**

In planning methods for teaching revision, teachers can choose from several approaches that are supported by research on revising processes and by instructional studies. Research on cognitive processes describes revising as a complex set of processes that depends on a writer's goals and purposes for writing, critical reading ability, knowledge of evaluation criteria and typical writing problems, and self-regulation ability. The instructional approaches discussed make sense in terms of these underlying cognitive and social processes. Peer collaboration makes sense because a major consideration in revising is whether the writing communicates effectively to an audience. In addition, peer review gives students opportunities as editors to practice critical reading and evaluation. Teaching evaluation criteria and self-evaluation processes makes sense because proficient writers use their knowledge of criteria for good writing. Teaching critical reading makes sense because rereading to revise involves all the same skills as reading comprehension from comprehending complex sentences to getting the gist and to making inferences. Strategy instruction makes sense because revising, like planning, is a complex process requiring writers to coordinate multiple skills and attend to multiple considerations.

In planning classroom writing instruction, teachers should draw on evidence-based practices and integrate them with the rest of their curriculum. In the next section, I describe examples of teaching revision as part of an integrated writing curriculum.

## **INSTRUCTIONAL EXAMPLES**

In this section, I give two examples of how revision can be taught as part of instruction. The first example describes instruction in a fourth-grade class that is learning to write narratives. The second example focuses on a unit on persuasive writing in a middle school classroom. Both examples are composites of instruction from research projects and other examples of instruction that my colleagues and I have worked on. Both examples illustrate

instruction that is organized around particular genres of writing. Knowledge about common genres is an important part of students' developing understanding of writing, and genre helps to organize writing around purposes as well as making both planning and revising instruction more specific. As students learn about basic genres, they develop the ability to generalize their knowledge to new purposes and forms for writing.

## **Revision in a Fourth-Grade Unit on Narrative Writing**

It is early October in Ms. A's fourth-grade classroom and the students are accustomed to the schedule of daily writing workshop. The class includes a range of ability from a few students who are fluent and imaginative writers to a couple of students with LD who struggle with reading and writing. In addition to instruction, writing workshop includes independent writing, sharing with peers in small groups and in whole-class readings, and teacher conferences. For the first month of school, students have engaged in writing personal narratives, descriptions of class activities, and responses to reading, while Ms. A has informally evaluated students' writing.

Mindful of the curriculum, which includes narrative, informative, and persuasive writing, Ms. A decides to initiate a unit on narrative writing. In earlier grades, students learned a basic strategy for planning and writing stories that involved using the elements of stories—character, setting, problem or goal, actions, and resolution—to plan stories before writing them. Her goal is for students to write more elaborated stories that are more interesting and effective. She decides to work toward this goal by teaching a peer-review strategy with genre-specific evaluation criteria. She understands that students learn both from giving and receiving feedback. She also understands that peer review requires considerable instruction in evaluation criteria to be effective.

Importantly, Ms. A has to select evaluation criteria that are worth teaching. She decides to begin with characters because characters'

personalities and the way they approach problems are central to narratives. In particular, she wants students to describe characters' personalities, feelings, and motivations. She translates these ideas into the following evaluation questions: "Are the characters described clearly?"; "Does the author show how the characters feel?"; and "Can you tell why the characters act like they do?"

Ms. A begins her instruction by integrating reading and writing. She explains to her students that they can learn how to write better stories by paying attention to how other authors write. She discusses how important characters are in stories—that stories are all about characters and their problems and that we enjoy stories because we get to know the characters and see how they deal with problems. She reads the first chapter of Louis Sachar's (1992) *Dogs Don't Tell Jokes*, which begins with an engaging description of Gary, the class clown. She discusses what the author tells us about the character and what the reader can predict about the problems Gary will have. Then she introduces the evaluation questions and asks students to discuss how the author achieved these things.

This discussion of characters in stories is presented here as an introduction to teaching students to evaluate and revise their own stories. But notice that this focus on characters also makes sense as reading comprehension instruction. Thinking about the personalities and motivations of characters is an important aspect of reading comprehension. Talking about characters is a good way to begin teaching students to make inferences when they read. As noted in the beginning of this chapter, critical reading and reading to revise have much in common. In this case, the teacher chose books that used fairly direct ways of conveying character so that students would be more likely to be able to use the techniques in their own stories.

The next part of instruction is one of the key elements: teaching students to evaluate writing and to revise based on the evaluation. Ms. A explains to the students that they can use these evaluation questions to revise their own stories and those of other students. She posts the evaluation questions on a bulletin board for easy reference. Then she models the process. She begins by

using stories from students in other classes or previous years so that students will feel free to criticize and revise the stories. Later, students will practice evaluating and revising their own papers with peer support. She chooses stories that have all the basic story elements but that are lacking in character development. Here is a sample story and modeling script:

One Christmas, two brothers Jim and Thomas went up to New Hampshire with their family. When they got there there was a lot of snow on the ground and it was really cold out. The very next day they both went skiing. They raced each other down the hill. Jim went over a small jump and went flying in the air. He crash landed. When Thomas skied over to him, he found he had broken a leg. There was no one around because they had skied off the course. Thomas didn't know whether to stay with Jim or go for help. Finally, he skied down the hill and found the ski patrol. The ski patrol came and rescued Jim. The ambulance took him to the hospital. Luckily he was OK after his leg healed.

Ms. A: (*Reads the story and then thinks aloud.*) Okay, this story has characters, setting, a problem, and a resolution. The problem is that one of the brothers breaks a leg, and the solution is that the other one finds the ski patrol who rescue him.

Now I want to use the evaluation questions to see if I can revise the story to make it more interesting. The questions are all about characters. I'll ask all the questions and then try to revise the story. The first question is "Are the characters described clearly?" Well, it tells me their names and that they are brothers. And they can ski. That's about all. I'd like to know more about them. I'd like to know how old they were and whether they were good skiers.

The second question is "Does the author show how the characters feel?" It's important to know how the characters feel in a story, and it's better if the author shows us through their actions instead of just saying it. This story doesn't say anything about their feelings. How do you think they felt when Jim broke his leg?

STUDENT: Scared!

Ms. A: I bet they were scared, especially because there was no one around.

The third question is, "Can you tell why the characters act like

they do?” Let’s see. What did the characters do? They had a skiing accident. Is there some reason why these boys had an accident? It sounds like they went off the regular ski trails, which wasn’t very smart. Why did they do that? Maybe they were racing against each other. Do you have any ideas?

STUDENT: Maybe one of them dared the other to do it.

Ms. A: That’s a good idea. That would explain why they did it, and make the story more interesting.

Okay. Now let’s see if I can revise it. I’ll add information about the characters. I think I’ll make them very competitive with each other, which would explain why they were racing and got into trouble. Okay.

*(reading)* “One Christmas, two brothers Jim and Thomas went up to New Hampshire with their family.” I’ll add some information here. “They were 12 years old and they were looking forward to skiing, which was their favorite sport.” There, that tells us that they knew how to ski. “They were twins and were always trying to beat each other.” Okay, that gives them a reason to be racing.

*(reading)* “When they got there there was a lot of snow on the ground and it was really cold out. The very next day they both went skiing. They raced each other down the hill.” Okay, I’m going to add something here about the dare. Let’s see. “They both wanted to be the first one down the hill. Jim yelled to Thomas, ‘I’m taking a shortcut through the woods. Bet you can’t follow me.’ Jim turned into the woods and Thomas raced after him.”

Ms. A continues the revising, adding information about Jim’s pain from the broken leg and how scared they both were. When she is done, she reads the story and discusses how much better it is now because you can tell more about the characters and why they acted like they did.

After this initial modeling, Ms. A provides ample practice with the whole class and in collaborative groups. She displays stories of varying quality on the



overhead projector and engages students in applying the evaluation questions and, when they identify weaknesses, in revising the story. She begins with whole-class practice that gives the students a chance to see other students applying the strategy and gives her a chance to prompt and guide students. However, whole-class practice does not engage enough students actively. Therefore, she also has students work on papers in pairs or small groups. Working together, they evaluate papers and make revisions. Ms. A visits with the groups and gives feedback on their use of the evaluation and revision process. All groups work on the same papers so that they can discuss their evaluations and revisions in a whole-class discussion.

After this point, students begin using the strategy in pairs to evaluate each other's papers and make revisions. Ms. A requires the students to take notes on the evaluations and suggestions made by the editor to compare to the actual revisions. She conducts conferences with the pairs, asking them to show her how they applied the strategy. This gives her an opportunity to see whether students are using the strategy successfully and to give appropriate support. If she sees that a number of students are having trouble with one of the evaluation criteria, she can provide more modeling and practice in the whole-class group.

One of the challenges of strategy instruction, in general, is to get students to see the value of the strategy so they will be motivated to continue to use and improve it. Ms. A does several things to promote this sense of the value of the strategy. First, when she conferences with pairs of students, she gives feedback to students both on how well they used the strategy and on the quality of their papers. This combined feedback encourages the students to see how the strategy helps their writing. Second, when students share their papers in the class, they acknowledge the assistance of their editor. The teacher often asks them to describe some way the editor helped them. Third, she emphasizes that expert writers have editors, too. She asks students to help edit her papers and talks about how her colleagues read and edit her papers before she turns them in for her college classes.

Finally, when Ms. A collects the final drafts and grades them, she uses the

evaluation criteria as an important part of her grading. This alignment between students' self-evaluations and the teacher's grading encourages students to see the self-evaluations as important.

As the students master these particular evaluation questions, the teacher goes on to teach new criteria. For example, for narratives, she might add criteria focused on rich descriptions and use of dialogue. As the class moves on to learning a new genre, there will be new evaluation criteria appropriate to that form of writing.

## **Revision in an Eighth-Grade Unit on Persuasive Writing**

Mr. B takes a somewhat different approach to teaching evaluation and revision in a unit on persuasive writing in his middle school English class. He works closely with the rest of his teaching team, and they have planned together to work on persuasive writing across the curriculum. Mr. B will take the lead to introduce persuasive writing in English class, and then other teachers will build on what the students learn. For example, the social studies teacher plans to engage the students in debates about immigration in American history followed by persuasive writing on various aspects of this broad issue. This close connection between writing and content-area instruction is consistent with the emphasis of the Common Core State Standards (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010).

Like Ms. A, Mr. B plans to teach both a planning and revising strategy, but he plans to connect the elements of the two strategies more closely and teach them together. The connection between the planning and revising strategies will be text structure, or genre elements. Students will learn a strategy for planning persuasive essays that is based on an argumentative text structure. An argumentative essay includes a thesis or position, reasons, elaborations on those reasons including supportive examples and evidence, and a conclusion. In addition, by eighth grade, students are expected to

consider opposing positions and reasons and refute those positions. Although even elementary students have a basic understanding of persuasion, persuasive writing is quite difficult for middle and high school students. It requires careful analytical thinking to generate reasons, connect reasons and evidence, and refute opposing positions.

Because of the difficulty of the task, Mr. B plans to use the evaluation strategy to directly support students in using the elements of argument that are in the planning strategy. Thus, the evaluation criteria will focus on the elements of an argument: position, reasons, elaborations, opposing positions, and refutations. He develops an evaluation rubric for the students to use in evaluating their own papers and when working in peer revising (see [Figure 12.1](#)). He will use this same rubric in grading and commenting on students' papers.

Score each question	1	Needs revision		
	2	Okay		
	3	Well done		
Topic: Does it say why the issue is important?	1	2	3	
Position: Is the writer's position clear?	1	2	3	
Reasons: Are my reasons clear and well supported?				
First reason clear?	1	2	3	
First reason supported with evidence?	1	2	3	
Second reason clear?	1	2	3	
Second reason supported with evidence?	1	2	3	
Opposing position: Is an opposing position given?	1	2	3	
Are opposing reasons explained?	1	2	3	
Are opposing reasons refuted effectively?	1	2	3	
Conclusion: Is the position restated?	1	2	3	
Does it end with something to think about?	1	2	3	
Does it use good transition words?	1	2	3	
Is the tone appropriate?	1	2	3	
Is the essay persuasive?	1	2	3	
What could I change to make my argument more persuasive?				

**FIGURE 12.1.** Evaluation of a persuasive essay.

Before any instruction in persuasive writing, Mr. B has the students write two persuasive essays, one on an assigned topic and one on an issue of their choice. He scores these essays using the rubric to assess student needs and plan for differentiation. In addition, later he will ask students to revise these essays so they can see how much they have learned about persuasive writing. Seeing progress is the best motivation for students.

Instruction begins with critical reading and analysis of persuasive texts. Critical reading is an important aspect of Mr. B's instruction for three reasons. First, his ultimate goal is for students to be able to read and listen to

other people's perspectives and to respond by explaining and supporting their own views, not just to give their own opinions. He believes that his students will be engaged by a discussion of controversial issues, and that such discussion will help them to understand the purpose of persuasive writing and something about what it takes to be persuasive. Second, reading and analyzing texts is a way to show students the essential elements of persuasive writing that are used in the planning and revising strategies. Third, critical reading is very similar to the kind of rereading and evaluation required to revise their own writing. In both cases, students must read to identify reasons, evidence, and other elements and think about whether those reasons are convincing.

For one critical reading activity, Mr. B brings in copies of a newspaper editorial and several letters to the editor on a locally important issue: prohibiting smoking in restaurants and other public places. He is careful to choose an editorial that includes several reasons and directly addresses opposing positions. After a brief discussion of what one has to do to support an argument—give reasons and evidence and consider opposing arguments—he models analyzing the argument in the editorial. As he thinks aloud, he highlights the position, reasons, and refutations of opposing arguments in different colors. As he highlights the reasons, he thinks aloud about whether the reasons are really separate reasons or all part of the same reason. He also thinks aloud about whether the evidence is good and whether he agrees. As he highlights the refutations, he thinks aloud about who might have those opposing positions and whether the author has answered them effectively. The process of highlighting the elements gets students to focus on the structure of the argument and consider each reason and its evidence. Then Mr. B asks students, working in small groups, to analyze the letters to the editor in the same way. Students then write brief letters to the editor of their own.

Next, Mr. B introduces the evaluation scale for students and models using it to evaluate and revise essays written by students unknown to his class. Middle school students are particularly reluctant to criticize their peers on

any task assigned and graded by a teacher. Using papers from unknown students makes it easier for students to evaluate and criticize the work. First, Mr. B focuses attention on the criteria about a clear position and reasons. As he models, he uses think-alouds to show his reasoning, but he also involves the students in the discussion. This sort of collaborative modeling allows the teacher to direct the overall process of applying the criteria but encourages student participation. Here is an example of collaborative modeling:

STUDENT TEXT DISPLAYED ON AN OVERHEAD PROJECTOR

I think smoking should be banned in some public places.

Some people can't handle other people smoking around them. They could either get sick or really choked up. Secondhand smoke can also be a problem. A child could be around someone smoking and inhel smoke and can become very sick.

Smoking can also be very rude. It can be very disgusting when your eating something and someone's cigarette smoke blows into your food. Lots of pollutants can get into the air.

People might disapprove because it is free country and they can smoke if they want to. But they probably don't know how much it is harmful to other people and the earth.

MR. B: (*Reads the whole essay.*) Okay. Now I need to use the evaluation questions to help me figure out how to improve this essay. Let's see, is the position clear? It says smoking should be banned in some public places. So I know which side the author is on, but I'm not sure about *some* public places. Does it mean *all* public places? Does anyone have an idea about how to fix that?

STUDENT A: We could just say *all* public places.

STUDENT B: We could say restaurants. It mentions them later.

MR. B: How could we say that?

STUDENT B: "I think smoking should be banned in all public places including restaurants and stores."

MR. B: (*Crosses out and inserts the needed words.*) Okay. That's better. I think I'm going to rate this a 2 now. It's okay but not great because it isn't elaborated at all. The next evaluation question is whether the

reasons are clear and supported. Let's find the reasons and underline them. There are two paragraphs here so each one should have a separate reason. This one starts "Some people can't handle other people smoking around them." Do you think that is clear?

STUDENT C: I don't think so. *Handle* could mean a lot of things. I think the author is talking about people getting sick. That's what the rest of the paragraph is about.

MR. B: I agree. How can we revise that first sentence to make it clearer?

STUDENT C: "Secondhand smoke can make other people sick."

STUDENT D: "If people smoke in public places, other people can get sick from the smoke."

MR. B: Both of those are good ideas. I like using the term *secondhand smoke*. And I also like referring back to the idea about public places. Let's try, "If people smoke in public places, other people can get sick from the secondhand smoke." (*Writes.*) That's better. The rest of the paragraph still needs some work, but let's get the rest of the reasons fixed before we do that.

MR. B: Let's look at the next paragraph. "Smoking can also be very rude." Again, I'm not sure what that really means. Why is it rude? The next sentence says it's disgusting when you are eating. I think the author means that the smoke is unpleasant. Is that a different reason from the first paragraph?

STUDENT A: I think so. The first paragraph was about the smoke making people sick. Disgusting is something else. They just don't like the smoke.

MR. B: I think you're right. So this paragraph should be about other people not liking the smoke. Let me think how to say that. "When other people are eating, smoke can be very disgusting." I'm not sure I like that word *disgusting*. Any other ideas?

STUDENT B: "When other people are eating, smoke can be very

unpleasant.”

STUDENT C: “When people are eating, they shouldn’t have to smell cigarette smoke.”

MR. B: Both of those ideas are good. (*Writes.*)

The discussion continues for a while longer. Mr. B considers how the support for the two reasons could be improved and evaluates how the author considered the opposing position. In the end, he reads the revised paper and comments that it is much better, although it could be better with more content.

Over the next few days, Mr. B has students work in pairs to evaluate and revise more essays written by students unknown to them. They use the evaluation scale to support their evaluations. Mr. B also continues to evaluate and revise papers as a whole-class activity. The papers range widely in quality and include some essays that are well written and need little revision. Mr. B, however, always manages to find some way to improve the paper by strengthening the support for the reasons or the way the paper responds to the opposing position. As part of the discussion, students talk about whether they agree with the positions taken and whether they think the evidence is convincing. Persuasive writing is not just about whether writers follow the form; the content of the reasons and evidence is critical, and it is part of what they evaluate.

When the students are consistently able to evaluate essays and revise them, Mr. B introduces a planning strategy for persuasive essays. The students already have a clear idea of what is required for an effective essay. The planning strategy helps the students to generate and organize their ideas before writing. It asks them to list reasons and evidence on both sides of the issue so that they are prepared to defend their position and respond to potential opposing positions.

The students then begin writing persuasive essays and applying the evaluation scale to revise them. Mr. B has them work in pairs to evaluate and



revise their papers. Students are now able to help one another because they have learned how to analyze and evaluate persuasive essays. Their natural reluctance to criticize one another is tempered somewhat by the knowledge that the teacher will be grading their papers on the same criteria that they are using. He also asks them to evaluate and revise the essays they wrote before instruction to show them how much they have learned.

The students write on a range of persuasive topics. They write on policy issues that are meaningful to middle school students, like whether students should have after-school jobs. They also write about the literature they are reading; Mr. B raises challenging questions about whether characters should have taken the actions they did, and the students respond, drawing evidence from the book as well as their experience. Students also start to use the planning and revising strategies for assignments in other classes. Mr. B has worked together with the team of teachers so that they are all familiar with the strategy. Using the strategies in multiple classes addresses the common problem of maintenance and generalization.

Mr. B's instruction included several of the components that research has shown are important to learning to revise. He provided meaningful writing tasks with a clear goal to persuade some audience. Sometimes the audience was peers; other times it was an imagined audience, but one within students' experience. He taught critical reading of persuasive essays as well as teaching evaluation criteria and how to use those criteria to revise their papers. He engaged students in whole-class and peer dialogue about evaluation and revision. Finally, he arranged with his colleagues to use the strategies across content areas.

## **CONCLUDING REMARKS**

In closing, I summarize a few principles for teaching revision in ways that help students develop their overall writing skills. First, it is important to provide a classroom context in which writing has meaningful goals. One of

the most common and best ways to make writing meaningful is to arrange authentic writing tasks that are read by peers and other audiences. However, authentic audiences are not the only way to provide meaningful goals. Students can also be engaged in writing tasks with clear goals based on learning specific objectives—for example, the task of describing tangrams mentioned above (Hollaway & McCutchen, 2004). It can also be interesting to ask students to write on the same issue to different audiences to get them to consider what arguments and tone are appropriate. Ideally, revision is guided by an understanding of audience and purpose, so writing tasks with clear goals are very helpful.

Second, peer interaction and teacher–student dialogue are essential to learning to evaluate texts. Peers and teachers are first readers for students’ writing, and students learn from serving as editors as well as from hearing the responses of others to their writing. Peer collaboration is also highly motivating, and it reflects the reality that most writing tasks outside of school are surrounded by rich oral communication.

Third, it is valuable to integrate reading comprehension instruction with instruction in evaluation and revision. Critical reading is similar in many ways to reading for revision—the main difference is in the purpose: reading to understand versus reading to identify problems and revise.

Fourth, word processing is a helpful tool in learning to revise. It simplifies the physical processes of revising and, thus, removes an important disincentive to revision: recopying. It also motivates students to produce final copies for publication, which is one of the main motivations for revising.

Fifth, strategy instruction is a highly effective way to improve students’ revising skills and the overall quality of their writing. Most strategy instruction in revision pulls together elements of evaluation criteria, peer interaction, and self-regulation. Much of the research combines instruction in strategies for planning and revising.

Finally, revision begins with evaluation, and the primary reason that students have difficulty revising is that they do not know how to evaluate their writing. Thus, it is important to teach students specific criteria for

evaluation and how to revise based on those criteria. Most effective approaches to teaching revising involve instruction in evaluation. As students learn to evaluate their writing and understand the features of good writing for varied purposes, not only will they revise more effectively but also their first drafts will improve. And that is the main reason to teach evaluation and revision.

## REFERENCES

- Beach, R., & Friedrich, T. (2006). Response to writing. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (pp. 222–234). New York: Guilford Press.
- Bereiter, C., & Scardamalia, M. (1987). *The psychology of written composition*. Hillsdale, NJ: Erlbaum.
- Boscolo, P., & Ascorti, K. (2004). Effects of collaborative revision on children's ability to write understandable narrative texts. In L. Allal, L. Chanquoy, & P. Largy (Eds.), *Revision: Cognitive and instructional processes* (Vol. 13, pp. 157–170). Boston: Kluwer.
- Cho, K., & MacArthur, C. (2011). Learning by reviewing. *Journal of Educational Psychology*, 103, 73–84.
- De La Paz, S., & Sherman, C. K. (2013). Revising strategy instruction in inclusive settings: Effects for English learners and novice writers. *Learning Disabilities Research & Practice*, 28, 129–141.
- Englert, C. S., Raphael, T. E., Anderson, L. M., Anthony, H. M., & Stevens, D. D. (1991). Making writing strategies and self-talk visible: Cognitive strategy instruction in writing in regular and special education classrooms. *American Educational Research Journal*, 28, 337–372.
- Fitzgerald, J. (1987). Research on revision in writing. *Review of Educational Research*, 57, 481–506.
- Galbraith, D., & Torrance, M. (2004). Revision in the context of different drafting strategies. In L. Allal, L. Chanquoy, & P. Largy (Eds.), *Revision: Cognitive and instructional processes* (Vol. 13, pp. 63–85). Boston: Kluwer.
- Graham, S. (2006). Strategy instruction and the teaching of writing: A meta-analysis. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (pp. 187–207). New York: Guilford Press.
- Graham, S., Harris, K. R., & Hebert, M. (2011). *Informing writing: The benefits of formative assessment*. Washington, DC: Alliance for Excellent Education.
- Graham, S., Harris, K. R., & McKeown, D. (2013). The writing of students with learning disabilities, meta-analysis of SRSD writing intervention studies, and future directions: Redux. In H. L. Swanson, K. Harris, & S. Graham (Eds.), *Handbook of learning disabilities* (2nd ed., pp. 565–590). New York: Guilford Press.
- Graham, S., MacArthur, C. A., & Schwartz, S. S. (1995). The effects of goal setting and procedural facilitation on the revising behavior and writing performance of students with writing and learning problems. *Journal of Educational Psychology*, 87, 230–240.
- Graham, S., & Perin, D. (2007). A meta-analysis of writing instruction for adolescent students. *Journal of Educational Psychology*, 99, 445–476.

- Harris, K. R., & Graham, S. (2009). Self-regulated strategy development in writing: Premises, evolution, and the future. *British Journal of Educational Psychology Monograph Series II*, 6, 113–135.
- Hayes, J. (2004). What triggers revision? In L. Allal, L. Chanquoy, & P. Largy (Eds.), *Revision: Cognitive and instructional processes* (Vol. 13, pp. 9–20). Boston: Kluwer.
- Hayes, J. R., Flower, L., Schriver, K. A., Stratman, J. F., & Carey, L. (1987). Cognitive processes in revision. In S. Rosenberg (Ed.), *Advances in applied psycholinguistics: Vol. 2. Reading, writing, and language learning* (pp. 176–240). New York: Cambridge University Press.
- Hillocks, G. (1986). *Research on written composition: New directions for teaching*. Urbana, IL: ERIC Clearinghouse on Reading and Communication Skills.
- Holliway, D. R., & McCutchen, D. (2004). Audience perspective in young writers' composing and revising. In L. Allal, L. Chanquoy, & P. Largy (Eds.), *Revision: Cognitive and instructional processes* (Vol. 13, pp. 87–101). Boston: Kluwer.
- Lundstrom, K., & Baker, W. (2009). To give is better than to receive: The benefits of peer review to the reviewer's own writing. *Journal of Second Language Writing*, 18, 30–43.
- MacArthur, C. A. (2006). The effects of new technologies on writing and writing processes. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (pp. 248–262). New York: Guilford Press.
- MacArthur, C. A. (2016). Instruction in evaluation and revision. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (2nd ed., pp. 272–287). New York: Guilford Press.
- MacArthur, C. A., & Graham, S. (2016). Writing research from a cognitive perspective. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (2nd ed., pp. 24–40). New York: Guilford Press.
- MacArthur, C. A., Graham, S., & Schwartz, S. (1991). Knowledge of revision and revising behavior among learning disabled students. *Learning Disability Quarterly*, 14, 61–73.
- MacArthur, C. A., Philippakos, Z. A., & Ianetta, M. (2015). Self-regulated strategy instruction in college developmental writing. *Journal of Educational Psychology*, 107, 855–867.
- McCutchen, D., Francis, M., & Kerr, S. (1997). Revising for meaning: Effects of knowledge and strategy. *Journal of Educational Psychology*, 89, 667–676.
- Midgette, E., Haria, P., & MacArthur, C. A. (2008). The effects of content and audience awareness goals for revision on the persuasive essays of fifth- and eighth-grade students. *Reading and Writing*, 21, 131–151.
- Moore, N., & MacArthur, C. A. (2012). The effects of being a reader and of observing readers on fifth-grade students' argumentative writing and revising. *Reading and Writing*, 25, 1449–1478.
- Morphy, P., & Graham, S. (2012). Word processing programs and weaker writers/readers: A meta-analysis of research findings. *Reading and Writing*, 25, 641–678.
- Murray, D. (1991). *The craft of revision*. Austin, TX: Holt, Rinehart & Winston.
- National Governors Association Center for Best Practices & Council of Chief State School Officers. (2010). *Common Core State Standards for English language arts and literacy in history/social studies, science, and technical subjects*. Washington, DC: Authors. Retrieved from [www.corestandards.org](http://www.corestandards.org).
- Philippakos, Z. A., & MacArthur, C. A. (2016). The effects of giving feedback on the persuasive writing of fourth- and fifth-grade students. *Reading Research Quarterly*, 51, 419–433.
- Philippakos, Z. A., MacArthur, C. A., & Coker, D. (2015). *Developing strategic writers through genre instruction: Resources for grades 3–5*. New York: Guilford Press.

Sachar, L. (1992). *Dogs don't tell jokes*. New York: Yearling Books.

## ***Chapter 13***

# Reading–Writing Connections

Timothy Shanahan

Scholars have long known that learning to read and learning to write are related processes (Tierney & Shanahan, 1991). Reading and writing each depend on learning slightly different versions of the same linguistic and cognitive information (Fitzgerald & Shanahan, 2000), including metaknowledge (e.g., understanding the functions and purposes of reading and writing, monitoring comprehension and production), knowledge about substance and content (e.g., world knowledge, domain knowledge, content knowledge), knowledge about universal text attributes (e.g., graphophonics, syntax, text organization), and the knowledge and skill needed to negotiate reading and writing (e.g., procedural knowledge, communication strategies). Both reading and writing depend on a mastery of sound–symbol relationships (for decoding in reading and for spelling in writing), vocabulary, grammar/syntax, text organization, and the like. They both require knowledge of the world and the content of what we read and write about. Both readers and writers must recognize they are in a communicative relationship with the other—writers by anticipating the readers’ needs for information, readers by thinking about the author’s choices—and both need to be self-aware, monitoring their own actions and effectiveness.

As similar as reading and writing are, however, it is essential to recognize

they are also different. Reading and writing depend on highly *similar* information, not *identical* information. That means being good at reading does not guarantee a student will be equally good at writing—someone can be a good reader and a poor writer, or vice versa (Stotsky, 1983), and this variation in superiority can change with learning and development (Costa, Edwards, & Hooper, 2016). For example, both reading and writing require knowledge of the world; writing requires it as the basis of what the writer will write about, while reading requires it as a tool for making sense of the information the writer provides. While it may seem like the knowledge base would be exactly the same, it is not. Readers and writers have to be able to start from different places. Readers have to follow an author’s lead, using their knowledge of a topic to draw inferences or to fill gaps that the author leaves. The writer, on the other hand, has to be able to initiate the “conversation,” which requires a greater degree of explicitness and a more thorough and complete grasp of the same information. It is sort of like the difference between recognizing which choice is right on a multiple-choice test and being able to produce an answer to a question with a cogent and complete statement of information. Knowing a topic well enough to read about it successfully pales before the more onerous demands of writing—more extensive and better organized knowledge is required for someone to write about it with sufficient depth. Similarly, it has been shown that there are different, though overlapping, cognitive paths from sound to letter than from letter to sound; spelling and decoding are not just mirror images of each other (Fitzgerald & Shanahan, 2000).

The separation of reading and writing argues for the teaching of both, as that would be the only way to ensure that both are learned. However, their separability is also the reason why reading and writing can be combined so effectively to support learning (Tierney, Soter, O’Flahavan, & McGinley, 1989). Because reading and writing differ, their combination provides alternative perspectives to a learner. Reading about a topic and writing about the same topic require somewhat different perspectives on the information, and doing both activities together provides an even richer learning

experience. Similarly, exploring language through both reading and writing helps to build an understanding of how language works—whether the focus is on graphophonemic relations, vocabulary, syntax, organization, or genre—as we explore these aspects of language somewhat differently from the reading or writing sides. Gaining a slightly different angle on the same information provides one with greater awareness and a distinctive perspective.

What are the implications for instruction of these close relations between reading and writing? Research has shown that the connections of reading and writing can be successfully exploited, allowing for the enhancement of literacy learning (Graham & Hebert, 2010; Tierney & Shanahan, 1991). Classrooms that take advantage of the interconnections of reading and writing can develop students who are better readers and writers. This chapter explores some of those practical possibilities.

## **BACK TO BASICS**

Research has shown the cross-modal benefits of reading and writing, but these benefits can be derived only when both reading and writing are taught. Unfortunately, many teachers choose not to include writing in their daily instructional routines. Sometimes school principals who may be trying to maximize their school's reading scores tell them not to. Generally, in curriculum coverage, it can make sense to focus on one thing at the expense of something else to ensure success. However, when it comes to ignoring writing with the idea of according more instructional time to reading, it is a bad deal for children. And, ironically, it is a bad deal for their reading scores.

The first basic when it comes to reading–writing relationships is that reading *and* writing need to be taught regularly—and this teaching should be part of the classroom life at all grade levels. Some teachers think it makes sense to include writing in the upper grades curriculum, but not in the lower grades. However, the research is pretty clear: reading and writing connect to each other even in preschool and kindergarten (Shanahan, 2015). Children's



ages are not a reason to delay writing instruction and experience. Nor is their language status—research shows benefits from combining reading and writing instruction with second-language learners as well (Lee & Schallert, 2016).

Another basic has to do with the teaching of foundational skills. Young children benefit from explicit guidance in how to write—that is, how to form letters and words (Berninger et al., 2006; Summer, Connelly, & Barnett, 2014). Of course, like anything else, some children may be able to catch on to this aspect of writing with only a modicum of modeling and guidance—such children may even enter school already writing. However, there are those children who struggle to get their words on paper. For them, forming letters in manuscript hand or in cursive is just not intuitive. Because of their uncertainty, such students write little, even when teachers provide the opportunity. They avoid writing, and when it cannot be avoided, they limit what they put on the page to the absolute minimum; they feel safer that way. A small amount of direct instruction and guided practice in printing and writing letters and words has been found to allow these children to write—and for their reading to gain the benefit of that writing experience.

The same can be said about spelling. As discussed later, being involved in spelling invention—that is, students writing words the way they think they are spelled—is beneficial. However, that students can spell on the basis of their knowledge of sound–symbol relationships does not mean that there is no value in explicit spelling instruction and practice. In fact, the knowledge that comes from such instruction is part of the knowledge base that children use to “invent” spellings (i.e., to spell words the way they think those words must be spelled). As both a teacher and parent, I have encouraged children to engage in invention—and research is certainly supportive of the benefits of such activity (Ouellette & Sénéchal, 2017). However, there are always those children who want to spell the words “right” (meaning conventionally—the way adults would write them). They can be so preoccupied by that goal that they try to avoid making mistakes by limiting their writing to words they think they can spell (Summer, Connelly, & Barnett, 2016); they are not always

right in those judgments, of course. What that means is they do not write much and what they do write is more constrained and inhibited than their oral language. The less that students write, the fewer the chances such writing will have a positive impact on their reading ability.

The full advantages of reading–writing connections cannot be gained unless writing instruction and writing experience are available throughout the school years from the earliest grades, and such activity should be bolstered by specific instruction in the relevant foundational skills. Some studies even suggest the importance of having somewhat equal coverage of reading and writing within an instructional program (Graham et al., 2017). But those fundamental conditions only make it possible to exploit the reading–writing connections. They create the necessary circumstances, but there is obviously more to it than that. Researchers have identified three major categories of connections between reading and writing that can be taken advantage of instructionally to maximize student learning and to enhance and expand students’ conceptions of literacy. Research has examined the shared knowledge and cognitive and linguistic processes that underlie both reading and writing (e.g., Shanahan, 1984); it has explored the communication dimensions of reading and writing, considering how readers think about authors and how authors think about their reading audiences (e.g., Nystrand, 1986); and they have considered how combining reading and writing in particular functional ways extends the power of reading and writing (e.g., Graham & Hebert, 2010). The rest of this chapter provides a brief introduction to the instructional implications of these three approaches.

## **SHARED KNOWLEDGE/SHARED PROCESS**

As noted earlier, reading and writing share a lot of common knowledge (and language). Reading and writing both require knowledge of the alphabet, phonemic awareness, sound–symbol relationships, syntax, cohesion, structure, and world or domain knowledge. One cannot, for example, read

without recognizing the letters, being able to distinguish one from another, linking them with particular phonemes. Obviously, phonemic awareness and phonics instruction are aimed at helping students to master such concepts. However, it should be equally obvious that students will not be able to write in a conventional sense unless they know this information as well. The fundamental idea here is that both reading and writing draw upon the same body of information in a literate person's mind; [Figure 13.1](#) provides a visual metaphor for the idea that reading and writing are both dependent upon the same well of information.



**FIGURE 13.1.** Visual metaphor for the Shared Knowledge/Process Approach to reading–writing connections.

Given that reading and writing have this reliance on shared skills, language, and knowledge, it makes sense to explore such skills from both the reading and writing side. For instance, when teaching the sound–symbol relationships why just teach students to decode? Such an approach treats that information as if it can be used only in reading (i.e., to sound out words), but it is applicable to writing as well. Decoding lessons should include both decoding practice and encoding practice with students trying to use the sounds to spell words. During such lessons, teachers should dictate words that the children then try to write based on the sounds or pronunciation patterns they are being taught.

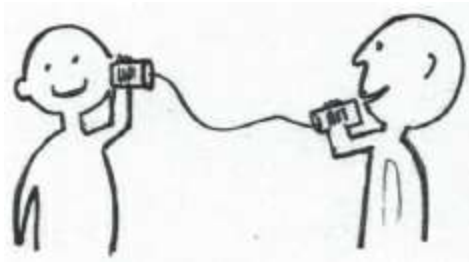
The writing benefit of such practice is obvious: children would learn to spell some words enabling them to write more fluently. However, the interesting thing is that we have long known that phonics instruction that includes that kind of dictation practice tends to develop better decoders (Chall, 1996). This could be because being able to transcribe such words accurately requires a more thorough understanding of word construction than decoding alone requires—leading to “overlearning” or “mastery.” Similarly, the invented spelling idea noted earlier seems like it would provide almost ideal phonemic awareness practice, and more individual practice than a typical phonemic awareness lesson could to any individual child (since everyone could be trying to figure out how to represent the phonemes in words simultaneously and the writing attempts leave a record of the students’ current level of proficiency in perceiving those phonemes for the teacher to analyze).

This kind of combined instruction is not just for foundational skills either. Vocabulary, for instance, is another area—this one focused specifically on meaning—in which reading and writing instruction should be combined. The vocabulary, language, and prediction (VLP) procedure in which students are pretaught vocabulary prior to reading a text is one way of infusing the vocabulary instruction into both reading and writing (Wood & Robinson, 1983). In this procedure, students use the vocabulary to construct their own stories, which then serve as predictions for the text they are about to read. This has a positive impact on both their reading comprehension and their vocabulary learning since using vocabulary words within composing has been found to increase learning of that vocabulary (Duin & Graves, 1986; Pichette, De Serres, & Lafontaine, 2012).

Whatever the underlying skill or ability being taught to facilitate reading there is likely a comparable skill or ability that a writer needs to be able to control to compose. When teaching such skills make sure that students have opportunities to implement them in both reading and writing. This should provide students with a more thorough understanding of and flexibility with the skills in question, and should allow for more efficient instruction.

## WRITING AS COMMUNICATION

The second conception of reading–writing relationships focuses on their reciprocal roles within the communication process. Writers compose texts with the hope of conveying information successfully to an audience, and to do this they have to anticipate readers’ needs, recognizing what readers might already know, and what they will need to be told about a subject that would allow them to understand the information. Writers, also, need to learn to control their tone—the attitude that they express through their writing can facilitate or interfere with communications. Similarly, readers have to learn to instantiate an author based upon the reading of a text: Historians analyze texts to draw inferences about an author’s point of view (Wineburg, 1991) and literary readers must compose an author’s persona or tone (Booth, 1983). [Figure 13.2](#) provides a visual metaphor illustrating the idea that reading and writing are a communications conduit between and among people.



**FIGURE 13.2.** Visual metaphor for the Communications Approach to reading–writing connections.

There are various ways of emphasizing these communicative aspects of reading and writing. Moffett (1968), for instance, described the variety of audiences students could learn to write for. Writers can engage in writing intrapersonally—that is, *reflective* writing with themselves as the intended audience (such as diary entries or writing aimed at managing one’s own emotions). Students can also write interpersonally, either through written

*conversation* or *correspondence*—the former texts written for audiences that are in close proximity to the author and with a lot of shared knowledge between reader and writer, and the latter for bridging greater distances and when less shared knowledge is evident. Finally, writers can write impersonally for *publication*—writing intended to bridge time and space, composed for unknown or distant readers.

This audience continuum captures the varied demands for explicitness and detail; when we write for ourselves we can take shortcuts and use a wide variety of abbreviations and summary statements. It is not necessary to be explicit since you, the writer, will know what you intended to mean. But when writing for others, such shortcuts can be problematic. They might lead to miscommunication. Having students writing for a variety of audiences and adjusting their writing for them can both enhance their writing ability and provide insights to how texts work.

Another writing activity that can provide students with these kinds of communications insights for reading is revision conferencing (Calkins, Hartman, & White, 2005). Having students read one another's writings and engaging in conferencing to identify readers' problems with one's texts can help writers to improve their communication skills. Obviously, such feedback can lead to improvements in the specific pieces of writing being critiqued, but it can also sensitize students to the kinds of things that undermine reading comprehension.

Similarly, on the reading side, it is possible to guide students to identify author personae and tone through analysis of text (Shanahan, 1992). I have had third graders compose author biographies based upon—not research into the real life of the author—information about the author implied by the fictional creations. I guide such writing with a series of questions (e.g., “Is the author a man or woman?”; “Would you like the author to be your substitute teacher?”). Students have to use information from the stories to construct their conception of this author.

A more sophisticated response to author information is the kind of sourcing-centered text analysis recommended for history instruction

(Wineburg, Martin, & Monte-Sano, 2012). Students may analyze multiple texts written by an author, looking for variations in the author's claims and evidence over time or with different audiences. Or different versions of an event might be compared to see how different perspectives give rise to alternative claims about such events.

Ultimately, the purpose of such writing and reading exercises is to sensitize students to the idea of text being the intermediary for human communication. Students need to learn to think about the people on the other side of these exchanges and how their attitudes, communicative intentions, and self-interests are implicated in the creation and interpretation of texts.

## COMBINING READING AND WRITING

The third way to think about reading and writing connections is the idea that reading and writing can be combined functionally to accomplish other problems. For the most part, research into this approach has focused either on learning—that is, how can reading and writing be combined to help students to study and learn content information more effectively or efficiently—or on the combination of reading and writing to conduct research and produce synthesis papers. The visual metaphor for this conception (see [Figure 13.3](#)) shows two tools that could be used in combination to construct some new object; using these tools together would offer the carpenter greater power than using them separately.



**FIGURE 13.3.** Visual metaphor for the Combined Reading and Writing Approach to reading–writing connections.

In a meta-analysis of studies that experimentally evaluated the effects of having students writing about the ideas in text, it was found that such writing was a powerful stimulus to learning (Graham & Hebert, 2010). Writing about text consistently led to greater amounts of learning. There are four basic ways that students can write about texts: they can try to write texts based upon text models, they can summarize the information from a text, they can analyze or critique the ideas in a text, or they can synthesize information from multiple texts.

## **Writing to Text Models**

Writing about text can be used to deepen children’s reading and writing skills in many ways by having students read model texts and then imitate particular aspects of the model text through their own writing. Such modeling is a very common approach to teaching writing at the college level, where 76% of instructors report using it regularly (Stolarek, 1994). However, there are persuasive examples of text modeling with elementary (Cramer & Cramer, 1975) and secondary students, too (Shields, 2007). The idea of text modeling is that students must carefully and analytically read texts to identify the key features of the text to produce their own version of a genre or a text feature. By engaging in such reading—with an eye aimed specifically at identifying features of craft and structure—students can sharpen both their reading and writing tools.

Modeling or imitative writing has not been studied often, but studies of the efficacy of writing to text models have found small, though positive, effects. Graham and Perin (2007), in an extensive review of studies of what improves writing achievement, found the study of text models to be an effective, albeit limited, approach to improving writing quality. Their review examined six studies focused on grades 4–12 that compared the performance



of students who examined model pieces of writing to guide the construction of original compositions with the performance of students who had not received such modeling support. The average effect size for modeling was 0.25; the experimental students received a quarter of a standard deviation advantage from modeling. If the control group performed at the 50th percentile at the end of the study, the modeling groups would have performed at the 60th percentile. There were no differences in the effectiveness of modeling procedures across the studies due to demographic or treatment variations.

What does text-modeling instruction look like? Basically, the idea is that to teach students about a genre, say the fairy tale genre, it is necessary to engage them in the reading and writing of fairy tales. Necessarily, the reading of the texts to be imitated must come first since without a model students would not have a clear idea of what to concentrate on in the production of their own versions. For such reading (or listening), teachers need to select appropriately strong or salient texts. An exemplary version of a fairy tale, one that is prototypical of the genre, and that would be easy to recognize as a fairy tale, would be a good choice. There is some evidence that model quality may not matter particularly when multiple examples are used (Charney & Carlson, 1995). However, such evidence comes from older student writers who might be better able to identify essential text characteristics on their own, without much teacher support.

Fairy tales usually focus on a quest of some kind and they tend to pit good against evil. Such tales always include magic, often, though not always, with talking animals or other “strange” creatures. Frequently, fairy tales include royalty (kings and princesses), and the tales customarily take place in somewhat exotic or distant settings (“at the edge of a dark wood”; “in a kingdom”; “across the seven seas”) far away and long ago (“once upon a time”)—and, presumably, emotionally at a safer distance for young readers who may be reassured that such events cannot befall them. The plots of fairy tales often include instances in which various events reoccur three or seven times.

To teach students to write in the fairy tale genre, the teacher would have the children read or listen to such stories, followed by some kind of guided analysis—breaking the stories down into their elements. Thus, in *Goldilocks and the Three Bears*, we have a story that takes place “once upon a time” in a “large forest.” Goldilocks sets off on an adventure. She enters the home of a family of three bears (who amazingly enough, talk and comport themselves like people). This story has a lot of threes in it: three bears, three bowls of porridge, three chairs, three beds, and most important, Goldilocks attempts to figure out what is “just right for her,” three times. By reading and rereading such tales, and discussing them and even charting out their elements, the students come to recognize the recurring text features. For example, the wolf in the *Three Little Pigs* tries to capture the pigs three times before he gets his ultimate lesson, and the queen in *Rumpelstiltskin* attempts to guess Rumpelstiltskin’s name three times as well.

Once the students are conversant with the essential elements or characteristics, then they are ready to attempt to produce their own fairy tales, complete with the essential fairy tale genre features they have identified through their reading. Initially, the teacher might provide a template for the children to fill in or complete with their own versions of the key features, but over time such scaffolding is withdrawn and the children create their tales with less support or constraint.

Modeling can focus on genre, as in this example, but there are many other features of text that could be replicated as well. Thus, students might try to write their own version of *Brown Bear, Brown Bear, What Do You See?*, investing its predictable literary pattern with their own content (Cramer & Cramer, 1975). Similarly, students might take the structure of a text comparing crocodiles and alligators, trying to imitate its informational text structure in their own reports on lions and tigers or frogs and toads or Democrats and Republicans.

Imitation of text models is even emphasized in the upper grades in the educational standards of many states (Common Core State Standards [CCSS]; National Governors Association Center for Best Practices & Council of Chief

State School Officers [NGA & CCSSO], 2010), in which students are expected to study how Shakespeare used *Ovid* as the source material for *Romeo and Juliet* and how Jerome Robbins, Arthur Laurents, and Stephen Sondheim later used *Romeo and Juliet* as the basis for *West Side Story*. Anyone who studies a text or some aspect of a text so carefully that he or she can use it as the basis for their own written inventions truly understands and appreciates the original work and is better situated to take on similar texts in the future, influencing both reading and writing. Of course, modeling requires readers to read like writers, with an eye not only to what the text says but to how it works (Tierney & Pearson, 1983).

## Summarizing Text

Another way reading can be a valuable basis of writing is to have students summarize texts, condensing the information into an essentialized but shorter version of the original (Brown & Day, 1983). To write an effective summary, of course, readers must recognize which ideas are indispensable to the original text, and which ones can be dropped altogether or combined within collective statements or generalizations. As such, summarization entails many important reading and writing skills including paraphrasing. Research shows summarization instruction improves both writing quality (Graham & Perin, 2007) and reading comprehension (Graham & Hebert, 2010; National Institute of Child Health and Human Development, 2000; Shanahan et al., 2010) across a wide range of ages; summarization has been found to exert large and consistent positive impacts on student reading and writing outcomes. Across 19 studies of the effects of summary writing with students in grades 3–12, the average effect size was 0.52. The summary writers ended up at the 70th percentile, while the control groups would have ended at the 50th percentile. Although studies have shown summarization to improve reading and writing at a variety of grade levels, the effects are markedly larger (0.79) with younger students—those in elementary school—than with older

ones (0.33) in the middle and high school grades (Graham & Hebert, 2010).

Good readers (or listeners) usually find that if they stop occasionally to sum up the information as they progress through a text or presentation, they end up with better comprehension and recall (National Institute of Child Health and Human Development, 2000). But the *writing* of summaries appears to be even more powerful. “Writing summaries about a text proved to be better than simply reading it, reading and rereading it, [and] reading and studying it” (Graham & Hebert, 2010, p. 16). Along the same lines, summarization of multiple sources is a vital step in the process of academic research.

To summarize effectively, students need to recognize main ideas and key details, disregard unimportant or repetitive ideas, construct topic sentences, paraphrase, and collapse or combine lists or events into general statements. Thus, if someone were retelling the story of *Goldilocks and the Three Bears*, he or she would likely write something similar to “Goldilocks tried out the bears’ breakfasts, chairs, and beds, always with the same result: the baby bear’s stuff was just right for her,” rather than retelling each episode in its entirety.

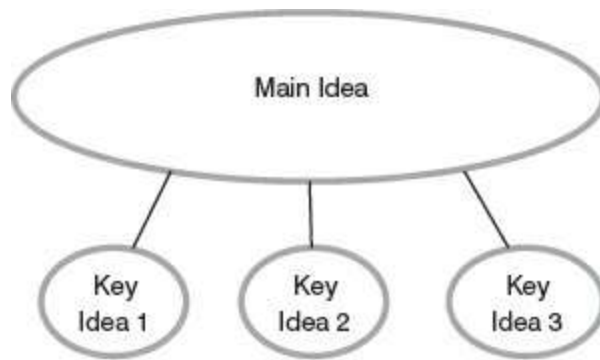
As with modeling, to teach summarization effectively, the instructional texts should be carefully selected. For instance, summarizing a brief text, like a paragraph, is a very different experience than summing up a more extensive text, like a chapter or a book. It usually is best to start with shorter texts and as students become proficient with them, to then move on to the challenge of longer texts. Similarly, it is best to start out with relatively easy-to-understand texts, particularly with regard to how clear, explicit, well organized, and straightforward they are in style. Again, it is not that summarization should not be applied to more complicated texts, only that students will likely do better if they have the chance to build up to dealing with higher levels of complexity.

Another idea for dealing with the summarization of longer text is to use the GIST approach (Cunningham, 1982; Frey, Fisher, & Hernandez, 2003). With GIST students initially read a brief text, perhaps a couple of paragraphs, and then write a single-sentence summary of the information, limiting the

summary to 20 words or less. When students become proficient with one-sentence summaries, the teacher then provides students with more extensive texts that have been marked with stopping points. Students are to read to the designated stopping points and to write the brief GIST summaries they have been practicing. By the time they complete a full article they will have written perhaps five- or six-sentence summaries of the various sections of the text, and then they combine these brief summaries and craft them into an overall summary.

Teacher guidance is also essential in effective summarization teaching. There are two approaches that have been tried successfully. In one approach, the teacher provides students with a partial graphic summary of a text and the students' initial task is to fill in the missing information. As the students complete the summary, they work with less supportive templates, filling in more of the information on their own, until they can write an entire summary independently (Chang, Sung, & Chen, 2002).

See [Figure 13.4](#) for an example of a summarization template that could be used. It is a fairly simple example in which the text expresses one main idea and three supporting ideas. In this one, none of the structures are filled in, but with such a simple text, providing the structure alone might be sufficient to meet many students' needs. Even with a bare-bones template like the example, it is possible to gradually withdraw support with practice. Finally, it would also be reasonable for the teacher to provide students with the beginnings of a summary statement: "The author's main idea was \_\_\_\_\_, and he or she supported his or her idea with three key pieces of evidence. . . ."



**FIGURE 13.4.** Graphic summary support.

In the other successful approach to summarization, students are taught the summarization process itself (Bean & Steenwyk, 1984; Brown & Day, 1983). Specifically, the teacher scaffolds the summarization process by taking students through each step with increasingly more student input. To do this, it can help if the text itself can be projected for analysis. Initially, the teacher might guide students to identify the main ideas, either helping them to state the major ideas or to locate the ideas in the text itself if the author stated them explicitly. Then, the text can be examined sentence by sentence to delete unnecessary, repetitive, or trivial information. Replacing extensive events, processes, or lists with summary statements is another step in the process. Finally, the teacher shows students how to translate the marked-up text into a summary statement of an appropriate length. Such practice can be fortified through the use of skeleton outlines that facilitate student identification of key information (Taylor & Beach, 1984; see Shanahan et al., 2010, for more details on how to teach students to summarize).

### **Analyzing/Critiquing Text**

Another way writing about text can improve reading and writing achievement is to engage students in responding to questions about text, especially questions that require more extensive and extended analyses and critical evaluations of the texts. “Answering questions about a text can be

done verbally, but there is a greater benefit to be realized from performing such activities in writing. Writing answers to text questions makes them more memorable, as writing an answer provides “a second form of rehearsal” (Graham & Hebert, 2010, p. 16). Writing answers to questions about text has a small but consistently positive effect on reading comprehension (grades 2–12). Graham and Hebert (2010) reviewed eight such studies with students in grades 6–12, and all had positive impacts for having students write questions about text or write answers to such questions. The average effect size was 0.40, meaning, on average, the students who wrote about text scored at the 66th percentile, while the control group ended at only the 50th percentile.

However, when questions required more extensive responses—involving personal reactions, interpretation of a text’s meaning, analyses of a text’s craft or content, or critical evaluation of a text—then the effect sizes grew in magnitude (Graham & Hebert, 2010; McGee & Richgels, 1990). The average effect size for the more extensive writing was 0.77 across nine studies, meaning students who were engaged in writing more extensive responses to text ended at the 78th percentile, while the control group stayed at the 50th percentile. Graham and Hebert (2010) concluded that writing more extensive responses to text was particularly effective in improving reading achievement. Again, the specificity and explicitness required by writing are believed to be the source of this substantial and consistently positive effect, so drawing evidence from a text to explain and support one’s responses to the text are valuable processes in which we need to engage students, especially as they move up through the grades. Many of these studies were conducted within content-area classes, such as social studies and science, suggesting the broad utility of combining reading and writing in these ways.

Extensive analytical writing has been shown, through research, to have a positive impact both on reading and writing achievement, as well as on knowledge of the content in the texts (Shanahan, 2004). Questions that only ask students to summarize or repeat information from a text do not have as powerful an effect on reading and writing ability as do questions that require a more extended and transformative treatment of the material (McGee &

Richgels, 1990). This is particularly true as students progress through the grades—thus, summarization and note taking have a bigger impact on reading achievement during the earlier years, but as students gain in proficiency and language sophistication, having them write longer and more analytical or evaluative pieces about what they read has a more profound effect on learning outcomes.

The idea here is neither for students to mimic an author's style or approach or to recognize or summarize an author's major points, but for the students to react to and to transform the author's ideas. For example, a student might be asked to write a personal response to the information, even comparing it to his or her own life experiences. Or the writing assignment might require the reader to analyze a character's actions or to evaluate an author's analysis of the information in terms of its clarity, accuracy, thoroughness, or value.

Extensive analytical and evaluative writing is valuable because it promotes a critical understanding of a text and often requires readers to revise their understanding as they read and write. Additionally, such writing requires readers to use their own knowledge and bring it to bear on the information in the text. Such writing tends to be longer, and the extendedness of it likely plays an important role in the students' growing writing abilities.

How can teachers frame questions about texts that will require sufficiently thorough and high-level responses? One way to do this would be to use the educational standards as a basis for questions. For example, K–5 reading standards adopted by many states (NGA & CCSSO, 2010) provide useful guidance for appropriate questions to frame writing responses to text:

- How does Mr. Plumbean's point of view about freedom in *The Big Orange Splot* differ from your own point of view? Use evidence from the text to support your claims about Mr. Plumbean's views. (grade 3)
- What are the similarities and differences between *A Special Place for Charlee* and *The Tenth Good Thing about Barney*? Provide evidence from both texts to show the specific similarities and differences. (grade



4)

- How do the visual images of *Point Blanc* contribute to the meaning and tone of the text? Be specific in your use of examples from the text. (grade

5)

Each question requires readers to think deeply about the texts, and as such, they would obviously make appropriate high-level reading comprehension questions. However, by requiring the students to write answers to such questions, and to provide evidence from the texts in support of their answers, the cognitive demands rise, as do the potential impacts of the questions on student learning. Other ways of encouraging students to engage in formulating an extensive response is to provide sufficient space and time for students to answer the questions. These questions would demand at least a half-page to a page for students to respond; physically providing sufficient space between such questions is necessary. Similarly, students often try to hurry through their responses, giving quick and incomplete answers, rather than thorough or extensive ones. It is helpful to talk to students about what such answers require in terms of a time commitment, and teachers may even want to scaffold some model answers, demonstrating for the students how elaborate the review of the text information has to be and how lengthy the responses might be. Some writing authorities insist teachers attempt to write answers themselves to such questions to determine what quality of answer is possible and to gain purchase on what it is the students will need to do to be able to write an adequate response. Armed with such information, it is possible for the teacher to decide what the most appropriate supports might be.

## **Text Synthesis**

Text synthesis, or writing from sources, is the most demanding and elaborate approach to writing about reading, but it is one that plays an important role in communication and learning, and it too can have big learning payoffs

(Spivey, 1991; Spivey & King, 1989). *Synthesis* means combining ideas from many sources together into one essay or presentation. After reading several articles, watching multiple videos, or conducting multiple experiments or observations, the students create their own texts based on the information drawn from the original materials. Syntheses are more than summaries, however—they require writers to create their own arguments and to use the source materials as evidence to support their claims and to refute counterclaims.

To synthesize text effectively, writers have to become researchers, not just casual readers. They may have to conduct research, to search for the information they need, and to recognize similarities and differences among the information that appears in the source texts (younger readers do not easily recognize that repetition of an idea across multiple sources is an indication of the relative importance of the idea). Authors may echo one another, but they also may contradict one another, or simply present nonoverlapping information; the accumulation of discrete facts from multiple sources may require some attention as well. Readers have to recognize conflicts among sources and then they must transform the materials for their own use, capturing the most important ideas and making sense of the contradictions and unique mentions. Students often think they have to decide which source is correct, and that can be an exciting adjudication process. However, it is just as reasonable to write about the discrepancies, documenting them and exploring the disagreements of opinion or points of view. Not surprisingly, much of the variation in how well students synthesize is due to variations in their reading proficiency (Spivey & King, 1989). When introducing students to text synthesis it is probably a good idea to limit the difficulty and the numbers and lengths of the initial source materials to be used, and to provide scaffolding and support to readers in making sense of the texts. Sometimes when teachers introduce writing about reading, they fail to provide the same level of reading support that they would usually offer in a more self-contained reading lesson.

Why is synthesis such a powerful learning task? Wiley and Voss (1995)

shed some light on this process. Working with college students, they assigned groups either a single history chapter to write a report about or a “text set” that they had created by dividing up the chapter into seemingly independent pieces. The students in both groups were able to produce the requisite writing with similar levels of quality—these were proficient readers and writers after all—but they learned the material better when they had to coordinate the separate pieces themselves through synthesis. Specifically, the students who were required to synthesize did better at learning the causal and explanatory relationships among the ideas than did the students who simply had to summarize this information. This effect is likely because the writing synthesis task, unlike the summarization task, required the readers to construct the relationships themselves—which developed stronger memories and understandings of the information.

Engaging in synthesis writing experiences sharpens the reader’s eye and gives the writer an opportunity to state his or her own ideas and positions (Graham & Hebert, 2010). It is helpful if teachers provide tools to guide the students’ research, such as teaching them how to use some kind of note-keeping form that supports the organization and comparison of information. For example, a social studies support form might guide students to record key information about the countries the students are researching from their sources, with spaces to record information on economics, culture, government, language, religion, and geography (see [Figure 13.5](#) for an example). With such a guide, a student can learn to track the sources of information in a manner that allows easy comparison and should facilitate the discovery of discrepancies of sourcing and fact, and will make it easy to see what important information is repeated again and again. Finally, it can be useful to provide students with templates that help them to transform such inert information into their own essays or articles (De La Paz, 2005). Such templates can teach students how to organize their key information into a report or essay, showing where to record their own topic sentence, providing transitions and connecting information between sections, giving guidance as to the extent and placement of information to be provided, and so on.

	Text 1	Text 2	Text 3
Geography			
Economics			
Government			
Language			
Religion			
Culture			

**FIGURE 13.5.** Text synthesis guide.

Writing from sources is demanding because it requires the simultaneous use of a number of sophisticated reading, writing, and thinking skills. For example, to engage in such writing successfully, students have to be able to cogently state their own premises, beliefs, or opinions and then must find evidence in support of their claims. Teachers can undermine the quality of their students’ synthesis work by having them write on topics rather than on positions, themes, or arguments. Although it might seem appropriate to have students write from multiple sources about New York, Babe Ruth, endangered species, or other subjects of interest, it is usually more effective to have them take a position and then seek evidence in support of that position. The difficulties students have in locating information are usually pretty obvious (“Mrs. Jones, I can’t find anything on dolphins”), but many times a synthesis task fails because students have difficulty taking a clear position or anticipating challenging counterarguments. Without a clear and meaningful argument or opinion, every other aspect of the synthesis becomes more problematic. For example, if the student does not have a clear position to articulate, it becomes more difficult to identify what evidence to include in

the resulting report. Having students practice stating arguments and counterarguments can be a useful exercise. Here are some examples:

- *Argument*: “The environment suffers because people destroy habitat.”
- *Counterargument*: “It is sometimes necessary to damage the environment for economic reasons.”
- *Argument*: “Football should be banned because it causes concussions.”
- *Counterargument*: “Football can be dangerous, but it is possible to make it safe.”
- *Argument*: “School uniforms make students safer and improve learning.”
- *Counterargument*: “School uniforms are not necessary for either school safety or improved learning.”

As should be evident from the examples, counterarguments are not necessarily just negative restatements of the original claim. Encourage the students to work collaboratively to turn topics into positions and then to formulate counterarguments to these positions. Many students get used to the “read–retell” sequence so ubiquitous in reading lessons. But just regurgitating what a text said becomes harder if the students are reading the texts with real purposes (to formulate their positions) and if they are trying to negotiate multiple texts rather than single ones, especially when the sources disagree.

There are many other skills entailed in such writing projects as well. One of the hardest for students seems to be using information from original sources without plagiarizing. Students are not dishonest, but the citation system of using and crediting information is subtle and complex. Students need to be apprenticed into it carefully and intentionally. Often students struggle even to record information from a text without copying. A good way to build discipline around this skill is to have students practice recording information without looking. When students are recording information from a text, their tendency is to copy word for word. But if they are required to read a section and then to close the book and try to write down the key

information without immediate access, they are forced to put the information into their own words (a great reading skill). If they cannot remember what to write once they have closed the source, then they are to put down their pencils and read it again, putting away the text and picking up the pencil when they are, again, ready to record.

Of course, there are times when a writer does want to quote from an original source (and such expectations are common in schools from grade 5 and up). To take an actual quote, the student does have to copy exactly from the original source, but how much quoting is appropriate and how to balance quotes with one's own statements requires practice and teacher guidance.

Another aspect of making use of information from source materials is the need to mark up a text to be able to note contradictions, useful information, and the like. It helps if students have access to versions of the materials on which they can write: underlining, circling, adding notes, drawing connecting arrows, and so on. This, of course, is not always possible in a school situation, but Post-it notes can be a big help in this regard. They allow students to write notes about the text at the points in the text where the notes would be helpful, without much expense and without damaging expensive textbooks and reference sources.

Of course, not all the information students will use comes from texts. Often the essential information a writer wants to draw from might be from a scientific observation or experiment, a field trip, a video, an online source from the Internet, or even personal experience. Each source poses different problems for the budding writer, but again, they require active summarization and appropriate use of paraphrase, crediting, and the like. Moreover, the information drawn from these sources must be accurately recorded and organized along with the other information sources.

## **FINAL THOUGHTS**

Research has shown that reading and writing are closely related, and that

there are multiple ways of exploiting the relationship instructionally so as to enhance children's literacy. Integrating instruction to teach the skills and abilities that underlie both writing and reading, focusing instruction on communications issues that treat text as a central component in the communications process, and teaching students to write about the texts that they read can have a powerful and positive impact on learning.

Writing in response to text has been found to be a particularly powerful approach in the English language arts. Students who engage in writing about reading usually improve their reading and writing skills, as well as increasing their knowledge of the content. Having students creating their own texts based on existing models, summarizing what they read, writing answers to questions about texts that require extended analysis or evaluation of the text information, or synthesizing multiple texts to write reports and essays that transform the information from those multiple sources into original compositions—all exert powerful impacts on student reading and writing achievement.

Teachers need to give such assignments and to support students in negotiating these tasks successfully, by managing and slowly extending the complexity and extensiveness of the texts used, by guiding the reading so students start with a deep understanding of the texts to be written about, by demonstrating and explaining how to conduct the various steps of the tasks, and by structuring the work or providing templates or other guides that encourage early success.

Not much has been included in this chapter about other kinds of supports that are often included in writing and that are treated elsewhere in this volume, nor has there been an attempt to connect the approaches described here. For example, revision is very important in all of the forms of writing about reading. Students should not be expected to end up with cogent and well-formed stories, summaries, answers to questions, or synthesis papers on a first draft. Such tasks are demanding and each will require students to try and try again to achieve real proficiency. One way of stimulating and supporting such outcomes is by making students privy to audience reactions

to their work, an approach suggested for emphasizing the communications functions of reading and writing. Is a synthesis too choppy, moving from one idea to another without careful transition? Is a story or article too imitative or repetitive of the original text? Is a summary too extensive or too brief to serve the purpose? It is easiest to identify such problems and to respond to them with improved drafts when someone reads your paper and reacts to it honestly and thoughtfully—and it may be possible to help students to gain proficiency both in responding to text and in communications awareness.

Similarly, all these approaches to writing are both complicated and enhanced by the addition of technology. Being able to search for information on the Internet should provide students with a richer collection of source materials to use as the basis of synthesis papers, but the use of such materials complicates things by making source credibility a big issue, and by possibly making the source sets too extensive and diverse to manage easily. Computers are great for keeping track of information as well, but they require technical skills for managing spreadsheets or other data or information summarization tools. Research reveals that writing with computers is superior to writing without them (Graham & Perin, 2007), as they allow students greater flexibility and they make revision less cumbersome. However, many schools make computers available for writing mainly through school computer labs, often far from the texts students need to write about. It requires real effort on the part of teachers to make the various materials—texts and technology—available simultaneously so students can better write about what they read.

Finally, all of these tasks are challenging and all require that students put forth concerted effort over time to accomplish them successfully. It is hard to imagine any of these being done well from the beginning. Such effort (and dealing with such frustration) requires motivation. Teachers need to encourage students and keep them actively engaged. Explaining the importance of each activity and revealing to students the value such activities have in their learning and work is a valuable support, as is engaging students in metacognitive discussions in which they explore their own insights about how the processes work. Also, finding ways for students to use these various



tasks to pursue ideas they themselves are curious about is beneficial (if someone is fascinated by penguins, then allowing him or her to write summaries of penguin texts is a reasonable support), as is engaging students collaboratively in the various activities (there is no reason why a synthesis paper or even a critical response has to be researched and written alone). Certainly, given the challenge level of these activities, it is wise to acknowledge to the students how difficult the tasks are and to find ways to document student progress toward meeting them. Writing about reading is worthwhile, but it is only likely to lead to learning when students are actively engaged in reading and writing tasks—recognizing the value of the activities and meeting their challenges with determination and self-awareness.

## REFERENCES

- Bean, T. W., & Steenwyk, F. L. (1984). The effect of three forms of summarization instruction on sixth graders' summary writing and comprehension. *Journal of Reading Behavior, 16*(4), 297–306.
- Berninger, V. W., Abbott, R. D., Jones, J., Wolf, B. J., Gould, L., Anderson-Youngstrom, M., et al. (2006). Early development of language by hand: Composing, reading, listening, and speaking connections; three letter-writing modes; and fast mapping in spelling. *Developmental Neuropsychology, 29*(1), 61–92.
- Booth, W. C. (1983). *The rhetoric of fiction* (2nd ed.). Chicago: University of Chicago Press.
- Brown, A. L., & Day, J. D. (1983). Macro-rules for summarizing text: The development of expertise. *Journal of Verbal Learning and Verbal Behavior, 22*(1), 1–14.
- Calkins, L., Hartman, A., & White, Z. R. (2005). *One to one: The art of conferencing with young writers*. Portsmouth, NH: Heinemann.
- Chall, J. S. (1996). *Learning to read: The great debate*. Fort Worth, TX: Harcourt Brace College.
- Chang, K. E., Sung, Y. T., & Chen, I. D. (2002). The effect of concept mapping to enhance text comprehension and summarization. *Journal of Experimental Education, 71*(1), 5–23.
- Charney, D. H., & Carlson, R. A. (1995). Learning to write in a genre: What student writers take from model texts. *Research in the Teaching of English, 29*(1), 88–125.
- Costa, L. C., Edwards, C. N., & Hooper, S. R. (2016). Writing disabilities and reading disabilities in elementary school students: Rates of co-occurrence and cognitive burden. *Learning Disabilities Quarterly, 39*(1), 17–30.
- Cramer, R. L., & Cramer, B. B. (1975). Writing by imitating language models. *Language Arts, 52*(7), 1011–1015.
- Cunningham, J. (1982). Generating interactions between schemata and text. In J. A. Niles & L. A. Harris (Eds.), *New inquiries in reading research and instruction* (pp. 42–47). Washington, DC: National Reading Conference.

- De La Paz, S. (2005). Effects of historical reasoning instruction and writing strategy mastery in culturally and academically diverse middle school classrooms. *Journal of Educational Psychology*, 97(2), 137–156.
- Duin, A. H., & Graves, M. F. (1986). Intensive vocabulary instruction as a prewriting technique. *Reading Research Quarterly*, 22(3), 311–330.
- Fitzgerald, J., & Shanahan, T. (2000). Reading and writing relations and their development. *Educational Psychologist*, 35(1), 39–50.
- Frey, N., Fisher, D., & Hernandez, T. (2003). “What’s the gist?”: Summary writing for struggling adolescent writers. *Voices in the Middle*, 11(2), 43–49.
- Graham, S., & Hebert, M. (2010). *Writing to read: Evidence for how writing can improve reading*. New York: Carnegie Corporation.
- Graham, S., Liu, X., Aitken, A., Ng, C., Bartlett, B., Harris, K. R., et al. (2017). Effectiveness of literary programs balancing reading and writing instruction: A meta-analysis. *Reading Research Quarterly*, 53(3), 279–304.
- Graham, S., & Perin, D. (2007). A meta-analysis of writing instruction for adolescent students. *Journal of Educational Psychology*, 99(3), 445–476.
- Lee, J., & Schallert, D. L. (2016). Exploring the reading–writing connection: A yearlong classroom-based experimental study of middle school students developing literacy in a new language. *Reading Research Quarterly*, 51(2), 143–164.
- McGee, L. M., & Richgels, D. J. (1990). Learning from text using reading and writing. In T. Shanahan (Ed.), *Reading and writing together: New perspectives for the classroom* (pp. 145–169). Norwood, MA: Christopher-Gordon.
- Moffett, J. (1968). *A student-centered language arts curriculum, grades K–12: A handbook for teachers*. Boston: Houghton-Mifflin.
- National Governors Association Center for Best Practices & Council of Chief State School Officers. (2010). *Common Core State Standards for English language arts and literacy in history/social studies, science, and technical subjects*. Washington, DC: Authors. Retrieved from [www.corestandards.org](http://www.corestandards.org).
- National Institute of Child Health and Human Development. (2000). *National Reading Panel—teaching children to read: Reports of the subgroups* (NIH Pub. No. 00-4754). Washington, DC: U.S. Department of Health and Human Services. Retrieved from [www.nationalreadingpanel.org/publications/subgroups.htm](http://www.nationalreadingpanel.org/publications/subgroups.htm).
- Nystrand, M. (1986). *The structure of written communication: Studies in reciprocity between writers and readers*. New York: Academic Press.
- Ouellette, G., & Sénéchal, M. (2017). Invented spelling in kindergarten as a predictor of reading and spelling in grade 1: A new pathway to literacy, or just the same road, less known? *Developmental Psychology*, 53(1), 77–88.
- Pichette, F., De Serres, L., & Lafontaine, M. (2012). Sentence reading and writing for second language vocabulary acquisition. *Applied Linguistics*, 33(1), 66–82.
- Shanahan, T. (1984). Nature of the reading–writing relation: An exploratory multivariate analysis. *Journal of Educational Psychology*, 76(3), 466–477.
- Shanahan, T. (1992). Reading comprehension as a dialogic process. In M. Pressley, K. R. Harris, & J. T. Guthrie (Eds.), *Promoting academic competence and literacy: Cognitive research and instructional innovation* (pp. 129–148). New York: Academic Press.

- Shanahan, T. (2004). Overcoming the dominance of communication: Writing to think and to learn. In T. L. Jetton & J. A. Dole (Eds.), *Adolescent literacy research and practice* (pp. 59–174). New York: Guilford Press.
- Shanahan, T. (2015). Relationships between reading and writing development. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (2nd ed., pp. 194–210). New York: Guilford Press.
- Shanahan, T., Callison, K., Carriere, C., Duke, N. K., Pearson, P. D., Schatschneider, C., et al. (2010). *Improving reading comprehension in kindergarten through 3rd grade*. Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.
- Shields, J. S. (2007). The art of imitation. *English Journal*, 96(6), 56–60.
- Spivey, N. N. (1991). Transforming texts: Constructive processes in reading and writing. *Written Communication*, 7(2), 256–287.
- Spivey, N. N., & King, J. R. (1989). Readers as writers composing from sources. *Reading Research Quarterly*, 24(1), 7–26.
- Stolarek, E. (1994). Prose modeling and metacognition: The effect of modeling on developing a metacognitive stance toward writing. *Research in the Teaching of English*, 28(2), 154–174.
- Stotsky, S. (1983). Research on reading/writing relationships: A synthesis and suggested directions. *Language Arts*, 60(5), 627–643.
- Summer, E., Connelly, V., & Barnett, A. L. (2014). The influence of spelling ability on handwriting production: Children with and without dyslexia. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 40(5), 1441–1447.
- Summer, E., Connelly, V., & Barnett, A. L. (2016). The influence of spelling ability on vocabulary choices when writing for children with dyslexia. *Journal of Learning Disabilities*, 49(3), 293–304.
- Taylor, B. M., & Beach, R. W. (1984). The effects of text structure instruction on middle-grade students' comprehension and production of expository text. *Reading Research Quarterly*, 19(2), 134–146.
- Tierney, R. J., & Pearson, P. D. (1983). Toward a composing model of reading. *Language Arts*, 60(5), 568–580.
- Tierney, R. J., & Shanahan, T. (1991). Research on the reading–writing relationship: Interactions, transactions, and outcomes. In R. Barr, M. L. Kamil, P. Mosenthal, & P. D. Pearson (Eds.), *Handbook of reading research* (Vol. 2, pp. 246–280). New York: Longman.
- Tierney, R. J., Soter, A., O'Flahavan, J. F., & McGinley, W. (1989). The effects of reading and writing about thinking critically. *Reading Research Quarterly*, 24(2), 134–173.
- Wiley, J., & Voss, J. F. (1995). The effects of “playing historian” on learning in history. *Applied Cognitive Psychology*, 10, 1–10.
- Wineburg, S. (1991). On the reading of historical texts: Notes on the breach between school and academy. *American Educational Research Journal*, 28(3), 495–519.
- Wineburg, S., Martin, D., & Monte-Sano, C. (2012). *Reading like a historian*. New York: Teachers College Press.
- Wood, K. D., & Robinson, N. (1983). Vocabulary, language, and prediction: A prereading strategy. *The Reading Teacher*, 36(4), 392–495.

# Chapter 14

## Assessing Writing

Joshua Wilson

What writing skills and knowledge do my students need to acquire? What skills and knowledge do they have right now? How do I help move my students forward to where they need to go?

These three big questions<sup>1</sup> form the basis of an *assessment for learning* orientation to teaching writing in which assessment data are used to *adjust* instruction to maximize learning. This orientation is contrasted with an *assessment of learning* orientation in which assessment data are used to *evaluate* the degree to which students have learned what is taught.

Answering the first of the three big questions is fairly easy: district curriculum guides and state standards, such as the Common Core State Standards (CCSS; National Governors Association Center for Best Practices & Council of Chief State School Officers [NGA & CCSSO], 2010), elucidate the knowledge and skills expected of students at different grade levels. Answers to the second and third questions, however, are more difficult to answer. The problem is that it is impossible to inspect students' minds and determine exactly what they know and can do, and what each student needs to move forward. Instead, the process of answering these questions necessarily relies on *drawing inferences* (Bennett, 2011). And, unfortunately, it is easy to draw incomplete or inaccurate inferences because learning to write

is so complex. It requires a complex coordination of writing skills, writing knowledge, attention, memory, language skills, motivation, and cognitive writing processes (e.g., planning, idea generation, and reviewing).

Further complicating matters is the fact that evaluating writing is at least to some degree subjective. Therefore, what seem like simple questions —“What are my students’ current levels of performance?” and “What do my students need to move forward?”—may in actuality be quite difficult to answer. Luckily, research has found that teachers who perform five key activities comprising assessment for learning maximize their chances of drawing *accurate inferences* and *adjusting their instruction in ways that promote student learning*.

## **ASSESSMENT FOR LEARNING**

Assessment for learning, popularly called *formative assessment*<sup>2</sup> (Kingston & Nash, 2011), consists of five activities (Black & William, 2009):

1. Clarifying criteria for success
2. Eliciting samples of students’ performance
3. Providing students with feedback that moves them forward
4. Engaging students as peer supports
5. Helping students take ownership of their learning

These activities are interconnected and interdependent (Black & William, 2009), and it is generally agreed that teachers who implement these activities produce better outcomes than those who do not (see Black & William, 1998; Kingston & Nash, 2011). Indeed, researchers Graham, Hebert, and Harris (2015) specifically studied the effects of formative assessment on students’ writing achievement. Their findings support using formative writing assessment practices as part of daily classroom writing instruction—regularly assessing students’ writing was shown to increase students’ writing quality.

Given that implementing assessment for learning activities enables

teachers to effectively adjust their instruction to produce better learning outcomes, the key question becomes “How do I implement these activities when teaching writing?” Answering this question is the focus of this chapter, which is organized around describing each of the five activities and providing concrete suggestions for ways each can be implemented during writing instruction.

## **ACTIVITY 1: CLARIFYING CRITERIA FOR SUCCESS**

The first activity for assessment for learning is clarifying to students the criteria for success for a particular writing assignment. *Criteria* refers to the standards of performance against which students’ performance will be judged. These criteria may be related to aspects of writing ability such as having a well-organized and well-developed text, having accurate grammar and mechanics, or incorporating certain genre-specific rhetorical elements such as dialogue in narratives or a thesis statement in argumentative texts.

Teachers typically find the source of these criteria in district curriculum guides or state standards, such as the CCSS (NGA & CCSSO, 2010). As a starting point, teachers should explain and clarify these criteria in student-friendly terms by using examples to show how the writing criteria are enacted in actual writing samples (Graham & Perin, 2007).

### **Use Examples to Teach the Criteria for Success**

An important way that teachers clarify the criteria for success is to use examples of published and student-authored texts to draw students’ attention to different ways these criteria are, or are not, successfully realized. Using examples is effective (Graham & Perin, 2007) because introducing criteria in this way makes it explicit to students what they will be expected to do and what they will be evaluated on—indeed, clarifying expectations is a central part of the explicit instruction framework (Archer & Hughes, 2011). Using

examples is also effective because it builds students' genre knowledge and linguistic knowledge, key areas of writing knowledge that influence writing ability (Bereiter & Scardamalia, 1987; Olinghouse, Graham, & Gillespie, 2015).

For example, if a key criterion for argumentative writing is including an engaging lead, the teacher might show an exemplary piece of published text, such as a set of "pro/con" articles from Newsela ([www.newsela.com](http://www.newsela.com)). The teacher can point out the different techniques that authors use to create an engaging lead, such as starting with facts, a question, or a quote. Starting with published texts helps students make the connection between reading and writing, and understand that they are learning skills that "real" authors use.

Next, the teacher should proceed to clarify the criteria using examples of student writing. This illustrates how the criteria are manifested at a developmentally appropriate level. For example, the teacher might present students with three pieces of student writing: one with an engaging lead, one with a lead that is not so engaging, and one without a lead at all. The teacher can initiate a lesson in which students are directed to look at the pieces of writing and discuss the purpose and qualities of engaging leads. Activities and discussion of this sort can continue for each of the key criteria needed for success on that assignment. However, teachers should take care not to use student writing from their own classroom as "nonexamples," to avoid negative experiences. As an alternative, teachers on a grade-level team might swap texts or use texts written from students in prior years.

## **Use Rubrics**

After collaboratively exploring and explaining the different criteria for success, the teacher can introduce or, together with his or her class, collaboratively develop a rubric that summarizes the different criteria and what distinguishes different levels of performance for each criterion. Whether the rubric is introduced or collaboratively developed, it is important that the

rubric incorporates the key criteria for that assignment and clearly states levels of performance in student-friendly language. It is also important that the rubric be the same, or at least very similar, to that which the teacher will later use to evaluate students' performance on the summative (i.e., final) assignment. This will serve to directly link instruction and evaluation, a key function within an assessment-for-learning framework (Popham, 2008).

Depending on the age/developmental level of the students, incorporating criteria into a rubric may mean using simple checklists that evaluate whether an element is present or absent or a more developed rubric(s) that includes multiple criteria and multiple performance levels (e.g., 0–2, 1–4, 1–5, or 1–6 scales). [Figure 14.1](#) presents a checklist for a first-grade narrative writing assignment that includes key criteria from the CCSS (NGA & CCSSO, 2010) writing and language standards (W.3, L.2a–2b).

Tells what comes <i>first</i>	Yes	No
Tells what comes <i>next</i>	Yes	No
Tells what comes <i>after</i>	Yes	No
Tells what comes at the <i>end</i>	Yes	No
Capitalizes names	Yes	No
Ends each sentence with a (.), (?), or (!)	Yes	No

**FIGURE 14.1.** Grade 1 narrative writing checklist.

To help students remember the criteria, teachers might consider using a mnemonic, such as an acronym. This is often done in strategy-based instructional approaches like self-regulated strategy development (SRSD; Harris & Graham, 2009). For instance, after students are introduced to the narrative genre and associated criteria in SRSD, students learn the mnemonic C-SPACE to help them remember the key elements of the narrative genre: Characters, Setting, Purpose, Actions, Conclusion, and Emotions (Harris, Graham, Mason, & Friedlander, 2008). [Figure 14.2](#) presents a rubric linked to



the C-SPACE mnemonic using a 1–3 rating scale. Tying the criteria for success to a rubric *and* a mnemonic increases the chances of students’ remembering and incorporating those key elements in their independent writing.

<b>Element</b>	<b>3</b>	<b>2</b>	<b>1</b>
<b>Characters</b>	Characters are fully described, both in terms of appearance and personality.	Characters’ appearance are described, but not their personalities.	Characters are used but only minimally described.
<b>Setting</b>	The time and place are described, and they play an important part in the story.	The time and place are described, but they do not play a part in the story.	The time and place are mentioned, but not described.
<b>Purpose</b>	The purpose, or problem, the main character is trying to solve is clear and the story focuses on this.	The purpose, or problem, the main character is trying to solve is clear, but the story does not focus on this.	The purpose, or problem, that the main character is trying to solve is unclear.
<b>Actions</b>	Multiple actions are taken to achieve the purpose.	More than one action is taken.	There is only one action taken.
<b>Conclusion</b>	The ending wraps up the story, what happens to the main character, and what happens to the other characters.	There is an ending that wraps up what happens to the main character, but not the other characters.	The ending is present, but is weak (e.g., “They lived happily ever after”).
<b>Emotions</b>	Emotions are used to describe how the main character feels after each action and at the end of the story, and how other characters feel throughout the story.	Emotions are used to describe how the main character feels after each action and the end of the story, but not to describe how other characters feel.	Emotions are used to describe how the main character feels at the end of the story.

**FIGURE 14.2.** Grade 5 narrative writing rubric.

Finally, once students understand the criteria for success, teachers can work with students to develop a class goal(s) for that assignment. For example, a fifth-grade teacher might set a class goal that all students score at least a 2 on each criterion within the rubric (see [Figure 14.2](#)). The class goal

should be a minimum level of success that all students will be expected to achieve. Then, the teacher can work with individual students to set customized goals for accelerated or struggling students. The topic of goal setting is discussed in detail later in this chapter in the section titled “[Activity 5: Helping Students Take Ownership of Their Learning](#).”

## ACTIVITY 2: ELICITING SAMPLES OF STUDENTS’ PERFORMANCE

The second key activity of assessment for learning is eliciting samples of student performance. This means finding opportunities to elicit samples of students’ writing-related knowledge and writing skills from which to draw inferences regarding their progress toward the learning goals, and adjust their instruction (Popham, 2008). These opportunities should occur during each stage of a gradual-release model instruction: explanation and modeling, guided practice, and independent practice. [Table 14.1](#) presents a possible sequence of formative assessments that teachers can use to elicit samples of student performance throughout these stages. Each type of formative assessment is discussed in detail below.

**TABLE 14.1.** A Sequence of Formative Assessments Embedded in a Gradual Release Model of Instruction

Formative assessment method	Stage of instruction			
	Teacher-led explanation and modeling	Baseline	Guided practice	Independent practice (summative)
Questioning	×		×	
Pretest		×		
Brief writes, curriculum-based measurement (CBM), and prompts			×	
Exit tickets			×	

## Use Questioning During Teacher-Led Instruction

Teacher questioning should begin during Activity 1 (clarifying criteria). This is the first opportunity the teacher has to gauge student understanding about the criteria for success. This is also the first opportunity the teacher has to correct any misunderstanding. Teachers should ask recall questions to ensure students remember the key criteria (e.g., “Who remembers what the five key criteria are for narrative writing?”). Teachers should also ask evaluative questions to ensure students are able to analyze texts in light of the criteria for success (e.g., “Using our class rubric, can someone identify in this writing sample which of the key criteria needs further development? Tell us why”).

In addition, teachers can use various response strategies, such as *response cards*, to ensure that evidence is elicited from all students, not just those who feel comfortable talking aloud. Response cards involve providing students with two cards, each with a different response listed, such as “yes” and “no,” or “true” and “false.” Students raise the appropriate card in response to a question, enabling the teacher to quickly sample performance from the whole class. Response cards might be useful when conducting a class evaluation of a writing sample. Students might be given two cards with the words *present* and *absent* written on them. The cards are raised in response to questions asking whether each of the key criteria is present or absent within a given writing sample. This same strategy might be adapted for older students to facilitate evaluation of a writing sample. Students could be given multiple cards, each with a number 0–3, that are raised when evaluating the presence/absence and quality of each of the criteria within a writing sample.

## Use a Pretest Prior to Initiating Subsequent Instruction

After explaining and clarifying the criteria for success, but before subsequent

instruction, an excellent idea is to administer a pretest writing assignment that mirrors the final writing task. The pretest serves as the baseline against which teachers and students can judge their progress and growth. For instance, students might be given a writing prompt and be instructed to plan, draft, and revise their texts within a limited time frame (e.g., one or two class periods). Students should work independently so their writing accurately reflects their current level of performance.

When selecting a prompt, it is important to consider the influence of the topic on writing performance. Students vary in their background knowledge, so it is important to distinguish poor performance due to lack of writing skills from poor performance due to lack of topic knowledge. One way to do this is to administer writing prompts that do not require specialized topic knowledge, such as story starters (“You walked toward the scary house and all of a sudden . . . ”), argumentative prompts that ask students to express and support their opinion about an idea (“Should students have school on Saturdays?”), or informative prompts that allow students to write about something they already know (“Think about your favorite place. Teach your reader all about this place”). Another way to mitigate students’ potential lack of topic knowledge is to administer writing prompts that include stimulus materials, such as texts that present the necessary information students must incorporate into their response. However, this introduces the possibility that poor performance on the writing task is due to poor reading performance, as reading comprehension influences writing achievement (Abbott, Berninger, & Fayol, 2010). To exclude reading ability as an explanation for poor writing performance, teachers might present reading materials on computers that enable students to use text-to-speech software to listen to the texts, or use videos as stimulus materials.

Because evaluating writing is somewhat subjective, it is also important that teachers seek to maximize their scoring reliability by trying to reduce bias and ensure consistency. Tackling the issue of reliability is no easy feat, but there are things that teachers can do to help. One option is for grade-level teams to work together to establish *interrater reliability*, which refers to the

consistency with which two or more raters apply a rubric. In low-stakes settings such as this, scoring within 1 point of each other 80% of the time would be sufficient. To establish interrater reliability, two teachers might double score all of the pretests. Then, they can calculate the percentage of time their scores were within 1 point of each other. If their reliability is greater than or equal to 80%, then students' final score would be the average of the two teachers' scores. Another method might be having one teacher score his or her entire class and have a fellow teacher perform a reliability check on 25% of the essays. Interrater reliability is again calculated, but only for the 25% of essays that were double scored. If the resulting percentage is greater than or equal to 80%, then the original teacher's ratings can be considered reliable.

However, double scoring or performing a reliability check may not be feasible because of time constraints. In that case, teachers can improve score reliability in the following ways:

- Remove potential bias by having students write their names on the back of their texts so the teacher is blind to the author's name.

- Evaluate the writing prompts in a random order. Essays are often judged in context—when preceded by several strong essays, an average essay is more strongly penalized than when it is preceded by several weak essays (Graham, Harris, & Hebert, 2011). Randomizing the order of evaluation ensures that any systematic ordering effects are minimized.

- Evaluate the writing in small batches to combat rater fatigue. When attention is taxed, teachers may become fatigued and more stringent or lenient in their ratings. This is known as *rater drift*.

- To further combat rater drift, occasionally check to see whether essays that receive the same score seem to be of equal quality. This ensures that the teacher is consistent within him- or herself, which is known as *intrarater reliability*.

- Be aware that handwriting may bias essay ratings; poor handwriting can result in lower scores even when the content is similar to that of writing done with good handwriting (Graham et al., 2011). Consequently, some recommend that teachers type students' compositions before evaluating them, but this may not be feasible. Thus, when evaluating handwritten essays, be cognizant of, and try to limit, *presentation bias*.

- For teachers with access to automated essay evaluation software, such as PEG Writing ([www.pegwriting.com](http://www.pegwriting.com)), Criterion (<https://criterion.ets.org>), or My Access ([www.myaccess.com](http://www.myaccess.com)), using this software to score pretests is an excellent idea. These systems provide immediate, reliable essay scoring, and, unlike humans, they are 100% consistent; they never fatigue or experience rater drift. This makes them ideal for establishing a quick baseline against which to judge progress and growth.

## **Use Brief Writes and Prompts during Guided Practice**

As students learn the writing-related knowledge, skills, and strategies needed to meet the learning goals, it is imperative that they receive sufficient opportunities to practice. Writing, like any skill, requires a great deal of practice before mastery is achieved (Kellogg & Whiteford, 2009). Unfortunately, national surveys reveal that students receive insufficient practice (Applebee & Langer, 2011). This is in part due to how time intensive it is to score and evaluate writing: Teachers do not assign a lot of writing because they do not have the time to evaluate it. So, what can be done?

One option is to assign “brief writes,” which are opportunities for students to practice a focused writing skill, such as writing a body paragraph, writing a character description, trying out different leads, elaborating a reason with details and evidence, or writing the conclusion to an essay. The idea with brief writes is that students practice a focused writing skill that is directly connected to what they are learning. Since the amount of writing is fairly short, a paragraph or two, evaluation time is decreased. Instead of evaluating

the entire assignment for each of the criteria in the rubric, teachers can solely focus on whether students are acquiring the taught skill. This increases practice and decreases grading time.

Another option is to embed curriculum-based measurement (CBM) throughout guided practice. CBM for writing are quick-writing prompts (between 3 and 8 minutes) that require students to respond to a picture prompt or story-starter prompt (e.g., “A police officer stopped the driver for speeding and . . .”). Students are typically given 1 minute to think and then 3 minutes to write. Texts are scored for length (total words written), spelling (number of correctly spelled words), and accuracy (correct word sequences; adjacent word pairs absent of errors in spelling, grammar, and semantics). To identify whether or not the student is within the expected range of development, students’ scores for length and accuracy can be compared to national norms (e.g., those provided by DIBELS [<https://dibels.uoregon.edu/assessment/dibels/benchmark-goals>]; see also Hosp, Hosp, & Howell, 2016). Students who fall below the 25th percentile are considered at risk for failing to achieve grade-level writing expectations. However, since CBM is not directly linked with instruction in the way that brief writes are, their use is best served for quickly identifying which students may need additional support or for monitoring students’ progress with respect to fluency and accuracy (Romig, Therrien, & Lloyd, 2016).

Another option is to assign occasional writing prompts that are similar to the pretest and posttest. This gives students the opportunity to practice sustaining attention and focus, and coordinating their knowledge, skills, and strategies in the same way that they need to do on the posttest. One class period every 7–10 days can be devoted to assigning a writing prompt and having students plan and draft a response. This does not necessarily increase the grading load on teachers. These interim prompts can be scored by automated essay evaluation software, by peers (see Activity 4: engaging students), or self-evaluation (see Activity 5: helping students). The use of automated essay evaluation software in this context has an additional benefit: it provides students with formative feedback in the form of suggestions for

improving an essay when revising. Students can revise and resubmit their essay multiple times, each time receiving a new rating and a new set of formative feedback. Research indicates that students who use automated essay evaluation systems increase the amount of revising they do, increase their motivation to write, and improve their writing quality from first draft to final draft (Grimes & Warschauer, 2010; Wilson & Cziko, 2016; Wilson, Olinghouse, & Andrada, 2014).

## **Use Exit Tickets**

Exit tickets afford the teacher an opportunity to hear from *all* students. Students' answers are provided in written form, be it on paper or typed via e-mail or submitted to the school learning management system.

Exit tickets are ideal for asking questions related to writing knowledge: “What are the key criteria for success in this genre?”; “What is the mnemonic we have been learning and what does it stand for?”; “How many pieces of evidence should you have for each reason?”; and “What are different ways to begin an introduction to an informative essay?”

Exit tickets are also ideal for asking questions related to procedural knowledge—the steps writers take to engage in the key writing processes of planning, reviewing, and revising: “How do you plan your writing?”; “What do you search for when you review your writing?”; and “What are the steps you take when you revise your writing?”

## **Use a Posttest**

The posttest is the summative assessment used to evaluate whether students met the class and individual learning goals, and whether they mastered the content introduced during the preceding unit. Ideally, students will have completed a pretest writing prompt, and at least one interim writing prompt (or at least multiple brief writes), prior to the posttest, so that students have



had opportunities to practice the skills they are expected to master, and the teacher has had a chance to adjust instruction along the way to ensure success on the posttest. Also, ideally, the rubric used to evaluate the posttest will be the same as, or at least very similar to, the one that students have been working with during instruction.

The same suggestions and cautions that were discussed for the pretest apply to the posttest as well. Teachers should try to ensure they can accurately infer whether students' performance is due to their writing skills and not due to lack of background knowledge or deficits in reading skills. Teachers should also take steps to ensure reliable scoring. Otherwise, it is not possible to make valid inferences regarding students' growth from pretest to posttest.

Although the posttest is a summative assessment, it can also be used formatively—hence, its inclusion in assessment for learning. Teachers should use information to identify whether there are any consistent weaknesses across students' writing that might be attributed to the way in which those things were or were not taught. Reflecting in this way allows teachers to adopt a growth and improvement orientation so subsequent instruction is even stronger. Students can also use the summative test in a formative manner by reflecting on their progress from the pretest and by setting goals for the next unit of instruction.

### **ACTIVITY 3: PROVIDING STUDENTS WITH FEEDBACK THAT MOVES THEM FORWARD**

Providing students with feedback is an almost universally recommended instructional practice (American Psychological Association, 2015). *Feedback* is information about one's performance or understanding that is provided by one or more sources, such as a teacher, a peer, a computer program, or even one's self (Hattie & Timperley, 2007). Effective feedback should help the writer (1) gauge his or her performance relative to the criteria for success, (2) identify what should be done to close the gap between current performance

and the learning goal, and (3) suggest ways of moving forward (Black & William, 2009; Parr & Timperley, 2010). Thus, effective feedback stems from and references the same criteria that teachers took time to explain and clarify to students in Activity 1 (clarify criteria). As Hattie and Timperley (2007, p. 82) write, “Feedback has no effect in a vacuum; to be powerful in its effect, there must be a learning context to which feedback is addressed.”

Providing this kind of feedback on student writing is challenging. First, writing is complex. There are lots of different things to comment on when reading students’ writing, such as lower-level writing skills (handwriting, spelling, conventions, grammar, sentence structure); higher-level writing skills (word choice, organization, ideas and elaboration, style); and students’ use of strategies for planning, drafting, revising, and editing. Second, providing feedback on student writing is time-consuming. Teachers often lack the time to provide detailed feedback on student writing. Finally, there is a lack of consensus on the *manner* in which feedback should be delivered (e.g., as a statement or a question), the *focus* of the feedback (lower-level writing skills vs. higher-level writing skills vs. writing processes), and the *timing* of the feedback (immediate vs. delayed; see Shute, 2008, for a review). Thus, while providing feedback is almost universally recommended, what constitutes effective feedback is unclear. Consequently, feedback has a mixed track record of effectiveness (Biber, Nekrasova, & Horn, 2011; Kluger & DeNisi, 1998). Therefore, to increase the likelihood of giving effective feedback, suggestions are provided regarding the three aspects mentioned above: the manner in which feedback is provided, the focus of the feedback, and the timing of the feedback.

### **Vary the Manner in Which Feedback Is Provided**

The manner in which teachers provide feedback refers to *how* they communicate their message to students. Generally, there are three manners of giving feedback (Black & William, 1998). First, there is *direct feedback* (using

directives) to explicitly tell students what needs to be improved. Second, there is *facilitative feedback* (using queries or informatives) to guide students in developing their own understanding of what to do to improve. Third, there is *praise*, a manner of providing feedback wherein teachers express approval or encouragement regarding positive aspects of the student's performance or effort (Nelson & Schunn, 2009; Patchan, Schunn, & Correnti, 2016). Teachers should vary the manner in which they convey feedback to their students because each manner engages students in different ways.

*Directives* are very useful for explicitly conveying suggestions for moving a student forward. However, this type of feedback may unwittingly reduce students' cognitive effort and ownership of their learning since the student is relying on the teacher to identify what is and is not working and what they should do to move forward (Parr & Timperley, 2010). Though, for some students, particularly struggling writers, reducing cognitive effort in this manner is likely a good thing. Nevertheless, teachers should be aware of the "flip side" of solely using directives as a manner of providing feedback.

*Queries* are very useful at stimulating students cognition and self-evaluation. In this way, they facilitate students' coming to their own understanding. Queries can encourage students to consider something ("What do you think a counterargument might be to this claim?") or to request a clarification ("What did you mean here?"). For some students, however, queries may convey information in too implicit a manner to successfully move them forward.

Like queries, *informatives* implicitly indicate the way forward by reminding students of key criteria without explicitly stating where in the text the revision should occur. For instance, a teacher might comment on a text saying, "Remember, good organization is aided by the use of transitions." This feedback statement reminds the student of a key criterion but does not directly state that the student must include transitions, nor does the statement directly indicate where the transitions should be placed or which transitions to use. Thus, informatives nudge the student in the correct direction without doing the work for him or her. Again, for some students this manner of

feedback may facilitate cognitive effort and ownership, but it may be too implicit for others.

While many researchers consider *praise* the least effective manner of feedback since it does not convey any information about what students can do to move forward (Hattie & Timperley, 2007), it is important to remember that learning to write is a social experience. Praise may have positive effects on students with respect to helping students be more comfortable submitting their writing to their teacher. It is important that feedback be helpful and encouraging, and praise may help build trust between student and teacher (Beach & Friedrich, 2006). Praise may also be useful early on in the instructional sequence, when students need feedback about what they are doing well, not just what they need to work on (Shute, 2008).

In sum, teachers should strive to vary the manner in which they provide feedback. Providing feedback in multiple manners increases the likelihood that students will feel comfortable receiving feedback and will strike a balance between being shown how to move forward and figuring it out for themselves. [Table 14.2](#) presents examples of each manner of feedback, as well as examples of how these manners can be used to focus on different writing skills and writing processes. These foci of writing feedback are described in the next sections.

**TABLE 14.2.** Examples of Different Manners and Foci of Feedback on Student Writing

Category	Feedback example
<u>Feedback manner</u>	
Directives	<ul style="list-style-type: none"> <li>• “Change ‘I went to the store’ to ‘I traveled to the store.’”</li> <li>• “Start this paragraph with a clear topic sentence.”</li> </ul>
Queries	<ul style="list-style-type: none"> <li>• “What did you mean here?”</li> <li>• “Did you include dialogue?”</li> </ul>
Informatives	<ul style="list-style-type: none"> <li>• “Each reason should be elaborated with facts and evidence.”</li> <li>• “Narrative writing should describe a scene with sensory language.”</li> </ul>
Praise	<ul style="list-style-type: none"> <li>• “Nice job here!”</li> <li>• “Your writing has really improved since your first draft!”</li> </ul>

### Feedback on lower-level skills

- Handwriting
- “Leave more space between words.”
  - “I can’t tell your letter *a* from your letter *o*.”
- Spelling
- “This word is misspelled.”
  - “Did you mean to spell . . . ?”
- Capitalization
- “Capitalize the title of your essay.”
  - “Remember, proper nouns should be capitalized.”
- Punctuation
- “There should be a comma between these items in the list.”
  - “Put quotation marks around dialogue.”
- Sentence structure
- “This is a run-on sentence.”
  - “Vary your sentence structure to keep your reader’s interest.”
- Grammar
- “Change ‘he and his friends is nice’ to ‘he and his friends are nice.’ ”
  - “Change this singular pronoun (*she*) to a plural pronoun (*they*).”
- Formatting
- “Indent each paragraph.”
  - “Italicize book titles.”

### Feedback on higher-level skills

- Word choice
- “Choose a more vivid verb.”
  - “In scientific writing, we refer to an *idea* as a *hypothesis*.”
- Organization
- “Transitions will improve the essay flow.”
  - “Move this part to the beginning.”
- Ideas and elaboration
- “Can you identify places in your essay to add imagery?”
  - “Remember to include an engaging lead.”
- Style
- “Don’t talk directly to the reader.”
  - “Change the point of view to first person.”

### Feedback on writing strategies

- Planning
- “Select the ideas from your brainstorm list that you know the most about.”
  - “Use the graphic organizer to help organize your ideas before writing.”
- Drafting
- “Sometimes it’s easier to start in the body of the essay and write an introduction afterward.”
  - “Remember to use positive self-talk if you get stuck.”
- Revising
- “Remember to revise your essay’s organization and ideas before revising for

sentence structure and word choice.”

- “When you revise, double-check that you have each of the key elements of a narrative text.”

Editing

- “When you edit first make sure that you have a period, question mark, or exclamation point at the end of every sentence.”
  - “Use your editing checklist to guide you through your editing.”
- 

## **Vary the Focus of the Feedback across Lower- and Higher-Level Writing Skills**

Focus refers to the object of the feedback message, that on which the teacher is commenting. Feedback can focus on lower- and higher-level writing skills. Several studies have shown that teachers of all grades (K–16) tend to overly focus on low-level writing skills (Clare, Valdés, & Patthey-Chavez, 2000). Unfortunately, research shows that feedback on lower-level writing skills tends to have little effect on improving students’ writing performance (Clare et al., 2000; Matsumara, Patthey-Chavez, Valdés, & Garnier, 2002). Addressing high-level writing skills has the greatest effect on writing quality. Thus, when giving feedback on students’ writing teachers should strive to balance their focus between lower- and higher-level writing skills, and specifically ensure that students receive sufficient feedback on higher-level skills since this has the greatest impact. Ideally, teachers would use the rubric they introduced (or collaboratively developed) during Activity 1 (clarifying criteria), so that students are continually referencing the key criteria for success as they move forward in their practice.

One way teachers can liberate their time and attention to focus on higher-level concerns is to offload feedback about lower-level skills to peer review, self-evaluation, or to automated essay evaluation software. Peers can review one another’s texts using an editing checklist to identify lower-level concerns. The same checklist also can be used for self-evaluation. The use of automated essay evaluation systems is particularly suited to this division of labor. Research has shown that teachers using the PEG Writing system provided

more feedback on higher-level writing concerns than teachers who provided feedback via Google Docs (Wilson & Czik, 2016).

## **Provide Feedback That Focuses on Writing Strategies**

Teachers should also focus their feedback on students' use of strategies for engaging in different writing processes. Research shows that struggling writers lack strategies for planning and revision (Graham, Schwartz, & MacArthur, 1993; MacArthur, Graham, & Schwartz, 1991). For instance, struggling writers tend not to plan and they often use revising as a time to make superficial changes to their text (e.g., improving handwriting and spelling), instead of making substantive changes. Thus, teachers should find opportunities to provide feedback on the processes that students use to plan, draft, and revise their texts.

Feedback on writing processes might come after directly observing students compose or after reviewing the results of exit tickets or discussions focusing on what students know about writing processes. Effective feedback on writing processes will direct or remind students to use a *strategy*, a goal-directed routine designed for use with complex tasks. Examples of feedback for the process of planning might be “Remember that, when planning, effective writers first brainstorm what they know about a topic and then select the ideas they know the most about.” An example for revising writing might be “Look for areas that need more elaboration.” Additional examples are included in [Table 14.2](#). This type of feedback helps improve students' procedural knowledge, an essential component of writing skill (Hattie & Timperley, 2007).

## **Increase the Frequency and Immediacy of Feedback**

Assessment for learning involves eliciting samples of knowledge/performance and providing feedback in an ongoing manner throughout the sequence of

instruction (see [Table 14.1](#)). When feedback is connected with practice in this way, this is referred to as the *practice-feedback loop* (Wiggins, 2012).

Research suggests that immediate feedback is generally better than delayed feedback (Hattie & Timperley, 2007; Shute, 2008). Immediate feedback, however, is often very difficult for teachers to offer because of the time involved in evaluating writing. To accelerate the practice-feedback loop, teachers can assign brief writes, which are quicker to evaluate and require a more focused approach to giving feedback (see [Activity 2: eliciting samples](#)). Teachers can also incorporate opportunities for peer review and self-evaluation (see [Activity 4: engaging students](#) and [Activity 5: helping students](#)). Finally, teachers can utilize automated essay evaluation software. By providing immediate feedback, these software systems vastly accelerate the practice-feedback loop and, in doing so, prompt students to revise more and to experience an increase in their writing motivation (Moore & MacArthur, 2016; Morphy & Graham, 2012; Wilson & Czik, 2016).

## **ACTIVITY 4: ENGAGING STUDENTS AS PEER SUPPORTS**

Engaging peers as supports during writing instruction is most commonly achieved by implementing *peer review*. Peer review is a reciprocal process in which students read, review, evaluate, and provide feedback on one another's writing (MacArthur, 2016). Studies show that peer review is generally effective at helping students improve their writing from first draft to final draft (Graham et al., 2015). There is also evidence that peer review not only benefits the essay author but also benefits the reviewer (MacArthur, 2016).

Peer review supports the goals of assessment for learning in many ways. It is an excellent method of accelerating the practice-feedback loop since teachers are no longer the sole source of feedback. Peers also may deliver feedback that is easier to interpret than teacher feedback (MacArthur, 2009; Patchan & Schunn, 2016). Peer review increases students' familiarity with the



criteria for success and their ability to reflect on their writing (metacognition). They learn to identify, diagnose, and offer solutions to different writing problems, which are critical skills for effective revising (Hayes, Flower, Schriver, Stratman, & Carey, 1987).

To implement effective peer review, it is important to consider the following: (1) preparing students for peer review, (2) teaching students how to give effective feedback, and (3) using different grouping strategies. Each is discussed in turn.

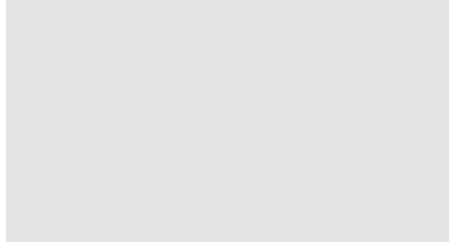
### **Prepare Students for Peer Review Using Think-Aloud Modeling and Guided Practice**

Before students can independently and effectively conduct peer review, it is essential that students receive instruction on how to give effective feedback. Peer review is a skill. Students need instruction and practice to become skilled reviewers. [Table 14.3](#) illustrates the sequence of instruction used to prepare students for peer review (and self-evaluation) and the gradual release of responsibility accompanying this instruction.

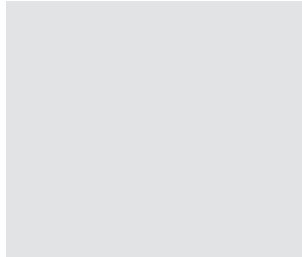
**TABLE 14.3.** Procedures for Preparing for Peer Review (Activity 4) and Self-Evaluation (Activity 5)

Procedure	Teacher responsibility
Teacher uses think-aloud modeling to demonstrate the process of reviewing, evaluating, and providing feedback on students' writing. (I do, you watch)	
Teacher enlists students' help reviewing, evaluating, and offering feedback on texts written by unknown grade-level peers. (I do, you help)	

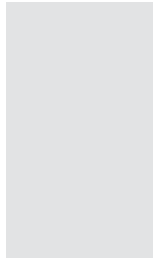
During whole-class instruction, students take the lead on peer reviewing papers written by unknown peers while the teacher supports. (You do, I help)



Students conduct peer review either anonymously (reviewer and essay author are unknown) or in an identified manner. (You do, I watch)



Students self-evaluate their own writing and develop plans/goals for improving their writing during revision. (Independent practice)



---

To begin, teachers should use think-aloud modeling to demonstrate the process of reading and evaluating a text and comparing its features to the criteria for success summarized in the rubric developed in Activity 1 (clarifying criteria). Teachers should explicitly share how they identify what is working with the text, what the problems are, and how to offer solutions to the identified problems. Following teacher-led cognitive modeling, teachers should initiate guided practice wherein students practice reviewing, evaluating, and offering feedback on texts written by unknown grade-level peers (Philippakos & MacArthur, 2016). During this time, students must familiarize themselves with the rubric and its criteria for success, and take the role of a reader, an experience that helps them understand the importance of audience in writing (MacArthur, 2009, 2016). This type of guided practice is not only useful for preparing for effective peer review but reviewing papers by unknown peers actually helps students become better authors (Cho & MacArthur, 2011; Philippakos & MacArthur, 2016). This type of guided practice should progress from a period of “I do, you help” to a period of “You

do, I help.” Indeed, as responsibility is further released, students engage in reciprocal peer review. Finally, as students learn to give and receive feedback, they learn vital skills to make them more effective at self-evaluating and improving their own writing, which is the final release of responsibility.

## **Highlight the Qualities of Effective Feedback**

As with teacher feedback, there is still much to learn about what makes for effective peer feedback (MacArthur, 2016). Nevertheless, teachers should help students be cognizant of the different aspects of giving good peer feedback, such as (1) giving an actionable amount of feedback, (2) focusing their feedback on higher-level writing concerns not just lower-level concerns, (3) using specific praise, and (4) considering whether feedback is localized or provided via a summary comment.

### ***Feedback Amount: More Is Not Necessarily Better***

Peer feedback is an excellent way to increase the amount of feedback that students receive. However, students should be mindful that giving lots of feedback is not necessarily the goal. A study of peer review among undergraduates found that students acted on only one-third of the feedback they received. In fact, providing greater amounts of feedback actually decreased students’ likelihood of acting on the feedback, and the amount of feedback students received was not related to the quality of the revisions students made (Patchan et al., 2016). Instead of focusing on providing lots of suggestions, it might benefit students to use the evaluation criteria to identify one or two aspects of a peer’s text that, if improved, would result in the greatest growth in writing quality.

### ***Focus Feedback on Higher-Level Writing Concerns***

Just as teachers tend to overly focus on lower-level writing concerns (e.g., spelling and mechanics), peers have a tendency to do this during peer review (Patchan et al., 2016). Thus, students should be taught to focus their feedback on higher-level writing concerns by identifying problems and offering solutions. Identifying problems and offering solutions is useful for the author because effective feedback identifies how to move forward (Hattie & Timperley, 2007). Indeed, peer feedback that identifies a problem *and* offers a solution is more likely to be implemented than feedback where only a problem is described (Patchan et al., 2016). One way to shift students' focus toward higher-level writing skills is to use a peer review form that specifies aspects of the text that the reviewer should consider. For instance, Patchan et al. (2016) provided students with a rubric that focused on three higher-level writing concerns: essay flow, argument logic, and author insight.

### ***Use Specific Praise***

As with teacher feedback, peer review should be a positive and supportive experience (Beach & Friedrich, 2006). Praise is one way to achieve this, and praise has actually been shown to increase the likelihood that an author would implement a reviewer's suggestions (Patchan et al., 2016). However, not all praise is equal. General praise like "I liked it" or "This is really good" is less effective than specific praise such as "The quote you used to start your paper really drew me in" or "The reasons you provided were very convincing." For the author, specific praise identifies exactly what he or she did well and how that affected his or her reader. For the reviewer, the ability to give specific praise signals a greater degree of insight and awareness of the criteria for success than general praise. Thus, students should be taught to use specific praise in addition to identifying problems and offering solutions. One way to help students do this is to use a peer review schema like "Two Stars and a Wish." Students identify two specific things their peer did well (the stars) and one thing they could do to improve their writing (a wish). Students

and teachers have found this peer review method useful and enjoyable (Webb & Jones, 2009).

### ***Position Feedback So It Can Be Seen and Used***

Peer feedback can be provided via rubrics, summary comments at the end of the text, or via margin comments written by hand or electronically as is done with Microsoft Word or Google Docs. These methods differ with respect to whether the feedback indicates where exactly in the text the author should revise (i.e., the *localization* of the feedback). There is some evidence to suggest that localized comments increase the likelihood that the author will act on them (see Nelson & Schunn, 2009; Patchan et al., 2016), but there is evidence to the contrary as well (e.g., Cho & MacArthur, 2010). In the absence of clear evidence one way or the other, teachers might consider talking with students and hearing their opinions about what works for them. As students reflect on the feedback they give and receive, they will likely identify successful feedback strategies (Patchan, Schunn, & Clark, 2017).

### **Use Mixed-Ability and Homogeneous Peer Review Groupings**

There is research to suggest that teachers can use either mixed-ability groupings or homogeneous groupings for peer review. A study of college-age students found that high-level students implemented feedback from both high-level and low-level peers, but low-level students actually benefited more from feedback provided by low-level peers (Patchan & Schunn, 2016). Unlike high-level peers who have a greater array of strategies available to act on the feedback they receive, less-skilled writers, who lack this repertoire, may benefit from feedback from less skilled peers since it is communicated in a more easily understandable way. These results should alleviate concerns that mixed-ability groupings may not benefit high-level peers. In addition, results

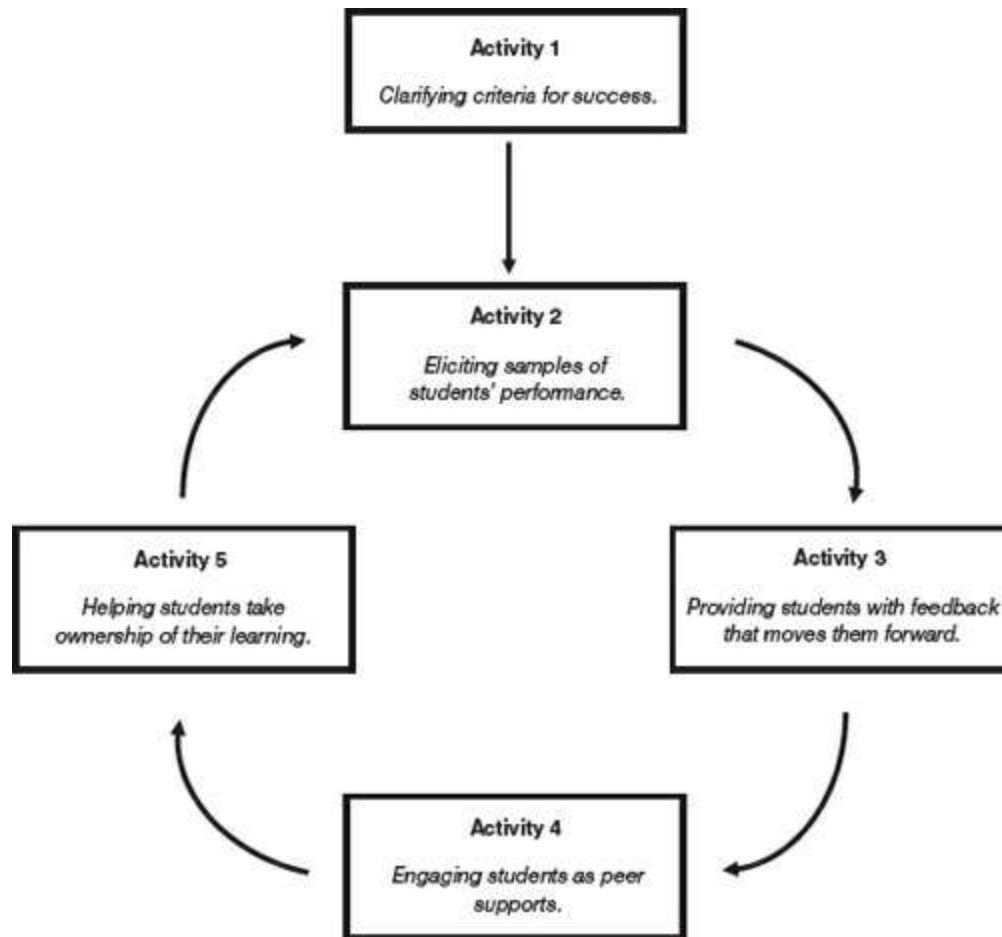
suggest that there is no harm, and may be some benefit, in using homogeneous groupings. Thus, teachers should consider varying grouping strategies across the school year.

## **ACTIVITY 5: HELPING STUDENTS TAKE OWNERSHIP OF THEIR LEARNING**

All of the prior activities are intended to help students take ownership of their learning; this is the final activity within the assessment for learning orientation toward writing instruction. When students take ownership of their learning, they become self-directed and self-regulated learners. *Self-regulation* refers to one's ability to direct and coordinate one's thoughts, emotions, and actions toward the pursuit of a goal (Schunk & Zimmerman, 2007). With respect to writing instruction, interventions that explicitly teach and promote self-regulation skills, such as Harris and Graham's (2009) SRSD model, are some of the most powerful and effective interventions available to educators (Graham, McKeown, Kiuahara, & Harris, 2012; Graham & Perin, 2007).

Critical components that foster student ownership and self-regulation include goal setting, progress monitoring, receiving and interpreting feedback, and adjusting actions accordingly. Each of these things is built into the previous activities of assessment for learning. Goal setting is supported by clarifying criteria for success (Activity 1) and analyzing pretest performance (Activity 2). Monitoring progress toward the goal also relates to Activity 2. Interpreting feedback arising from progress monitoring relates to Activities 3 and 4, from which it is possible for both teachers and students to adjust their actions accordingly. Thus, in a sense, all the activities discussed to this point are designed to help students take ownership of their learning (Activity 5). Indeed, [Figure 14.3](#) illustrates the relationship among the five activities and how they reinforce one another. Yet, there are additional steps to maximize the likelihood that such ownership occurs. These steps include helping

students set individual goals, teaching students to self-evaluate, and providing opportunities for self-evaluation and revision.



**FIGURE 14.3.** The five activities within assessment for learning.

## Help Students Set Individual Goals

During Activity 1, teachers explain and clarify the criteria for success and work with the whole class to set goals. Then, in Activity 2 (eliciting samples), teachers can use a pretest to establish a baseline. Based on the results of the pretest teachers should help students set individual *performance goals*. Goals are the foundation of self-regulation and setting specific goals, especially goals tied to the criteria for success, is effective at improving writing quality (Ferretti, Lewis, & Andrews-Weckerly, 2009). Examples of individual

performance goals might be “My goal is to include all the key elements of a narrative in my story” or “My goal is to score a 3 out of 3 for the elaboration component of the rubric.” Performance goals should be *meaningful*—they should be tied to the key criteria—and they should be *individualized*—they should be aimed at an individual’s zone of proximal development, pushing the student toward the next level of performance.

Once individual performance goals are set, teachers can explain that students will achieve their goals when they use the strategies they learn in class. This leads to helping students set *process goals* in which they commit to implementing what they learn in class to help them achieve their performance goal. The pairing of performance goals and process goals is effective at increasing students’ writing knowledge and performance (Graham, MacArthur, Schwartz, & Page-Voth, 1992; Schunk & Swartz, 1993). It is important to have this conversation at the outset of instruction since it increases students’ ownership of the subsequent learning process.

## **Teach Students to Self-Evaluate**

Like peer review, self-evaluation is a skill that needs to be taught and practiced. Luckily, the same instruction used to teach peer review can be used to teach self-evaluation (see Activity 4: engaging peers, and [Table 14.3](#)). After learning to evaluate, diagnose problems, and provide feedback on the writing of unknown peers, students can apply these skills to their own writing (Philippakos, MacArthur, & Coker, 2015). During the process of self-evaluation, students apply the criteria for success and the associated rubric to their own writing. They identify what they are doing well and areas of improvement. An excellent place to start is with the pretest administered at baseline. Teachers and students can compare evaluation results to help students calibrate their appraisal of their own performance. This conversation can flow seamlessly into the conversation in which teachers work with students to set meaningful individualized performance goals and obtain buy



in to enact process goals.

## **Provide Opportunities for Students to Self-Evaluate and Revise Their Writing**

Having learned to self-evaluate and having set individual goals, students should be given opportunities to self-evaluate subsequent samples of their writing. In doing so, students not only receive opportunities to refine and apply their understanding of the criteria for success, they are able to self-monitor their progress toward the learning goal. Self-monitoring is important because it affords students an opportunity to adjust their effort to ensure they reach their goal. This is the student-level equivalent of the teacher using assessment data to adjust instruction. A great way to help students self-monitor is to graph progress. Seeing progress is motivating!

After self-evaluating and self-monitoring, students should be given the opportunity to diagnose problems in their writing, prescribe solutions, and enact those solutions during revision (see Hayes et al., 1987). Thus, the instruction students receive via preparation for peer review and in self-evaluation helps students improve the amount and quality of their own revisions (Graham et al., 2015).

## **CONCLUSION**

Adopting an assessment for learning orientation to teaching writing means implementing five mutually reinforcing activities (see [Figure 14.3](#)): clarifying criteria for success, eliciting samples of students' performance, providing students with feedback that moves them forward, engaging students as peer supports, and helping students take ownership of their learning. The goal of this chapter was to introduce these activities and offer concrete suggestions for how they may be implemented. Teachers who implement these activities will have put into place a framework that allows them to identify the skills

and knowledge students need to grow as writers, to adjust their instruction to be maximally effective, and to make a powerful impact.

## REFERENCES

- Abbott, R. D., Berninger, V. W., & Fayol, M. (2010). Longitudinal relationships of levels of language in writing and between writing and reading in grades 1 to 7. *Journal of Educational Psychology, 102*, 281–298.
- American Psychological Association, Coalition for Psychology in Schools and Education. (2015). Top 20 principles from psychology for PreK–12 teaching and learning. Retrieved from [www.apa.org/ed/schools/cpse/top-twenty-principles.pdf](http://www.apa.org/ed/schools/cpse/top-twenty-principles.pdf).
- Applebee, A. N., & Langer, J. A. (2011). A snapshot of writing instruction in middle schools and high schools. *English Journal, 100*(6), 14–27.
- Archer, A. L., & Hughes, C. A. (2011). *Explicit instruction: Effective and efficient teaching*. New York: Guilford Press.
- Beach, R., & Friedrich, T. (2006). Response to writing. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (pp. 222–234). New York: Guilford Press.
- Bennett, R. E. (2011). Formative assessment: A critical review. *Assessment in Education: Principles, Policy and Practice, 18*, 5–25.
- Bereiter, C., & Scardamalia, M. (1987). *The psychology of written composition*. Hillsdale, NJ: Erlbaum.
- Biber, D., Nekrasova, T., & Horn, B. (2011). *The effectiveness of feedback for L1-English and L2-writing development: A meta-analysis: TOEFL iBT™ research report*. Princeton, NJ: Educational Testing Service.
- Black, P., & William, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy and Practice, 5*, 7–74.
- Black, P., & William, D. (2009). Developing the theory of formative assessment. *Educational Assessment, Evaluation and Accountability, 21*, 5–31.
- Cho, K., & MacArthur, C. (2010). Student revision with peer and expert reviewing. *Learning and Instruction, 20*, 328–338.
- Cho, K., & MacArthur, C. (2011). Learning by reviewing. *Journal of Educational Psychology, 103*, 73–84.
- Clare, L., Valdés, R., & Patthey-Chavez, G. G. (2000). *Learning to write in urban elementary and middle schools: An investigation of teachers' written feedback on student compositions* (Center for the Study of Evaluation Technical Report No. 526). Los Angeles: University of California, Center for Research on Evaluation, Standards, and Student Testing (CRESST).
- Ferretti, R. P., Lewis, W. E., & Andrews-Weckerly, S. (2009). Do goals affect the structure of students' argumentative writing strategies? *Journal of Educational Psychology, 101*(3), 577–589.
- Graham, S., Harris, K. R., & Hebert, M. (2011). It is more than just the message: Presentation effects in scoring writing. *Focus on Exceptional Children, 44*(4), 1–12.
- Graham, S., Hebert, M., & Harris, K. R. (2015). Formative assessment and writing: A meta-analysis. *Elementary School Journal, 115*, 523–547.
- Graham, S., MacArthur, C. A., Schwartz, S. S., & Page-Voth, V. (1992). Improving the compositions of

- students with learning disabilities using a strategy involving product and process goal setting. *Exceptional Children*, 58, 322–334.
- Graham, S., McKeown, D., Kihara, S., & Harris, K. (2012). A meta-analysis of writing instruction for students in the elementary grades. *Journal of Educational Psychology*, 104, 879–896.
- Graham, S., & Perin, D. (2007). *Writing Next: Effective strategies to improve writing of adolescents in middle and high schools—a report to Carnegie Corporation of New York*. Washington, DC: Alliance for Excellent Education.
- Graham, S., Schwartz, S. S., & MacArthur, C. A. (1993). Knowledge of writing and the composing process, attitude towards writing, and self-efficacy for students with and without learning disabilities. *Journal of Learning Disabilities*, 26, 236–249.
- Grimes, D., & Warschauer, M. (2010). Utility in a fallible tool: A multi-site case study of automated writing evaluation. *Journal of Technology, Learning, and Assessment*, 8(6), 1–44.
- Harris, K. R., & Graham, S. (2009). Self-regulated strategy development in writing: Premises, evolution, and the future. *British Journal of Educational Psychology Monograph Series II*(6), 113–135.
- Harris, K. R., Graham, S., Mason, L. H., & Friedlander, B. (2008). *Powerful writing strategies for all students*. Baltimore: Brookes.
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77, 81–112.
- Hayes, J. R., Flower, L., Schriver, K. A., Stratman, J., & Carey, L. (1987). Cognitive processes in revision. In S. Rosenberg (Ed.), *Advances in applied psycholinguistics: Vol. 2. Reading writing and language processing* (pp. 176–241). Cambridge, UK: Cambridge University Press.
- Hosp, M. K., Hosp, J. L., & Howell, K. W. (2016). *The ABC's of CBM: A practical guide to curriculum-based measurement* (2nd ed.). New York: Guilford Press.
- Kellogg, R. T., & Whiteford, A. P. (2009). Training advanced writing skills: The case for deliberate practice. *The Educational Psychologist*, 44, 250–266.
- Kingston, N., & Nash, B. (2011). Formative assessment: A meta-analysis and a call for research. *Educational Measurement: Issues and Practice*, 30(4), 28–37.
- Kluger, A. N., & DeNisi, A. (1998). Feedback interventions: Toward the understanding of a double-edged sword. *Current Directions in Psychological Science*, 7(3), 67–72.
- MacArthur, C. A. (2009). Evaluation and revision. In V. W. Berninger (Ed.), *Past, present, and future contributions of cognitive writing research to cognitive psychology* (pp. 461–483). New York: Psychology Press/Taylor & Francis.
- MacArthur, C. A. (2016). Instruction in evaluation and revision. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (2nd ed., pp. 272–287). New York: Guilford Press.
- MacArthur, C. A., Graham, S., & Schwartz, S. (1991). Knowledge of revision and revising behavior among students with learning disabilities. *Learning Disability Quarterly*, 14, 61–73.
- Matsumara, L. C., Patthey-Chavez, G. G., Valdés, R., & Garnier, G. (2002). Teacher feedback, writing assignment quality, and third-grade students' revision in lower- and higher-achieving urban schools. *Elementary School Journal*, 103, 3–25.
- Moore, N. S., & MacArthur, C. A. (2016). Student use of automated essay evaluation technology during revision. *Journal of Writing Research*, 8, 149–175.
- Morphy, P., & Graham, S. (2012). Word processing programs and weaker writers/readers: A meta-analysis of research findings. *Reading and Writing*, 25, 641–678.
- National Governors Association Center for Best Practices & Council of Chief State School Officers.

- (2010). *Common Core State Standards for English language arts and literacy in history/social studies, science, and technical subjects*. Washington, DC: Authors. Retrieved from [www.corestandards.org](http://www.corestandards.org).
- Nelson, M. M., & Schunn, C. D. (2009). The nature of feedback: How different types of peer feedback affect writing performance. *Instructional Science*, 37, 375–401.
- Olinghouse, N. G., Graham, S., & Gillespie, A. (2015). The relationship of discourse and topic knowledge to fifth graders' writing performance. *Journal of Educational Psychology*, 107, 391–406.
- Parr, J. M., & Timperley, H. S. (2010). Feedback to writing, assessment for teaching and learning and student progress. *Assessing Writing*, 15, 68–85.
- Patchan, M. M., & Schunn, C. D. (2016). Understanding the effects of receiving peer feedback for text revision: Relations between author and reviewer ability. *Journal of Writing Research*, 8, 227–265.
- Patchan, M. M., Schunn, C. D., & Clark, R. J. (2017). Accountability in peer assessment: Examining the effects of reviewing grades on peer ratings and peer feedback. *Studies in Higher Education*.
- Patchan, M. M., Schunn, C. D., & Correnti, R. J. (2016). The nature of feedback: How peer feedback features affect students' implementation rate and quality of revisions. *Journal of Educational Psychology*, 108, 1098–1120.
- Philippakos, Z. A., & MacArthur, C. A. (2016). The effects of giving feedback on the persuasive writing of fourth- and fifth-grade students. *Reading Research Quarterly*, 51(4), 419–433.
- Philippakos, Z. A., MacArthur, C. A., & Coker, D. (2015). *Genre-based self-regulated strategy instruction for writing: Resources for grades 3–5*. New York: Guilford Press.
- Popham, W. J. (2008). *Transformative assessment*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Ramaprasad, A. (1983). On the definition of feedback. *Behavioral Science*, 28, 4–13.
- Romig, J. E., Therrien, W. J., & Lloyd, J. W. (2016). Meta-analysis of criterion validity for curriculum-based measurement in written language. *Journal of Special Education*, 51(2), 72–82.
- Schunk, D. H., & Swartz, C. W. (1993). Goals and progress feedback: Effects on self-efficacy and writing achievement. *Contemporary Educational Psychology*, 18, 337–354.
- Schunk, D. H., & Zimmerman, B. J. (2007). Influencing children's self-efficacy and self-regulation of reading and writing through modeling. *Reading & Writing Quarterly*, 23, 7–25.
- Shute, V. J. (2008). Focus on formative feedback. *Review of Educational Research*, 78, 153–189.
- Webb, M., & Jones, J. (2009). Exploring tensions in developing assessment for learning. *Assessment in Education: Principles, Policy and Practice*, 16, 165–184.
- Wiggins, G. (2012). Seven keys to effective feedback. *Educational Leadership*, 70, 10–16.
- Wilson, J., & Czik, A. (2016). Automated essay evaluation software in English language arts classrooms: Effects on teacher feedback, student motivation, and writing quality. *Computers and Education*, 100, 94–109.
- Wilson, J., Olinghouse, N. G., & Andrada, G. N. (2014). Does automated feedback improve writing quality? *Learning Disabilities: A Contemporary Journal*, 12, 93–118.

---

<sup>1</sup> These questions are adapted from Ramaprasad's (1983) three key processes in learning and teaching: (1) Where is the learner going?; (2) Where is the learner right now?; and (3) How do I get the learner

there?

<sup>2</sup> Though Bennett (2011) argues that it is possible to use summative assessments in a formative manner to support teaching and learning.

## ***Chapter 15***

# Instruction for Students with Special Needs

Amy Gillespie Rouse

**W**riting is a complex task, involving the skillful deployment and coordination of a number of cognitive, motivational, and memory processes (Hayes, 1996; MacArthur & Graham, 2016). Due to its complicated nature, some argue that writing is one of the most difficult academic skills for students to master. Because skilled writing is difficult for all students, it is not surprising that students with disabilities (SWD) tend to experience difficulties with writing (Saddler & Asaro-Saddler, 2013). In fact, years of research document the difficulties SWD face when writing (e.g., Connelly & Dockrell, 2016; Joseph & Conrad, 2009). Fortunately, years of research also support an understanding of how students develop as writers (e.g., Fayol, 2016; Langer & Applebee, 1986; Scardamalia & Bereiter, 1987), as well as an understanding of the types of writing instruction and instructional adaptations most effective for meeting the needs of SWD (e.g., Datchuk & Kubina, 2013; Gillespie & Graham, 2014; McMaster, Kunkel, Shin, Jung, & Lembke, 2018; Pennington & Delano, 2012).

Currently, writing instruction in our country is not meeting the needs of SWD, as evidenced by the most recent data from the National Assessment of

Educational Progress (NAEP) that show only 5% of SWD in grades 8–12 performed at or above grade-level writing expectations (National Center for Education Statistics, 2012). It is imperative that teachers understand how to provide effective writing instruction to SWD to remediate these students' difficulties as early as possible. Successful remediation of writing difficulties will allow SWD to meet state-mandated writing standards, including those outlined in the Common Core State Standards (CCSS; National Governors Association Center for Best Practices & Council of Chief State School Officers [NGA & CCSSO], 2010). More broadly, and in my opinion, more importantly, teachers who can provide effective writing instruction and adaptations to SWD permit these students to access the power of writing as a tool for learning, a mode for self-expression and self-reflection, and a skill required for full participation as 21st-century citizens.

Although many of the investigations examining writing instruction and adaptations for SWD have focused on students with learning disabilities (LD), research shows that the writing difficulties experienced by students with LD are similar to those experienced by students with other types of disabilities, including attention-deficit/hyperactivity disorder, emotional and behavioral disorders, and speech/language disorders (Ennis & Jolivette, 2012; Graham, Fishman, Reid, & Hebert, 2016; Graham & Harris, 2005). Thus, in this chapter, I discuss writing instruction and adaptations for SWD as a whole, across different disability subtypes. Because many of the studies reviewed for this chapter included struggling writers who did not have formal disability diagnoses, readers may find much of the chapter information applies to struggling writers as well. Although less writing research has been conducted with students with autism spectrum disorders (ASD; Pennington & Delano, 2012) or students with intellectual disabilities (ID; Joseph & Konrad, 2009) than students with the aforementioned disabilities, many (but not all) of the instructional recommendations described in this chapter have been shown to be effective for students with ASD and students with ID (e.g., cover-copy-compare for spelling, sentence combining, strategy instruction, word processing) as well. Because students with ASD and students with ID

often require more intensive instruction and adaptations to meet their learning needs, some chapter information may be less applicable to these students or may need to be applied with modifications (Joseph & Konrad, 2009).

The chapter is written with two overarching aims. First, I want readers to understand ways to address the common writing challenges experienced by many SWD. To do this, I describe SWD's difficulties with (1) transcription, (2) sentence-level skills, (3) composition skills, and (4) motivation. Next, I describe research-supported practices for teaching writing to SWD and instructional adaptations that benefit SWD along these four dimensions of writing. My second aim for this chapter is to provide readers with examples of effective writing assessments commonly used for screening, progress monitoring, and informing instruction within a response-to-intervention (RTI) framework. Although there is no universally agreed-upon method for carrying out RTI (Fuchs, Fuchs, & Stecker, 2010), I describe a three-tiered model. A majority of schools in the United States are using some form of RTI (Cortiella & Horowitz, 2014), so it is important for teachers to think about writing instruction and assessments delivered within such a framework. Importantly, my description of RTI is intended to advocate for early identification of students who struggle with writing as well as intervention and effective instruction for these students, not one model or framework for RTI over another.

## **COMMON WRITING CHALLENGES FOR SWD**

Research shows SWD tend to have difficulties acquiring, deploying, and generalizing the multiple skills and cognitive processes necessary to produce quality writing. Thus, the behaviors displayed by SWD as they write and the writing produced by SWD tend to look different from those of students who do not have disabilities (Connelly & Dockrell, 2016). To summarize these differences, I outline the common challenges many SWD experience when



writing across four areas: (1) transcription, (2) sentence-level skills, (3) composition skills, and (4) motivation. I encourage readers to consider these common writing challenges when planning for and delivering the evidence-based writing instruction described later in the chapter.

## **Transcription**

Seminal models of skilled writing (e.g., Flower & Hayes, 1981; Hayes, 1996) neglect transcription skills, as these lower-level writing skills require little attention or effort for skilled writers (Graham, 2006). However, for SWD, difficulties with transcription (i.e., handwriting, spelling) often constrain their abilities to attend to the content, meaning, and organization of their writing. By focusing on transcription skills, SWD are unable to focus on the higher-level processes needed to produce quality writing (Graham, Harris, & Fink-Chorzempa, 2002; Schlagal, 2013). Furthermore, transcription difficulties often prevent SWD from writing (or typing) quickly enough to record all of their ideas (MacArthur & Graham, 2016).

Many SWD struggle with handwriting and spelling skills. They have trouble learning and forming legible letters with automaticity and ease. They tend to write slowly, many times letter-by-letter or stroke-by-stroke (Graham, Harris, & McKeown, 2013). Many SWD also struggle with spelling, making considerably more spelling mistakes in their written compositions than their peers without disabilities (Williams, Walker, Vaughn, & Wanzek, 2017). Further, SWD often have difficulty writing for longer periods of time (Graham et al., 2013).

As a result of these handwriting and spelling difficulties, the writing of SWD is often illegible or incomplete (Cannella-Malone, Konrad, & Pennington, 2015; Graham & Harris, 2005), which can negatively impact overall writing quality. Even if SWD produce compositions with adequate content, they are more likely to be scored lower or judged negatively due to spelling errors and illegible handwriting (Graham, Harris, & Hebert, 2011).

Also, because handwriting can be fatiguing and a focus on spelling can be cognitively demanding, SWD struggle with writing fluency. They often take excessive amounts of time to complete writing tasks, produce written assignments that are relatively short, and/or stop writing prematurely (Gillespie & Graham, 2014), all of which can have negative impacts on their writing quality.

## **Sentence-Level Skills**

Beyond handwriting and spelling, students must understand how to translate their ideas into words and place those words into complete, syntactically appropriate, and grammatically correct sentences that convey the meaning they intend (Saddler, 2013). Compared to transcription, less research has been conducted on how SWD perform when translating their ideas into written language at the sentence level (Graham, Harris, & Santangelo, 2015; Niedo, Tanimoto, Thompson, Abbott, & Berninger, 2016). However, researchers contend that constructing a sentence is linguistically and cognitively demanding, with each sentence requiring a construction process similar to that required to plan and organize an entire written composition (Furey, Marcotte, Wells, & Hintze, 2017; Saddler, 2013). To generate a sentence, students employ many linguistic skills, considering lexical, syntactical, mechanical (e.g., punctuation), and rhetorical choices, while also formulating sentences that make sense within the context of the text they have already produced (Fayol, 2016). Given the complexity of sentence construction, it is not surprising that SWD tend to produce shorter, less syntactically complex sentences than their peers without disabilities. These sentences also tend to contain more grammatical errors than their peers (Saddler, Behforooz, & Asaro, 2008).

As with transcription, difficulties with sentence-level skills can have a negative impact on the writing quality of SWD. An inordinate amount of mental effort devoted to sentence construction can inhibit SWD from

focusing on higher-level composing processes and can cause them to forget ideas for writing that are held in their limited working memory space (Datchuk & Kubina, 2013; Saddler & Graham, 2005). In addition, because SWD often lack the linguistic skills necessary to produce quality sentences, they produce less complex and less coherent written compositions. Further, when SWD produce texts that contain sentence-level errors, such as grammar mistakes or repeated use of simple sentence structures (e.g., “The dog was brown. The dog was white. The dog was big.”), their writing is not only more difficult for others to read but also more likely be evaluated negatively (Saddler, 2013; Saddler et al., 2008).

Given the constraints imposed by transcription and sentence construction, SWD have difficulties writing fluently. In fact, SWD demonstrate writing fluency rates half that of their peers who do not have disabilities (Weintraub & Graham, 1998). They tend to produce shorter texts with fewer complete ideas, as most of their time is devoted to word- and sentence-level skills (Graham et al., 2013). Importantly, teachers who address these writing skills typically find improvements in the writing fluency and thus, the writing quality of SWD, as fluent transcription and sentence construction reduces cognitive load and allows SWD to focus their efforts on composition. Further, with improved sentence-level skills, SWD can more clearly express their ideas through varied (and more complex) sentence structures, which also improves writing quality (Datchuk & Kubina, 2013; Saddler et al., 2008; Saddler & Graham, 2005).

## **Composition Skills**

Skilled writers typically begin the composition process by devoting time to planning what they will write and developing goals (e.g., goals to write for a particular audience, goals to meet the requirements of a specific genre, goals to make the writing better/more interesting than a previous piece) for their texts (Flower & Hayes, 1981). However, even when prompted to plan, SWD

spend little to no time planning their writing. Instead of approaching writing as a process that requires intentional goal setting, multiple drafts, and continual reflection on audience, organization, and progress toward goals (as skilled writers do), SWD tend to think of writing as a process of content generation (Graham et al., 2013). This approach, in which SWD produce an idea, translate that idea into a sentence, and then use that sentence to generate the next idea, has been called the knowledge-telling approach (Scardamalia & Bereiter, 1987) and it is common among young, less experienced writers as well as SWD. Using this approach, students produce texts that include an exhaustive list of ideas to express everything they know about a topic; these texts contain fewer elaborations, details, and connections between ideas than those of skilled writers and they often fail to meet the needs of the intended audience (Santangelo, 2014; Scardamalia & Bereiter, 1987).

The composing difficulties demonstrated by SWD extend beyond planning and writing to revising and editing. Typically, SWD do not revise their written texts. When they do reread their texts to make improvements, they tend to make surface-level edits (e.g., correcting spelling and punctuation errors, making handwriting legible) rather than substantive revisions (Santangelo, 2014). It is important to note that these revision behaviors, or lack thereof, are also common in younger (i.e., elementary) writers (Scardamalia & Bereiter, 1987). Although attention to editing is important given what we know about SWD's difficulties with spelling, syntax, and grammar skills, failure to revise their texts likely reflects the limited knowledge and the limited strategies SWD have for carrying out the writing process (MacArthur & Graham, 2016).

When compared to peers without disabilities, SWD have less sophisticated conceptualizations of writing. They lack the strategies (e.g., strategies for planning, writing, and revising), the procedural knowledge necessary to carry out the strategies, and the ability to self-regulate the strategies necessary for producing quality written compositions (Graham & Harris, 2000; Lienemann & Reid, 2008). Thus, the composing difficulties experienced by many SWD appear rooted in skill, strategy, and self-

regulatory weaknesses, as well as a lack of understanding about what skilled writing entails (Graham, 2006; MacArthur & Graham, 2016).

Compounding this lack of knowledge about writing in general, SWD tend to have less knowledge about specific writing genres and text structures. Skilled writers use this type of knowledge to plan what they will write, organize their ideas, and monitor (revising as necessary) whether they are adequately conveying their ideas to the reader (Santangelo, 2014). However, SWD tend to produce compositions that lack key genre elements—such as characters, setting, problem, and solution in a story—or claims, evidence, counterargument, and rebuttal in a persuasive essay (Saddler & Graham, 2007). Additionally, SWD tend to neglect the features needed for particular text structures (e.g., compare–contrast, chronological sequence of events) and do not include important key words or statements (e.g., story cues, transition words, introductory and conclusion statements), resulting in lower-quality texts that lack organization and clear connections between ideas (Li, 2007).

## **Motivation**

Given the many difficulties SWD face when writing, is it not surprising these students typically lack motivation for engaging in and completing writing tasks. Research shows that in order to juggle the many cognitive demands imposed by writing (and the frequent frustrations that may be encountered throughout the process), skilled writers must be motivated and must think writing is important enough to persist when it becomes difficult (Bruning & Horn, 2000). However, SWD lack knowledge of why writing is important or personally relevant to them (Saddler & Graham, 2007) and have difficulty sustaining effort during writing tasks (Graham & Harris, 2005; Lienemann & Reid, 2008). Also, compared to their peers, SWD hold fewer positive beliefs about writing. Yet, research indicates that SWD tend to have high perceptions of themselves as writers (i.e., self-efficacy for writing) despite their weaknesses in writing knowledge, skills, and performance (Graham, 2006; Santangelo,

2014). This overconfidence may inhibit SWD from devoting the effort and cognitive resources needed to successfully complete writing tasks—that is, because they believe they are good writers, they underestimate the effort and persistence they need to put forth to produce quality texts. Alternatively, because SWD are less likely to believe their efforts impact their performance, they may devote less effort to writing because they feel writing performance is out of their control and shaped by external factors (Troia, Shankland, & Wolbers, 2012).

## **EVIDENCE-BASED WRITING INSTRUCTION**

Given the difficulties SWD experience with writing, it is important that they receive early and appropriate intervention that includes effective, research-supported (or evidence-based) writing instruction to meet their specific needs. Evidence-based writing instruction includes teaching methods that have been tested and shown to be effective for improving the writing skills and writing quality of SWD in multiple research studies and across multiple students and settings. By using evidence-based writing instruction, teachers save time and effort; they do not have to search for or create for themselves instructional techniques, and they do not have to wait and wonder whether the latest fads or trends in instruction will impact their SWD's writing performance. That being said, there are some caveats. First, research often lags behind innovation. Thus, there are likely new and untested methods for teaching writing to SWD that may, over time, be tested and supported by research. Second, because teachers are experts in understanding their own students' needs, the optimal mix of instructional techniques (perhaps several of those described here combined with other methods that are not yet research supported) will depend on each teacher, the writing task or assignment, and the needs of SWD in the class.

Next, I describe evidence-based writing instruction along the four dimensions of writing outlined in the previous section to serve as a starting

point for instruction that is grounded in research. I conclude with a discussion of the advantages as well as the limitations of the CCSS (NGA & CCSSO, 2010) for writing and their potential impact on SWD.

## **Transcription**

Researchers have demonstrated that explicit handwriting and spelling instruction can improve these skills in SWD. Some studies also show improvements in writing fluency and writing quality when SWD receive effective transcription instruction, as improvements in these lower-level writing skills reduce the cognitive load of writing. Details about evidence-based handwriting and spelling instruction for SWD follow (see also Alves, Limpo, Salas, & Joshi, [Chapter 9](#), this volume).

## ***Handwriting***

All of the research measuring the impacts of handwriting instruction for SWD has been conducted at the primary level, as these skills are typically mastered in the early grades (Datchuk & Kubina, 2013). However, some SWD may have handwriting difficulties that persist in later grades (Berninger, Abbott, Augsberger, & Garcia, 2009). Therefore, I encourage readers to consider the instructional techniques discussed in this section for older SWD as appropriate. I also caution that although word processing is a reasonable adaptation for many SWD who struggle with handwriting, it should not replace handwriting instruction and should not be provided to SWD without explicit instruction in how to keyboard and use other software features, such as spell check or grammar check.

There were several common features across the available studies of effective handwriting instruction for SWD. Across all studies, handwriting instruction led to improvements in legibility and writing fluency. Five evidence-based recommendations for teaching handwriting skills to SWD

(Datchuk & Kubina, 2013; Graham, 1999; McMaster et al., 2018) include:

**1.** Provide explicit instruction in how to form letters, introducing several letters at a time that include common features (e.g., *c*, *d*, and *g* all contain backward circle strokes) but that are not too similar as to be confused or reversed (e.g., *b* and *d*). Instruction should include teacher modeling of how to form each letter as well as time for students to participate in guided and independent practice with letter formation.

**2.** Use visual cues, such as a dot indicating where to begin and numbered arrows showing the correct stroke sequence needed to form each letter. After teacher modeling of how to form a letter, allow students to practice with visual cues as scaffolds and then practice forming the letter independently, without cues. Often, teachers ask students to circle the best letters they produced on their own and correct any improperly formed letters, emphasizing the importance of SWD learning to self-evaluate their own letter formation and legibility.

**3.** Use cover-and-copy exercises, where students examine a properly formed letter, then cover the letter and copy it from memory.

**4.** Include alphabet exercises, during which students practice singing the alphabet and recalling missing letters when provided a sequence of letters in alphabetic order. These activities promote alphabet awareness, so that students can quickly recall letters and accurately match each letter to its name.

**5.** Integrate handwriting practice with writing extended text, so that students have the opportunity to apply handwriting skills. Initial practice activities can include writing words and sentences with newly learned letters for a specified period of time (e.g., 2 minutes) to build fluency. More importantly, students should have the opportunity to apply handwriting skills in their own written compositions.



## ***Spelling***

Like handwriting, much of the research on spelling instruction for SWD has been conducted with younger students, primarily those in the elementary grades (Williams et al., 2017). However, I encourage readers to provide evidence-based spelling instruction to older SWD as necessary.

Across the studies of effective spelling instruction for SWD, students improved in spelling skills, and in some instances, improved in writing fluency, writing quality, and word-reading skills as well. Five evidence-based recommendations for teaching spelling skills to SWD (Graham, 1999; McMaster et al., 2018; Williams et al., 2017) are:

- 1.** Provide explicit instruction in letter–sound correspondences, spelling of syllable patterns, spelling of meaning patterns (i.e., morphemes), and spelling of irregular words.

- 2.** Teach students to use self-correction when studying spelling words. One such method, cover–copy–compare, involves students looking at a spelling word, covering the word, writing the word from memory, and then comparing their written word to the original word. When students misspell a word, they typically write the word correctly (one to three times) before moving on to the next word.

- 3.** Distribute spelling practice over time, limiting the number of words students learn consecutively. Also, teach students strategies for studying spelling words (e.g., word sorts, flash cards, peer practice, self-tests) as well as strategies for self-monitoring their learning.

- 4.** Provide immediate error correction. This has been accomplished successfully with computer programs that provide immediate corrective feedback when a student misspells a target word during spelling practice.

- 5.** Have students apply new spelling knowledge in sentence writing and

in their written compositions. This supports writing fluency as well as generalization and maintenance of learning.

## **Sentence-Level Skills**

In contrast to transcription instruction, most studies of effective sentence-level instruction for SWD have focused on students in the upper elementary and secondary grades (McMaster et al., 2018). However, like transcription, instruction in sentence-level skills has led to improvements in the sentence-level skills taught as well as improvements in more distal writing outcomes. When provided with effective sentence-level instruction, SWD showed better sentence construction skills (i.e., correct word sequences in sentences, production of complete sentences, production of complex sentences) as well as improvements in writing fluency and writing quality (in some studies). Five evidence-based recommendations for teaching sentence-level skills to SWD (Datchuk & Kubina, 2013; Datchuk, Kubina, & Mason, 2015; Furey et al., 2017; Saddler & Graham, 2005) follow:

- 1.** Provide direct instruction in simple and complex sentences, including the components (e.g., subject/predicate, capitalization, punctuation, parts of speech, grammar) of complete and interesting sentences. Teachers should model how to develop and write different types of sentences and provide guided (e.g., peer-supported sentence-writing activities) and independent practice, during which students write their own sentences. Additionally, teachers should have students apply sentence construction skills in their own writing, holding students accountable for producing in their texts the sentence-level skills they have learned.

- 2.** Use picture–word prompts (i.e., each picture is paired with several words that should be included in a sentence that describes the picture) during initial instruction, so that students do not have to generate content for sentences on their own.

**3.** Use strategy instruction to teach students mnemonics for remembering the steps needed to create a variety of complex sentences. (See Bui, Schumaker, & Deschler, 2006, for an example strategy.)

**4.** Use sentence combining. With sentence combining, students learn about syntactical choices for their writing by combining simple sentences into more complex sentences using cues and connector words. Instead of rules for writing sentences, students learn to consider a variety of sentence alternatives and to write the sentence that best conveys the meaning and content they intend. Parts of speech and grammar can also be taught within the context of sentence-combining lessons (see also Saddler, [Chapter 10](#), this volume).

**5.** Situate grammar instruction in an authentic writing context, where students apply learned grammar skills to writing and connected texts—one approach for this is sentence combining, described above. Avoid traditional, or stand-alone, grammar instruction that involves workbook-type activities (e.g., sentence diagramming, worksheets on capitalization and punctuation) and decontextualized instruction in parts of speech and parts of sentences.

## **Composition Skills**

When SWD become fluent in transcription and sentence construction skills, they are better able to enact the writing strategies that help them produce quality compositions. However, many of these students still require direct instruction and support in composing skills, including planning, writing, revising, and self-regulating the writing process (MacArthur & Graham, 2016). Furthermore, many SWD need instruction to increase their knowledge of the writing process and knowledge of different writing genres (Graham & Harris, 2005; Saddler & Graham, 2007).

When provided with effective instruction in composition skills, SWD demonstrated increases in writing quality as well as increases in genre elements and length of their written compositions (in some studies). Six

evidence-based recommendations for teaching composition skills to SWD (Cook & Bennett, 2014; De La Paz, Espin, & McMaster, 2010; Gersten & Baker, 2001; Gillespie & Graham, 2014; Graham et al., 2013; Joseph & Konrad, 2009; Pennington & Delano, 2012) are:

**1.** Teach students strategies for carrying out the writing process, including strategies for planning, writing, editing, and revising. Examples of mnemonics that help students remember the steps in particular writing strategies can be found at the University of Nebraska—Lincoln’s Cognitive Strategy Instruction in Writing website (<http://cehs.unl.edu/secd/writing>). Students with ASD and students with ID can benefit from picture prompts and/or peer video models to help them remember the steps in writing strategies.

**2.** Implement self-regulated strategy development (SRSD). SRSD involves explicit instruction in writing strategies as well as instruction in the writing knowledge (e.g., elements of different genres) and self-regulation procedures needed to carry out those writing strategies delivered through six flexible, recursive stages of instruction. SRSD is student driven; lessons are criterion based, with individual student progress determining when teachers move on to subsequent lessons; and teachers scaffold instruction until students can use writing and self-regulation strategies independently. For further description of SRSD stages and instruction, as well as free SRSD materials, visit thinkSRSD ([www.thinksrsd.com](http://www.thinksrsd.com)).

**3.** Provide direct instruction in the different text structures associated with common writing genres (e.g., narrative, persuasive, informational). Teachers should show students models of each genre, identify key text structure and genre elements, and provide prompts for students to include the necessary components of each genre in their writing, until they can do so on their own.

**4.** Provide frequent guided feedback on students’ writing throughout the

writing process. Feedback should focus on writing strengths as well as overall writing quality and any elements students may have neglected to include in their written compositions. Teachers can provide writing feedback and peers can be taught to provide feedback to one another as well. Students with ASD and students with ID can benefit from computer-based feedback on their writing, which limits their participation in sometimes-difficult social interactions, provides immediate writing feedback, and gives immediate reinforcement for quality responses.

**5.** Teach students to proceed through the stages of writing (i.e., plan, draft, edit, revise, publish), allowing sustained time for writing, writing for authentic purposes and audiences, and mini-lessons to address writing skills; this type of instruction is typically called *process writing*.

**6.** Provide concrete writing topics for students with ID, particularly during initial writing instruction. Teachers can also provide pictures to help students with ID understand prompts fully or ask students to bring pictures (e.g., a picture from a field trip or family vacation) to provide an authentic context and background knowledge needed to write. (See Cannella-Malone et al., 2015, for examples of how to modify existing writing prompts to make them more concrete and accessible for students with ID.)

## **Motivation**

In theory, once they become more skilled and experience more writing successes, SWD will begin to attribute their efforts to their positive writing outcomes and will display greater motivation to write (Garcia & de Caso, 2004, 2006). Researchers who have recognized the importance of motivation have incorporated it into multicomponent writing interventions, such as strategy instruction and SRSD (described previously). In fact, many of the aforementioned evidence-based practices in this chapter address motivation, either directly (e.g., as in SRSD) or indirectly, by helping SWD become more

skilled and more successful in writing.

The recommendations listed next are integral and integrated aspects of writing instruction that impact motivation and thus, increase the writing quality of SWD. Five evidence-based recommendations for improving the writing motivation of SWD (Garcia & de Caso, 2004, 2006; Garcia-Sanchez & de Caso-Fuertes, 2005; Graham et al., 2013; Troia et al., 2012) include:

**1.** Provide direct instruction in why knowing how to write is important and why writing skills are valuable to students. Teachers should provide authentic applications for writing by incorporating real audiences (e.g., write to a local newspaper about an important community issue, write to the principal with a new idea for the school) and giving students a choice of interesting writing topics. Teachers should also pledge to students that if they put forth the effort to learn writing skills and strategies, their writing will improve.

**2.** Set high expectations for students' writing while also scaffolding writing instruction, so that students experience many successes with writing tasks and receive instructional supports until they can complete more difficult writing tasks on their own. Include positive feedback and encouragement throughout instruction to encourage students' continued efforts.

**3.** Establish a positive classroom environment for writing, where students feel comfortable taking risks and persisting when writing tasks are difficult. Teachers should convey enthusiasm for writing, express their own love of writing, and show students that writing can be fun and interesting. Also, teachers should share their own struggles with writing to show students how they persisted and how their efforts paid off at times when writing was difficult.

**4.** Give students goals for their writing, such as goals to include a particular number of genre elements (e.g., include all seven elements of a story) or goals to address a specific number of areas needed for revision (e.g.,

find three areas that can be expanded using descriptive details). Students can also select their own writing goals from a premade list provided by the teacher, with the long-term aim that the process of setting goals for writing becomes one students will engage in and complete on their own.

**5.** Monitor students' writing performance and teach students to self-monitor. Teachers can provide visual displays, such as graphs on which students chart gains in writing quality or increases in genre elements across multiple writing tasks. These displays provide visual reminders of students' writing progress and advancement toward writing goals.

## **WRITING INSTRUCTION AND THE CCSS**

Since their inception, there have been mixed reviews of the CCSS for writing and language (NGA & CCSSO, 2010), with praise for their emphasis on writing as well as concerns about their vagueness around some writing skills (e.g., spelling) and lack of guidance in how to instruct SWD (Graham & Harris, 2013; Troia & Olinghouse, 2013). Because a majority of U.S. states and territories are implementing the CCSS, or some version of these standards (often with state-level modifications), it is important to consider their impact on writing instruction for SWD.

Researchers and policymakers alike recognize the potential for the CCSS (NGA & CCSSO, 2010) to increase the amount of time devoted to writing instruction in our nation's schools and to improve students' use of writing as a tool to help them research, learn, and present knowledge across academic domains (Graham & Harris, 2013; Graham et al., 2015); these aspects of the CCSS have promise for improving the writing instruction and thus, the writing outcomes, for SWD. Importantly, the CCSS have a strong focus on the writing process (i.e., plan, draft, edit, revise) and key writing genres (i.e., narrative, informational/explanatory, argumentative), which is important for SWD. Additionally, the CCSS set high expectations for students' writing at

each grade level, increase writing expectations across grade levels, and emphasize student (and peer) support for writing in all grades, which are important considerations for teachers when scaffolding writing instruction for SWD (Graham & Harris, 2013; Troia & Olinghouse, 2013).

However, the CCSS (NGA & CCSSO, 2010) do not provide guidance for using many of the evidence-based instructional practices discussed in this chapter that are known to be important for the writing development of SWD. First, the CCSS do not focus on handwriting beyond first grade, but research indicates SWD often struggle with handwriting skills beyond the primary grades (Berninger et al., 2009; Graham & Harris, 2013). Second, although the CCSS include many references to grammar, researchers have cautioned that this may encourage teachers to rely on traditional, or decontextualized, models of grammar instruction (Troia & Olinghouse, 2013), which have been shown to ineffective for SWD (e.g., Saddler & Graham, 2005). Third, the teaching of sentence-level fluency, which is important for many SWD, is not included in the CCSS. Fourth, although there are frequent references to the writing process, the CCSS never refer to the writing strategies important for SWD to carry out the processes involved in skilled writing. Fifth, the CCSS never mention aspects of writing motivation and relatedly, neglect goal setting and self-monitoring, both of which appear important for increasing the writing motivation and writing quality of SWD (Graham & Harris, 2013; Troia & Olinghouse, 2013).

Despite the aspects of writing instruction noticeably absent from the CCSS, an addendum to the Standards recognizes the importance of evidence-based, individualized support and instruction for SWD (NGA & CCSSO, 2010). The evidence-based instructional practices described in this chapter are an excellent start for readers looking for ways to provide writing instruction that meets the demands of the CCSS, or other comparable state standards for writing, while also addressing the unique writing needs of SWD. The instructional adaptations described next can also be used to support evidence- and standards-based writing instruction for SWD.



## ADAPTATIONS FOR WRITING INSTRUCTION

In addition to evidence-based instructional practices for teaching writing to SWD, there are important accommodations and adaptations to writing instruction that can benefit SWD (see [Table 15.1](#)). I organized [Table 15.1](#) to distinguish between adaptations for the general classroom environment, those for transcription, and those for sentence-level skills and composition. Importantly, many of the adaptations could be placed under multiple headers within the table. For example, an adaptation listed for transcription may also have an impact on composition skills or motivation. I combined sentence-level skills and composition, as the adaptations under this heading cover both areas. There is not a specific section of the table for adaptations to enhance writing motivation, as many of the adaptations listed (e.g., use of technology, token reinforcement, comfortable spaces for students to write) should increase SWD’s motivation for engaging in and completing writing tasks.

**TABLE 15.1.** Writing Adaptations for Students with Disabilities<sup>a</sup>

<u>General classroom adaptations</u>	
<ul style="list-style-type: none"> <li>• Allow extra time for completing writing assignments.</li> <li>• Permit students to write collaboratively with peers.</li> <li>• Allow students to write where they are comfortable (e.g., in a different area of the classroom, standing up, sitting on the floor).</li> <li>• Use token reinforcement and/or student-preferred reinforcers.<sup>a</sup></li> </ul>	
<u>Transcription</u>	<u>Sentence-level skills and composition</u>
<ul style="list-style-type: none"> <li>• Provide pencil grips.</li> <li>• Teach students to keyboard on computers and iPads.</li> <li>• Allow students to use word processing programs for composing.</li> <li>• Promote the use of spell check and grammar check.</li> <li>• Allow students to dictate their compositions into a tape recorder or to a scribe.</li> <li>• Allow students to use speech-to-text programs (e.g., Dragon NaturallySpeaking) for dictating</li> </ul>	<ul style="list-style-type: none"> <li>• Teach students to plan their writing using:               <ul style="list-style-type: none"> <li>◦ Software for creating visual representations of ideas (e.g., Inspiration, Kidspiration).</li> <li>◦ Graphic organizers.</li> <li>◦ Planning sheets with questions to answer about proposed content.</li> <li>◦ Storyboards.</li> </ul> </li> <li>• Provide word arrays and sentence frames to help with sentence construction and composition.<sup>a</sup></li> <li>• Use procedural facilitation, including cue cards</li> </ul>

their compositions.

- Allow students to use word-prediction software (e.g., Co:Writer) to assist with spelling.
- Use voice-output communication aids (VOCA) to digitize the reading of letters and words students produce.<sup>a</sup>

for steps of the writing process and prompts/questions to consider while composing, revising, and editing.

- Provide checklists to help students evaluate their own writing.
- Use word processing programs that read aloud what students have written.
- Provide reminders for students to add more information (e.g., “Can you add five more sentences?”) to their writing.
- Use automated essay scoring (AES; e.g., Summary Street) to provide ongoing and summative writing feedback.
- Allow students to use multimodal composing, including audio, images, and hyperlinks in their compositions.

---

<sup>a</sup>Shown to be specifically effective for students with ASD (Pennington & Delano, 2012) and students with ID (Cannella-Malone, Konrad, & Pennington, 2015; Joseph & Konrad, 2009).

When considering the adaptations in [Table 15.1](#), readers should be aware of two critical elements that will impact their effectiveness: assessment and instruction. First, teachers must assess which adaptations work best for their individual SWD (MacArthur, 2009; Niedo et al., 2016). For example, some students may compose well using a word processor and others may perform better using paper and pencil. Further, word processors may be appropriate for some writing assignments while less appropriate for others. Teachers should conduct an initial assessment of any instructional adaptation for writing to examine its effects on students’ writing performance and continue to monitor the effectiveness of that adaptation as students use it.

Second, teachers must provide SWD direct instruction, modeling, and guided practice opportunities with any instructional adaptation before they can be expected to use it effectively on their own. A common misconception is that SWD can benefit from simply being provided the use of technology for writing (e.g., word processing, spell check). However, simply providing laptops or iPads without instruction in how to use their features (e.g.,

keyboarding instruction, instruction in how to use editing and revising tools), is not effective for SWD (MacArthur, 2009). Furthermore, it is important to understand that spell check is less helpful for students who lack basic spelling skills and frequently produce severely misspelled words, like many SWD do (Cullen, Richards, & Frank, 2008). Thus, SWD not only require instruction to know how to use writing adaptations but they also need instruction in how to perform the basic writing skills needed to use many adaptations. Therefore, it is important to remember that writing adaptations should supplement, but never take the place of, evidence-based writing instruction.

## **WRITING ASSESSMENT AND RTI**

Assessment and progress monitoring guide teachers in their selection of appropriate evidence-based writing instruction to meet the needs of SWD in their classrooms, while also helping teachers determine which SWD need further intervention and supports. A more prominent focus on scientific, evidence-based instruction and assessment in our nation's schools began with the Individuals with Disabilities Education Improvement Act of 2004 (IDEA). Language in IDEA encouraged students' responsiveness to research-based intervention, called RTI, as a method for evaluation and identification of students with LD (Fuchs & Fuchs, 2005). RTI also promotes early identification and remediation of struggling students, with a tiered system of supports and interventions (Fuchs & Fuchs, 2006; Furey et al., 2017). Next, I describe commonly used writing assessments across the three tiers of RTI.

### **Tier 1**

At Tier 1, or the general education classroom, teachers begin with universal screening measures to identify students who are struggling writers and who may be at risk for later writing difficulties. Often, universal screening measures are state- or district-level assessments that require students to

respond to a writing prompt or a series of prompts. Students' written responses are then scored holistically (i.e., a score for the overall impression of the quality of the response) or analytically (i.e., individual scores for specific features of the response, such as organization, voice, and word choice) using a rubric. These types of large-scale writing assessments may also include multiple-choice questions that measure students' knowledge about writing (e.g., grammar, word choice, syntactical choices, punctuation). They are often administered two to three times per year (e.g., fall, winter, spring) to document students' progress, or in some instances, lack of progress, toward grade-level writing standards. Students who do not meet predetermined cutoffs on these assessments are considered at-risk or struggling writers and teachers monitor these students' writing progress more frequently to document their response to evidence-based writing instruction and determine whether they require further instructional intervention or supports (De La Paz et al., 2010).

Because writing is a multifaceted skill, and large-scale writing assessments (like the universal screening measures described in the preceding paragraph) provide information on only some aspects of writing, teachers should use other validated writing assessments to measure and monitor students' writing performance at Tier 1 (Saddler & Asaro-Saddler, 2013). One way to monitor, assess, and document students' writing progress is to collect students' writing in a portfolio. Teachers can determine a schedule (e.g., once per grading period) to assess a piece of writing from each student's portfolio using a genre-specific rubric. Performance on these portfolio assessments drives the teacher's subsequent writing instruction and serves to identify students who are not responding to the evidence-based writing instruction being provided. Another valid and accurate assessment for screening and progress monitoring purposes is curriculum-based measurement (CBM). CBM writing involves short, timed (e.g., 3–5 minutes) responses to writing prompts. Teachers score students' responses to determine performance and progress in total words written, number of words spelled correctly, and correct (and incorrect) word sequences, and graph each student's progress toward a desired goal, which

can be based on CBM writing norms or the average performance of students in the classroom. (See De La Paz et al., 2010; *AIMSweb.com*, for further details about administering and scoring CBM writing assessments.) At the beginning of the school year, teachers can use CBM writing data (in conjunction with scores from large-scale writing assessments) to determine which students are not meeting grade-level expectations. CBMs should be administered on a regular schedule (e.g., fall, winter, spring) to all students in Tier 1, and students identified as struggling writers should be monitored more frequently (e.g., once per month; De La Paz et al., 2010).

Assessment data (combined with teachers' qualitative observations of their students) at Tier 1 allows teachers to plan for and differentiate their writing instruction based on students' needs. For example, if data and observations show a small group of students are struggling with constructing detailed and interesting sentences, then the teacher may pull out these students during class writing time to work on sentence combining. If teachers observe students who demonstrate a pattern of persistent low performance on the aforementioned assessments and who do not respond to the evidence-based writing instruction provided at Tier 1, they consult with school literacy specialists and special education teachers to plan for more intensive writing support and instruction at Tier 2.

## **Tier 2**

Students identified as needing Tier 2 intervention receive more intensive and personalized instruction designed to meet their specific learning needs and areas of weakness (identified in Tier 1 assessments and observations); typically, this instruction is provided in small groups. A specialist (e.g., school literacy specialist, classroom paraprofessional who is trained to provide evidence-based tutoring and instruction) would most likely provide writing instruction at Tier 2 (Fuchs & Fuchs, 2005). Tier 2 writing instruction focuses on remediating transcription, sentence-level, or composition skills as well as

ways of increasing students' writing motivation (see [evidence-based instructional recommendations](#) described earlier in the chapter) or remediating some combination of these aspects of writing, as determined by students' needs. For example, a literacy specialist may pull out three at-risk and/or struggling writers who earned similar CBM writing scores at Tier 1. The specialist will instruct these students for 30 minutes, three times per week using evidence-based instructional practices targeted to remediate the students' specific writing weaknesses.

At Tier 2, the teacher and/or responsible specialists collect weekly CBM writing data from students to measure their progress toward writing goals and grade-level expectations. Experts recommend monitoring students for a specified time, such as a grading period, before making a determination whether students are responsive to Tier 2 instruction (Fuchs et al., 2010). Students who demonstrate adequate growth toward writing goals within the specified time frame continue receiving targeted writing instruction at Tier 2 until the instructional team (e.g., teacher, literacy specialist, special education teacher) has data to indicate they can be successful without this added intervention. Students who continue to display persistent writing difficulties and lack of progress despite evidence-based instruction and support at Tier 2 are referred for more intensive intervention at Tier 3.

### **Tier 3**

At Tier 3, a multidisciplinary team uses all of the writing assessment data and writing samples collected by the teacher and specialists to support a referral for special education services for any students who did not respond to Tier 2 instruction. After a meeting with a student's parents and school administrators, the team determines the amount of writing instruction the student will receive (e.g., 150 minutes per week). This writing instruction is provided by a special education teacher who is trained in delivering evidence-based writing instruction for SWD. This teacher will likely deliver targeted

writing instruction in both individualized and small-group settings. The writing instruction should include many of the evidence-based practices and adaptations described in this chapter.

The special education teacher continues to monitor weekly CBM writing progress at Tier 3, with adjusted goals that are more appropriate for each student's current writing performance level and slower rate of progress toward grade-level writing expectations. The teacher also continues to collect and score writing for each student's portfolio and administers state- or district-level writing assessments with accommodations as needed (e.g., extra time to complete the writing assessment, use of a word processor and spell check). The teacher and multidisciplinary team meet at least every grading period to discuss each student's performance and to examine data from all assessments to determine progress toward the writing goals in his or her individualized education program (IEP), adjusting writing instruction and adaptations as needed to support each student's growth in writing.

## **CONCLUSIONS**

Across the evidence-based practices described in this chapter, several unifying themes emerge. I remind readers to consider these themes as critical for any type of instruction, adaptation, or assessment they choose when teaching writing to SWD. First, writing instruction for SWD should be explicit, direct, and systematic. SWD need teachers to model writing skills and strategies extensively, making the writing process and the "hidden" processes (e.g., planning, self-regulation) that skilled writers deploy as transparent as possible. SWD also need many opportunities for scaffolded guided practice as well as meaningful independent practice, in which they apply newly learned writing skills in their own written compositions. Second, as described in the RTI section of this chapter, evidence-based writing instruction for SWD should be informed by data. Teachers and specialists need to collect and interpret data from multiple sources and to conduct ongoing progress

monitoring of SWD in order to make decisions about the types (and level of intensity) of writing instruction and adaptations these students require. Last, motivation for writing should be emphasized and reinforced throughout instruction. Although teachers can determine what is personally motivating for their students, writing instruction that involves student choice, a real audience, and an enthusiastic writing teacher who supports and provides feedback to SWD throughout the writing process, lays the foundation for student engagement and motivation to write.

Although the ideal combination of instructional practices and adaptations will be student and context dependent, I hope readers draw on the recommendations in this chapter as a starting point for effective writing instruction for SWD. Importantly, SWD who receive evidence-based writing instruction and appropriate adaptations will gain access to the many uses and the incredible power writing has in their lives in- and outside of school.

## REFERENCES

- Berninger, V. W., Abbott, R. D., Augsburger, A., & Garcia, N. (2009). Comparison of pen and keyboard transcription modes in children with and without learning disabilities. *Learning Disability Quarterly, 32*(3), 123–141.
- Bruning, R., & Horn, C. (2000). Developing motivation to write. *Educational Psychologist, 35*(1), 25–37.
- Bui, Y. N., Schumaker, J. B., & Deschler, D. D. (2006). The effects of a strategic writing program for students with and without learning disabilities in inclusive fifth-grade classes. *Learning Disabilities Research & Practice, 21*(4), 244–260.
- Cannella-Malone, H. I., Konrad, M., & Pennington, R. C. (2015). ACCESS!: Teaching writing skills to students with intellectual disability. *Teaching Exceptional Children, 47*(5), 272–280.
- Connelly, V., & Dockrell, J. E. (2016). Writing development and instruction for students with learning disabilities: Using diagnostic categories to study writing difficulties. In C. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (2nd ed., pp. 349–363). New York: Guilford Press.
- Cook, K. B., & Bennett, K. E. (2014). Writing interventions for high school students with disabilities: A review of single-case design studies. *Remedial and Special Education, 35*(6), 344–355.
- Cortiella, C., & Horowitz, S. H. (2014). *The state of learning disabilities: Facts, trends and emerging issues*. New York: National Center for Learning Disabilities.
- Cullen, J., Richards, S. B., & Frank, C. L. (2008). Using software to enhance the writing skills of students with special needs. *Journal of Special Education Technology, 23*(2), 33–44.
- Datchuk, S. M., & Kubina, R. M. (2013). A review of teaching sentence-level writing skills to students with writing difficulties and learning disabilities. *Remedial and Special Education, 34*(3), 180–192.



- Datchuk, S. M., Kubina, R. M., & Mason, L. H. (2015). Effects of sentence instruction and frequency building to a performance criterion on elementary-aged students with behavioral concerns and EBD. *Exceptionality, 23*(1), 34–53.
- De La Paz, S., Espin, C., & McMaster, K. (2010). RTI in writing instruction. In T. A. Glover & S. Vaughn (Eds.), *Response to intervention: Empowering all students to learn* (pp. 204–238). New York: Guilford Press.
- Ennis, R. P., & Jolivette, K. (2012). Existing research and future directions for self-regulated strategy development with students with and at risk for emotional and behavioral disorders. *Journal of Special Education, 48*(1), 32–45.
- Fayol, M. (2016). From language to text: The development and learning of translation. In C. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (2nd ed., pp. 130–143). New York: Guilford Press.
- Flower, L., & Hayes, J. R. (1981). A cognitive process theory of writing. *College Composition and Communication, 32*(4), 365–387.
- Fuchs, D., & Fuchs, L. S. (2005). Responsiveness-to-intervention: A blueprint for practitioners, policymakers, and parents. *Teaching Exceptional Children, 38*(1), 57–61.
- Fuchs, D., & Fuchs, L. S. (2006). Introduction to response to intervention: What, why, and how valid is it? *Reading Research Quarterly, 41*(1), 93–99.
- Fuchs, D., Fuchs, L. S., & Stecker, P. M. (2010). The “blurring” of special education in a new continuum of general education placements and services. *Exceptional Children, 76*(3), 301–323.
- Furey, W. M., Marcotte, A. M., Wells, C. S., & Hintze, J. M. (2017). The effects of supplemental sentence-level instruction for fourth-grade students identified as struggling writers. *Reading & Writing Quarterly, 33*(6), 563–578.
- Garcia, J. N., & de Caso, A. M. (2004). Effects of a motivational intervention for improving the writing of children with learning disabilities. *Learning Disability Quarterly, 27*(3), 141–159.
- Garcia, J. N., & de Caso, A. M. (2006). Changes in writing self-efficacy and writing products and processes through specific training in the self-efficacy beliefs of students with learning disabilities. *Learning Disabilities: A Contemporary Journal, 4*(2), 1–27.
- Garcia-Sanchez, J. N., & de Caso-Fuertes, A. M. (2005). Comparison of the effects on writing attitudes and writing self-efficacy of three different training programs in students with learning disabilities. *International Journal of Educational Research, 43*(4), 272–289.
- Gersten, R., & Baker, S. (2001). Teaching expressive writing to students with learning disabilities: A meta-analysis. *Elementary School Journal, 101*(3), 251–272.
- Gillespie, A., & Graham, S. (2014). A meta-analysis of writing interventions for students with learning disabilities. *Exceptional Children, 80*(4), 454–473.
- Graham, S. (1999). The role of text production skills in writing development: A special issue. *Learning Disability Quarterly, 22*(2), 75–77.
- Graham, S. (2006). Writing. In E. Anderman, P. H. Winne, P. A. Alexander, & L. Corno (Eds.), *Handbook of educational psychology* (pp. 457–478). New York: Routledge.
- Graham, S., Fishman, E. J., Reid, R., & Hebert, M. (2016). Writing characteristics of students with attention deficit hyperactive disorder: A meta-analysis. *Learning Disabilities Research & Practice, 31*(2), 75–89.
- Graham, S., & Harris, K. R. (2000). The role of self-regulation and transcription skills in writing and

- writing development. *Educational Psychologist*, 35(1), 3–12.
- Graham, S., & Harris, K. (2005). *Writing better: Effective strategies for teaching students with learning difficulties*. Baltimore: Brookes.
- Graham, S., & Harris, K. R. (2013). Common Core State Standards, writing, and students with LD: Recommendations. *Learning Disabilities Research & Practice*, 28(1), 28–37.
- Graham, S., Harris, K. R., & Fink-Chorzempa, B. (2002). Contribution of spelling instruction to the spelling, writing, and reading of poor spellers. *Journal of Educational Psychology*, 94(4), 669–686.
- Graham, S., Harris, K., & Hebert, M. A. (2011). *Informing writing: The benefits of formative assessment: A Carnegie Corporation Time to Act report*. Washington, DC: Alliance for Excellent Education.
- Graham, S., Harris, K. R., & McKeown, D. (2013). The writing of students with learning disabilities, meta-analysis of self-regulated strategy development writing intervention studies, and future directions: Redux. In H. L. Swanson, K. R. Harris, & S. Graham (Eds.), *Handbook of learning disabilities* (2nd ed., pp. 405–438). New York: Guilford Press.
- Graham, S., Harris, K. R., & Santangelo, T. (2015). Research-based writing practices and the Common Core: Meta-analysis and meta-synthesis. *Elementary School Journal*, 115(4), 498–522.
- Hayes, J. R. (1996). A new framework for understanding cognition and affect in writing. In C. M. Levy & S. Ransdell (Eds.), *The science of writing: Theories, methods, individual differences, and applications* (pp. 1–27). Mahwah, NJ: Erlbaum.
- Joseph, L. M., & Konrad, M. (2009). Teaching students with intellectual or developmental disabilities to write: A review of the literature. *Research in Developmental Disabilities*, 30(1), 1–19.
- Langer, J. A., & Applebee, A. N. (1986). Reading and writing instruction: Toward a theory of teaching and learning. *Review of Research in Education*, 13(1), 171–194.
- Li, D. (2007). Story mapping and its effects on the writing fluency and word diversity of students with learning disabilities. *Learning Disabilities: A Contemporary Journal*, 5(1), 77–93.
- Lienemann, T. O., & Reid, R. (2008). Using self-regulated strategy development to improve expository writing with students with attention deficit hyperactivity disorder. *Exceptional Children*, 74(4), 471–486.
- MacArthur, C. A. (2009). Reflections on research on writing and technology for struggling writers. *Learning Disabilities Research & Practice*, 24(2), 93–103.
- MacArthur, C. A., & Graham, S. (2016). Writing research from a cognitive perspective. In C. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (2nd ed., pp. 24–40). New York: Guilford Press.
- McMaster, K. L., Kunkel, A., Shin, J., Jung, P. G., & Lembke, E. (2018). Early writing intervention: A best evidence synthesis. *Journal of Learning Disabilities*, 51(4), 363–380.
- National Center for Education Statistics. (2012). *The Nation's Report Card: Writing 2011* (NCES 2012-470). Washington, DC: Institute for Education Sciences, U.S. Department of Education.
- National Governors Association Center for Best Practices & Council of Chief State School Officers. (2010). *Common Core State Standards for English language arts and literacy in history/social studies, science, and technical subjects*. Washington, DC: Authors. Retrieved from [www.corestandards.org](http://www.corestandards.org).
- Niedo, J., Tanimoto, S., Thompson, R. H., Abbott, R. D., & Berninger, V. W. (2016). Computerized instruction in translation strategies for students in upper elementary and middle school grades with persisting learning disabilities in written language. *Learning Disabilities*, 21(2), 14–30.
- Pennington, R. C., & Delano, M. E. (2012). Writing instruction for students with autism spectrum

- disorders: A review of literature. *Focus on Autism and Other Developmental Disabilities*, 27(3), 158–167.
- Saddler, B. (2013). Best practices in sentence construction skills. In S. Graham, C. A. MacArthur, & J. Fitzgerald (Eds.), *Best practices in writing instruction* (2nd ed., pp. 238–256). New York: Guilford Press.
- Saddler, B., & Asaro-Saddler, K. (2013). Response to intervention in writing: A suggested framework for screening, intervention, and progress monitoring. *Reading & Writing Quarterly*, 29(1), 20–43.
- Saddler, B., Behforooz, B., & Asaro, K. (2008). The effects of sentence-combining instruction on the writing of fourth-grade students with writing difficulties. *Journal of Special Education*, 42(2), 79–90.
- Saddler, B., & Graham, S. (2005). The effects of peer-assisted sentence-combining instruction on the writing performance of more and less skilled writers. *Journal of Educational Psychology*, 97(1), 43–54.
- Saddler, B., & Graham, S. (2007). The relationship between writing knowledge and writing performance among more and less skilled writers. *Reading & Writing Quarterly*, 23(3), 231–247.
- Santangelo, T. (2014). Why is writing so difficult for students with learning disabilities?: A narrative review to inform the design of effective instruction. *Learning Disabilities: A Contemporary Journal*, 12(1), 5–20.
- Scardamalia, M., & Bereiter, C. (1987). Knowledge telling and knowledge transforming in written composition. In S. Rosenberg (Ed.), *Advances in applied psycholinguistics: Reading, writing, and language learning* (Vol. 2, pp. 142–175). New York: Cambridge University Press.
- Schlagal, B. (2013). Best practices in spelling and handwriting. In S. Graham, C. A. MacArthur, & J. Fitzgerald (Eds.), *Best practices in writing instruction* (2nd ed., pp. 257–283). New York: Guilford Press.
- Troia, G. A., & Olinghouse, N. G. (2013). The Common Core State Standards and evidence-based educational practices: The case of writing. *School Psychology Review*, 42(3), 343–357.
- Troia, G. A., Shankland, R. K., & Wolbers, K. A. (2012). Motivation research in writing: Theoretical and empirical considerations. *Reading & Writing Quarterly*, 28(1), 5–28.
- Weintraub, N., & Graham, S. (1998). Writing legibly and quickly: A study of children's ability to adjust their handwriting to meet common classroom demands. *Learning Disabilities Research & Practice*, 13, 146–152.
- Williams, K. J., Walker, M. A., Vaughn, S., & Wanzek, J. (2017). A synthesis of reading and spelling interventions and their effects on spelling outcomes for students with learning disabilities. *Journal of Learning Disabilities*, 50(3), 286–297.

## ***Chapter 16***

# Instruction for English Learners

Adrian Pasquarella

English learners (ELs) are students learning English when their home language, or mother tongue, is a language other than English. Other commonly used terms to refer to ELs are *English language learners* (ELLs) and those with *limited English proficiency* (LEP), as well as students with *English as a second language* (ESL) or *English as an additional language* (EAL). For simplicity, ELs will be used to reference all students learning English as an additional language, whether it be their second, third, or more. All ELs have the arduous task of learning *the* language of instruction, while simultaneously building content knowledge and improving academic skills. The purpose of this chapter is to describe important characteristics that reflect and express the diversity of ELs, the strengths ELs bring to the classroom, the challenges that ELs face to succeed academically, and the practices we can use to support ELs in inclusive educational environments. First, demographic characteristics of ELs are described to help understand the diversity of ELs, and how the landscape of public schools is rapidly changing. Then, relevant research on writing and reading development in ELs and monolingual learners is reviewed. I concentrate on both writing and reading in this chapter as instruction in both can support writing development (as well as reading development). Finally, explicit suggestions, strategies, and resources are

provided to support ELs in important aspects of literacy development.

## **DEMOGRAPHIC OF ELs IN U.S. SCHOOLS**

### **Student Population Trends**

It is of little surprise to many that ELs are the fastest growing group of students in public schools. However, the rate at which demographics are changing is surprising. Overall, the K–12 EL population grew by 60% over the last decade, compared with 7% growth for the general population. Certain states have seen dramatic increases in the EL population. For example, South Carolina schools saw a 610% increase in ELs, Delaware, Kentucky, and Nevada all saw between 200–300% increases in EL students, and at least six other states had more than a 100% increase in ELs from 2000–2001 to 2010–2011 (Douglass & Sampson, 2013). Currently, there are over 5 million ELs in U.S. schools. It is projected that by 2020, half of all public school students will have non-English-speaking backgrounds (Chao, Schenkel, & Olsen, 2013). Not only is the field of education changing but our student population is rapidly changing. In order to flourish, we need to equip ourselves with relevant knowledge about the cultural and linguistic diversity of our ELs and the best practices to support their growth and achievement.

### **Student Diversity**

Within the United States, approximately 70% of ELs, between the ages of 5 and 18 speak Spanish as their home language. The U.S. census lists 325 languages spoken in homes across the United States. The following languages comprise the other nine most commonly spoken home languages in U.S. homes: Chinese (4%), Vietnamese (3%), French/Haitian Creole (2%), Arabic (2%), Yiddish/Jewish (1%), Korean (1%), Filipino/Tagalog (1%), German (1%), and Hmong (1%). Additionally, the majority of ELs were born in the United States. Approximately 75% of ELs in K–5 are second- or third-

generation Americans, and 57% of middle and high school ELs were born in the United States. Of course, these are general statistics and large differences vary by region, such that port-of-entry communities have more newcomers or first-generation Americans (Chao et al., 2013). To be clear, teaching ELs often involves working with culturally and linguistically diverse children and families. To help EL children the most, we need to be aware and sensitive to the culture and traditions of the children we teach. ELs are a heterogeneous group, and the best supports and practices are different from one school to the next. Now, we unpack some important factors that influence literacy development for ELs.

## **IMPORTANT BACKGROUND CHARACTERISTICS TO CONSIDER WHEN WORKING WITH ELs**

*Simultaneous* and *sequential bilinguals* are common terms used to help understand distinct differences among groups of ELs in schools. Generally speaking, simultaneous bilinguals are children learning two languages at the same time. To oversimplify, we can consider the majority of ELs born in the United States to be simultaneous bilinguals. They are learning their first language (L1) at home, often Spanish, and their second language (L2), English, at school. Sequential bilinguals are ELs who learned an L1 before learning their L2. These ELs had immersive language exposure and experience in their L1 before switching to be immersed in the L2 (e.g., English). Again, to oversimplify, this group of ELs would have likely immigrated to the United States before the start of school or during any grade. The labels of sequential or simultaneous are not very informative for planning writing instruction. They provide little information about what we really need to know, which is What language and educational experiences have ELs had prior to entry into our schools, and what L1 skills and knowledge have been learned?

In order to help ELs flourish in the classroom, we should consider a few

key factors to anticipate what abilities, skills, and knowledge ELs will bring with them to the classroom. This includes looking beyond categorizations and labels to consider ELs' prior educational and language experiences to gain insights on what skills they already know and what skills are developing. For example, with ELs born in the United States, we often see them starting school with significantly lower knowledge of English vocabulary than their English-speaking peers (August, Carlo, Dressler, & Snow, 2005; Au-Yueng et al., 2015; Carlo et al., 2004). Research has shown that without intervention, gaps between ELs and their English-speaking peers are persistent and remain into the upper elementary grades (August & Shanahan, 2006; Carlo et al., 2004). These startling trends continue beyond high school as the graduation rates are lower for ELs than their monolingual peers—this trend has remained relatively unchanged for the last two decades (McFarland et al., 2018). However, when an educational setting integrates evidence-based assessment and instructional approaches focused on language, writing, and reading, ELs catch up to their peers in reading skills (Lesaux, Rupp, & Siegel, 2007) and vocabulary knowledge (Au-Yueng et al., 2015).

Additionally, research has also shown that children who come to school with strong L1 language and literacy skills learn English quicker than ELs who come with less L1 knowledge (Genesee, Geva, Dressler, & Kamil, 2006). For ELs who have immigrated, we want to know how many years of schooling they attended, whether there were any significant gaps in their education, and in what language(s) instruction occurred. Some schools have reported lots of diversity—for example, in typical urban settings, researchers have reported upward of 20 or more languages, and ELs' length of immigration ranged from a few months to several years (Lesaux, Lipka, & Siegel, 2006; Pasquarella, Gottardo, & Grant, 2012).

ELs are very diverse and we should consider cultural background, language exposure, and school experiences when planning inclusive and supportive instruction. It is easy to get lost in the details so it is important to reiterate the big ideas: (1) ELs need support in developing English language skills, especially academic vocabulary, so they can efficiently learn content

and improve their writing skills in English; and (2) L1 skills are incredibly valuable and in many instances can be used to support English learning.

## HOW CAN L1 SKILLS SUPPORT ENGLISH WRITING DEVELOPMENT?

If an EL has developed skills or knowledge in his or her L1, is that helpful when learning English? The answer to this question is a resounding *Yes!* Although, the details about what it means for the classroom are a little harder to figure out. Two important theories in EL research have established a foundation to help explain some important aspects of *when, why, and how* L1 and L2 skills are related. These theories help us understand *cross-language transfer*, which is the ability to use skills or knowledge, typically in an individual's L1, to engage in writing in his or her L2 (Geva, 2014).

The *linguistic interdependence hypothesis* (Cummins, 1979, 1981) suggested that L1 and L2 skills are related and connected. Knowledge and skills learned in the L1 are an important part of L2 learning. The *dual-iceberg representation* is helpful in thinking about *how* L1 and L2 skills are related. An iceberg analogy is useful because it suggests that even though L1 and L2 skills appear different at the surface level, they are built from the same foundation below the surface. In this model, surface-level skills can involve basic interpersonal communication skills (BICS), which are mostly used in conversational English, or the proficiencies or skills ELs display in the classroom. Below the surface level involves cognitive academic language proficiency (CALP), also called “academic language proficiency.” CALP involves academic discourse skills and specialized vocabulary that become increasingly more important in reading, writing, and language tasks as children develop and engage in more advanced content learning. Binding L1 and L2 languages together are *common underlying proficiencies*, which are skills, knowledge, and cognitive–linguistic processes that are used to think, speak, read, and write in any language. For example, working memory (the



amount of information you can think about at one time) is a common underlying proficiency that is essential to comprehension in every language. Developing L1 skills is important because it helps build the common underlying proficiencies that can be used when learning a new language. The linguistic interdependence hypothesis was a big step forward in bilingual education and valuing L1 literacy skills, and research has since demonstrated that positive instances of cross-language transfer can be broad or nuanced, but one thing is certain: there are several other complex aspects of language and cognition that come into play.

An important factor that has been shown to influence cross-language transfer is the proficiency in the L1 and L2—in other words, how well children can comprehend and communicate in their first language. The *threshold theory* (Alderson, 1984, 2000; Bialystok, 2011) suggests that ELs need to reach a level of proficiency to pass a threshold in the new language before the benefits and skills from the L1 can be used. In other words, ELs will need to learn some foundational language and writing skills in English, and have sufficient exposure and experience with English before we expect to see the positive benefits from cross-language transfer.

Another important aspect of bilingualism that helps predict cross-language transfer is the *language distance*, also called the *linguistic proximity*, between the L1 and L2 (Odlin, 2003; Koda, 2007). In some cases, cross-language transfer is influenced by the linguistic distance between the L1 and L2. When there is a high degree of similarity between the L1 and L2, cross-language transfer occurs with little adjustment. However, when the two languages are distantly related, L1 skills do not facilitate L2 reading. Research has tested this theory by breaking down the different subskills of writing and reading to examine how decoding, spelling, vocabulary knowledge, and higher-level thinking (metacognitive) skills function across languages. The collective results are quite interesting and help provide support for the main aspects and core ideas of the multiple theories just discussed. There are many ways to compare languages to identify similarities and differences to help establish how *distant* languages are from one another.

There are two important aspects to consider when thinking about how oral language maps onto print. The first is knowing the type of script—this could range from an alphabetic script (like English) or a logographic script (like Chinese). Another dimension is the way in which sound is mapped onto spelling patterns. Consider the word *flower* in three languages. Both Spanish (*flor*) and English use the Roman alphabet to represent phonemes, the smallest unit of sound, in the respective languages. A difference between Spanish and English is that Spanish has more transparent and consistent relationships between letters and sounds, while English is less transparent because individual letters can represent multiple sounds (e.g., long vs. short vowel sounds). To signify the word *flower*, Chinese uses a logographic script (e.g., 花 or Huā), for syllables and/or morphemes (smallest unit of meaning in words). These sounds are mapped onto radicals that make up the logographic characters. In Chinese, words cannot be decoded like in Spanish or English because the Chinese radicals and character cannot be broken down into sound units smaller than syllables or morphemes (Chen & Pasquarella, 2017; Defior & Serrano, 2018).

When thinking about these three languages together, it is pretty clear that Spanish and English have more in common and have less “linguistic distance” than English and Chinese. These similarities and differences have helped researchers test aspects of transfer more specifically, and identified situations where linguistic distance has either an inconsequential or central role in what skills transfer. In turn, understanding the nuanced nature of transfer can be very helpful toward understanding the strength and challenges of specific ELs, and possible activities and strategies that will help them learn English quickly. In the following sections, we deconstruct the core skills necessary for proficiency writing, paying particular attention to development and instruction for ELs.

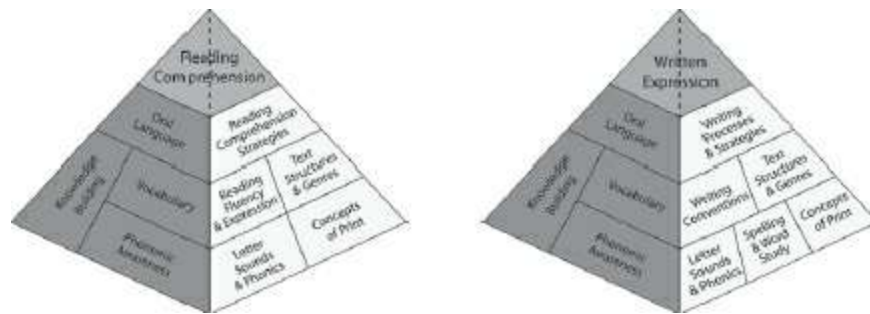
## **LITERACY SKILL DEVELOPMENT IN ELS**

Literacy is a multifaceted skill because it involves fluent coordination among cognitive–linguistic abilities, background knowledge, and strategic or higher-level thinking, and is heavily influenced by motivations, interests, and the goals or objectives (e.g., reading text, composing text). Literacy skills are recruited for two important forms of communication: written expression and reading comprehension. Proficient writing and reading are intimately related, as they both rely on many of the same core cognitive processes and knowledge bases. Both reading and writing access the same vocabulary and content knowledge to aid in comprehension and composition. Development and improvement of these skills are intertwined. Over time, skills involved in spelling and reading words become increasingly automatic and fluent, and higher-level thinking becomes increasingly strategic and focused on purposeful reading or writing (Gough & Tunmer, 1986; Graham et al., 2017; Nelson & Calfee, 1998; Pasquarella et al., 2012; Scarborough, 2001; Shanahan, 2016; Tierney & Pearson, 1983; Tierney & Shanahan, 1991; Wigfield & Guthrie, 1995).

A bidirectional and synergistic relationship exists between writing and reading development and instruction. In other words, writing interventions have been shown to improve reading performance and reading interventions have been shown to improve writing performance (Ehri et al., 2001). (Graham & Hebert, 2011a, 2011b; Graham et al., 2018; Graham & Santangelo, 2014). It can be advantageous to plan instruction that balances, or separately focuses on, reading and writing. If designing balanced instructional programs, it is paramount that the instruction be purposefully targeted and rooted in evidence-based practices for both writing and reading. More research is needed to understand the best practices for combining writing and reading instruction. Previous studies have indicated that if the writing instruction component of a balanced reading program is not adequately developed or implemented, little benefit will be evident toward writing outcomes (Graham et al., 2017).

**Figure 16.1** presents a framework outline of some of the major building blocks of written expression and reading comprehension. The two pyramids

—one for reading comprehension and one for written expression—highlight the overlapping and interconnected nature between reading and writing. Next, we explore the pyramids in greater detail to highlight the explicit components important for writing development, and draw connections on how improving language and reading skill building can help support the development of writing for ELs.



**FIGURE 16.1.** Literacy pyramids for reading and writing. Retrieved from [www.oise.utoronto.ca/balancedliteracydiet/Food\\_Groups/index.html](http://www.oise.utoronto.ca/balancedliteracydiet/Food_Groups/index.html).

The component skills children need to learn to be proficient readers and writers are divided into two main groups: *print-related skills* (light gray) and *language-related skills* (dark gray). Print-related skills include the bottom-up skills necessary for spelling and reading words, as well as the top-down skills that include knowledge about text structure and genres, comprehension strategies, and writing strategies. Language-related skills are focused around oral language comprehension and expression. The central components include vocabulary, background, and content knowledge. Phonemic awareness is the ability to break speech sounds into individual phonemes, which is a language skill and nested within the construct of phonological awareness. Phonemic awareness is critically important for word reading and spelling development (Ball & Blachman, 1991; Ehri et al., 2001; Eunice Kennedy Shriver National Institute of Child Health and Human Development, 2000).

In the following sections, we span important print- and language-related

skills to highlight relevant research pertaining to development, cross-language transfer, and instruction for ELs.

## **Spelling and Reading Words**

Research has consistently demonstrated that ELs often start school with significantly lower English spelling and word-reading skills than their monolingual peers. However, research has documented that ELs do not have pervasive challenges learning how to spell or read words (August & Shanahan, 2006). A longitudinal study followed large groups of ELs and English-speaking children from kindergarten to the end of fourth grade. The study reported that spelling ability was similar between ELs and English-speaking children in kindergarten. Furthermore, in kindergarten, English-speaking children outperformed their EL peers in word reading. By the end of the fourth grade, ELs had caught up to their English-speaking peers. A major contributing factor to ELs' rapid growth in word-reading skill was positively influenced by integrating early and reoccurring assessments of language and literacy skills, and differentiated word-study instruction. Additionally, it was a print and language-rich environment full of read-alouds and discussions, as well as daily work reading grade-level text and writing sentences (Lesaux et al., 2007). Additionally, a meta-analysis identified that ELs typically develop word-reading and word-spelling skills efficiently, if instruction includes timely assessment and integrates best practices in literacy instruction (August & Shanahan, 2006).

Extensive research has been conducted in the area of cross-language transfer of word-reading skills. Numerous studies have been examined to see whether children can use phonological skills developed in the L1 to support reading in English (e.g., Gottardo, Pasquarella, Chen, & Ramirez, 2016; Gottardo, Yan, Siegel, & Wade-Woolley, 2001). Phonological skills, or phonological awareness, is the ability to identify and manipulate speech sounds and is a central skill involved in word-reading and word-spelling

development (Ball & Blachman, 1991). Overall, the results have provided unanimous support for positive instances of cross-language transfer of phonological skills in one language to learn how to read in another. What is very interesting is that cross-language transfer of phonological skills does not appear to be influenced by the linguistic distance between languages. In other words, whether a child speaks Arabic, Spanish, Chinese, Hebrew, or any other language, we see the phonological skills developed in his or her L1 related to how well he or she performs or how quickly the child develops English reading skills (see August & Shanahan, 2006, for a review). What we have learned through this field of EL research is that phonological skills can be thought of as a common underlying proficiency that is necessary to read in any language, and having developed these skills in the L1 supports English reading development.

Considerably less research has been conducted on transfer of word-level skills to spelling outcomes in ELs, but the few studies present the same trend as we see with word reading. For example, Sun-Alperin and Wang (2011) found that children's phonological skills in Spanish related to performance in both reading and spelling. Furthermore, de Sousa, Greenop, and Fry (2010) reported that South African Zulu and English-speaking children's phonological skills in the L1 were related to English spelling performance. Fostering the development of phonological skills in any language, will be highly beneficial to English reading and spelling development. Teaching word-level skills, like phonological awareness, explicitly and increasing interactions with text can be used to enhance students' writing performance. Improvements in phonological skills, word reading, and vocabulary knowledge also positively contribute to improvements in spelling and writing quality. However, more research is needed to understand the long-term influences of reading instruction on writing development, and how these influences might change based on the type or difficulty of a particular writing task (Graham et al., 2018).

Educational implications can take different forms. For instance, assessing L1 phonological or word-reading skills can be informative and predictive of

English reading development. If a student is struggling with phonological segmentation or blending tasks in his or her L1, it should raise awareness that similar issues in English are likely, and explicit instruction and timely interventions should be a priority. One drawback is that reliable assessments of phonological word-reading and word-spelling skills in languages other than English and Spanish can be challenging to locate and use without a teacher who is highly proficient in that language. Most importantly, for ELs in the early stages of learning English—whether they are starting in kindergarten or have immigrated in the upper elementary grades—it is essential to ensure that phonological awareness (particularly phonemic awareness) and the connection between letters and sounds is sufficiently developed or should be instructed explicitly to ensure that children are able to decode spelling and reading words. Excellent planning resources, based on research findings, can be found at The Balanced Literacy Diet ([www.oise.utoronto.ca/balancedliteracydiet/Home/index.html](http://www.oise.utoronto.ca/balancedliteracydiet/Home/index.html)). This site comprises hundreds of activities that can be used to build all of the skills depicted in [Figure 16.1](#).

## **Metacognitive Knowledge: A Cognitive Strategies Approach to Support Writing**

Metacognition refers to higher-level reasoning, comprehension, and production skills that help make a person aware of his or her own thought process. Metacognition refers to the processes used to plan, monitor, or examine a person's own understanding and performance. Strategy instruction involves explicitly teaching students procedural strategies to help effectively and efficiently perform academic tasks—for example, writing a summary of a topic, theme, or argument based on reading multiple texts.

The California Writing Project (CWP) at the University of California, Irvine, site conducted a professional development and longitudinal research project in a district that was 93% ELs, where almost 70% were predominately

designated as having limited English proficiency and living in an urban low-socioeconomic-status school district. The goal of the project was to develop academic literacy skills to help ELs continue their education to college. The core idea of the program was to provide scaffolded strategy instruction. The professional development focused on a cognitive strategies approach to writing and reading instruction on planning and goal setting, tapping prior knowledge, asking questions/making predictions, monitoring, summarizing, revising, reflecting, and relating. Overall, children in grades 6–12 who participated in the program significantly outperformed control children at posttest, and experienced significantly more gains than the control group (Olson, Land, Anselmi, & AuBuchon, 2010). The CWP provides support for the applicability of a cognitive strategies approach to writing and reading. The best practices in writing instruction mentioned throughout this book can be appropriate for ELs. ELs need extensive support with English language development in order to be able to thrive academically and socially. The recommendations below should be integrated, when appropriate, to strategy instruction developed and evaluated with English-speaking children and adolescents.

## **Language-Based Supports for Writing and Reading**

Our primary educational goal and challenge with ELs is to rapidly increase their command and confidence using the English language, so they can build knowledge and academic writing and reading skills. We must consider a multifaceted approach to instruction that simultaneously builds language, reading, and writing skills.

An essential first step when working with ELs is to make instructional language more comprehensible. Breaking down instructions into multiple steps with simplified explanations will help improve ELs' comprehension and take some of the load off of their working memory. Avoid adjusting the difficulty of the questions—instead, adjust instruction and teacher talk to



match students' current level of proficiency. Integrate language-based supports for writing assignments, such as graphic organizers, sentence frames, or paragraph frames. Specifically providing students with sentence frames related to the academic and instructional language of the lesson can act as an excellent scaffold to support oral language and writing. Sentence frames could also be created based on commonly occurring phrases that we use during informal conversations with peers or formal conversations with a teacher. Carrier and Tatum (2006) describe how these types of sentence frames can be used to create templates of questions and statements that name, describe, and explain the object or phenomenon of study. Sentence frames and paragraph frames can both be used to support ELs' speaking skills, but can also serve as a more scaffolded outline or organizer for writing exercises. Be sure to provide explicit guidance and lots of modeling to show how to use language-based supports in constructing written responses.

Collaboratively learning writing projects or assignments provides excellent opportunities for ELs to engage in critical collective dialogue related to content learning, knowledge building, and improving language and literacy skills. Peer-assisted learning strategies (PALS) is one example of collaborative learning that involved pairs (or small groups) of students who take turns reading aloud or listening to their partner read, provide feedback, and support each other while working through structured writing and reading activities. PALS has produced positive results in supporting literacy growth for ELs. More research is needed to directly connect the benefits of PALS to spelling and writing output or quality, but studies are producing favorable results for reading skills. Sàenz, Fuchs, and Fuchs (2005) demonstrated that Spanish-speaking students with learning disabilities in grades 3–6, showed significantly more growth in reading comprehension than Spanish-speaking students who did not participate in PALS. In another study, Calhoun, Al Otaiba, Cihak, King, and Avalos (2007) reported that ELs who participated in PALS showed significantly more growth in phoneme segmentation fluency, nonsense word fluency, and oral reading fluency. We should provide multiple daily opportunities for students to read, write, and discuss content together. It

is important that students are grouped heterogeneously, and to provide ELs with low levels of English proficiency opportunities to rehearse responses. Integrating sentence frames to support learning content, academic language, and producing written or verbal responses is essential to provide the best supports of ELs.

### ***Academic Vocabulary in ELs***

Research has clearly documented that a central factor contributing to ELs' academic struggles is not having sufficient knowledge of academic vocabulary (Carlo et al., 2004; Pasquarella et al., 2012). Additionally, research documents that children who enter school with high levels of vocabulary knowledge experience accelerated growth in reading and language development, while students with lower levels of vocabulary struggle to build knowledge and reading skills appropriate for grade-level work (e.g., Hart & Risley, 1995; Stanovich, 1984). Improving vocabulary knowledge is a challenging task because to truly know a word and recognize how to use it in context requires multiple exposures across several occasions. Effective vocabulary instruction can be enhanced by incorporating explicit instruction about morphological awareness (Kieffer & Lesaux, 2007, 2010). Best practices of vocabulary and morphological instruction are discussed in the following section, after reviewing relevant research for ELs.

Morphological awareness refers to the knowledge of and the ability to manipulate morphemes, which are the smallest units of meaning in a language. More specifically, morphological awareness refers to the use of word formation rules to construct and understand morphologically complex words (Kuo & Anderson, 2006; Stahl & Nagy, 2006). The three most common types of morphologically complex words are inflections, derivations, and compounds. Inflections (e.g., *-s*, *-ing*) are word endings added to a base (root) word that denote meanings such as verb tense, gender, or case. Derivations involve applying affixes (e.g., prefixes *un-*, and *sub-*; suffixes *-ness*, and *-ly*) to

base words to form new words that have different meanings or word classes from the base words (e.g., *friend–friendship–friendly*). Derivational suffixes also specify syntactic categories (e.g., *-ion* indicates a noun, while *-ify* indicates a verb). Finally, compounds are the combinations of two or more words to form new words (e.g., *tomb + stone = tombstone*; Kuo & Anderson, 2006; Lam, Chen, Geva, Luo, & Li, 2012; McBride-Chang, 2004).

Cross-language transfer of morphological awareness in ELs has been shown to support word reading, vocabulary knowledge, and comprehension (Pasquarella et al., 2012; Ramirez, Chen, Geva, & Luo, 2011). No studies have examined the influence of morphological awareness in writing for ELs, but it is quite reasonable to assume a positive relationship would exist considering an essential part to sentence composition is understanding how affixes modify root words. Future research should explicitly test these assumptions with ELs and their monolingual peers. Interestingly, cross-language transfer of morphological awareness is related to the linguistic distance between languages. Spanish and English both have a rich derivational morphology. Generally, compound words are encountered less often than derived words (Chen & Pasquarella, 2017; Chen, Ramirez, Luo, Geva, & Ku, 2012; Defior & Sorzano, 2018; Ramirez et al., 2011). On the other hand, Chinese has a very rich compound morphology as over 75% of words are formed through compounding (Chen & Pasquarella, 2017; Kuo & Anderson, 2006; Sun, Sun, Huang, Li, & Xing, 1996). These typological differences in the language have important implications for literacy development. Studies have shown that Spanish-speaking ELs can use their derivational skills in the L1 to support comprehension in English (Ramirez et al., 2011). Additionally, Chinese-speaking ELs may need more explicit instruction about derivational morphology because it is seldom encountered in their L1. Studies confirmed Chinese-speaking ELs performing significantly lower than their Spanish-speaking ELs and English-speaking peers when engaging with morphologically complex derivations during literacy activities (Chen et al., 2012; Lam et al., 2012).

## ***Building Academic Vocabulary***

Best practices at improving vocabulary knowledge begin by choosing short, interesting, and content-rich informational texts that include a set of academic vocabulary to be used as the basis for learning. Some texts should be read aloud by the teacher—some of the texts should be more difficult than the students' reading levels to expose them to more advanced and academic language. Other texts should be at grade level and reading level so that ELs have exposure to grade-appropriate content, but also have successful experiences reading aloud. Texts should work to build knowledge and be connected to a unit of study, or content area. Explicit vocabulary instruction should focus on a small set of words (five to eight) for in-depth, intensive instruction that reoccurs over multiple lessons and across multiples texts. Academic words that are central to understanding the text should appear often and across content areas and should be a top priority for instruction. Reinforce vocabulary learning through reading, writing, speaking, and listening activities. Engage students in multiple oral and written activities to increase exposure to, and experience with, the target vocabulary.

For example, have ELs use student-friendly definitions of the target words, and explicitly clarify and reinforce learning the definitions by using examples, nonexamples, and concrete representations. Additionally, engaging students to use the target vocabulary in sentence and paragraph-writing exercises will help students learn how to use the words authentically (Baker et al., 2014). Having ELs create their own word banks or personal dictionaries for each target word taught is a useful strategy to help students review, reinforce, and expand their word knowledge. Word banks or personal dictionaries should include some of the following important aspects of word knowledge, such as spelling, pronunciation, student-friendly definition, a mental image (e.g., picture drawn by student), multiple example sentences, morphological variations (identifying relevant and potential prefixes and suffixes that modify a root word to produce other words students will likely encounter), semantic maps, examples/nonexamples, synonyms/antonyms,

and so on. Each word should be written on a dedicated card and the cards should be reviewed, revised, and expanded upon over multiple lessons to increase exposure and experience with a target word.

Explicit instruction of morphological awareness goes hand in hand with the best practices of vocabulary instruction discussed above. There are four core principles to follow that result in high-quality instruction of morphology, outlined in Kieffer and Lesaux (2007).

**1.** Morphology should be taught in the context of rich and explicit vocabulary instruction. Words are learned best when introduced in a meaningful context with multiple exposures to the target words, across a variety of texts. Use the target words selected in the texts as the basis for explicit morphological instruction, instead of creating isolated lessons in morphology that are not directly and specifically connected to texts and content.

**2.** Students should be taught to use morphology as a cognitive strategy with explicit steps that are useful to help comprehend unknown words. To break down words into morphemes students must complete the following steps: (a) recognize they do not know a word, (b) analyze the word for morphemes (both roots and affixes) they recognize, (c) hypothesize a meaning for the word based on word parts, and (d) check whether their hypothesis makes sense in the context of the text.

**3.** Explicitly teach children relevant morphological knowledge of prefixes, suffixes, root words, and how morphological modifications can influence meaning. Again, use the context of text as a backdrop of your instruction. Choosing highly occurring affixes as the focus on instruction will ensure children get adequate exposure during reading. Keiffer and Lesaux (2007) provides tables of affixes sorted by how often they occur in text. Activities should include grouping words by prefixes or suffixes to compare and contrast what morphologically complex words share in meaning or as

part of speech. Word walls, or some variation, should include prefixes and suffixes in thoughtful ways. One example is the “peeling-off tree” used in the Phonological and Strategy Training (PHAST) and the Word Identification Strategy Training (WIST) programs. The peeling-off strategy involves students identifying affixes and using them to understand complex words, or build new words from existing root words. This strategy uses the imagery of a tree to help guide the activity. Affixes are placed on cutouts of tree leaves and the root word is placed in the trunk of the tree. Students peel off affixes to deconstruct a morphologically complex word into prefixes, suffixes, and the root word, or to construct morphologically complex words by adding affixes onto a target root word (Lovett, Lacerenza, & Borden, 2000; Lovett, Lacerenza, Borden, Frijters, et al., 2000; Swanson & Hoskyn, 1998).

4. When possible, morphology should be taught to include cognate instruction as well. ELs need targeted instruction on how to recognize cognate relationships and use them to support vocabulary learning, comprehension, and writing in English. Previous research has demonstrated that ELs as young as the first grade are able to recognize cognates, and cognate awareness supports comprehension (Hipfner-Boucher, Pasquarella, Chen, & Deacon, 2016) and vocabulary development (D’Angelo, Hipfner-Boucher, & Chen, 2017). However, cognate strategies may not have strong utility when students have low levels of proficiency in their first language, and no utility for languages that do not share cognates (e.g., Chinese and English). Be sure to use a gradual release of responsibility when introducing new cognitive strategies, such as using morphological awareness or cognate awareness to infer word meanings. There should be lots of teacher modeling and guided practice before we expect children to be able to use a strategy independently.

### ***Building Content-Area Knowledge***

Central to ELs’ educational success is having abundant content-area

knowledge and background knowledge in English. A barrier to building knowledge is limited English proficiency because it makes comprehension and learning exceedingly difficult. *Sheltered instruction* has shown to be an important component of successful programs for ELs because it helps students progress academically while developing English proficiency (Genesee, 1999; Harper & de Jong, 2004; Markos & Himmel, 2016; Saunders & Goldenberg, 2010). Sheltered instruction intends to deliver grade-level content-area instruction that is rich in language in a manner that emphasizes gradual integration into mainstream education. Broad program ideals include using native language instruction to support content-area learning (language arts, math, social studies, and science), and provide sheltered English instruction in art, music, and physical education. As children develop English proficiency they are moved toward total integration in mainstream education (see Markos & Himmel, 2016, for more detail). This dual-language approach is a powerful and positive way to encourage ELs to build skills in both languages, while learning content. However, implementing this model is heavily influenced by the proportion and diversity of the EL student body, and the ability to recruit teachers fluent in the ELs' language. Within the United States, the high number of Spanish-speaking ELs provides strong support for dual-language models, like sheltered instruction.

Another core feature of sheltered instruction that is applicable to all teachers of ELs, is the inclusion of language objectives alongside content objectives. Content-area standards are typically derived from the Common Core State Standards (CCSS; National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010) for English language arts and math, and the Next Generation Science Standards (NGSS; National Science Teachers Association, 2014). Language objectives emphasize the functions and skills of academic language that ELs need to master to succeed educationally. Language objectives should be based on the daily content-area objectives. Once the content objectives are established, teachers must identify and analyze the academic language embedded in the tasks and activities. The idea is to not integrate language standards in *all* tasks but to think critically

about what aspects of academic language are essential to comprehension and learning. Markos and Himmel (2016) present a practitioners' overview of sheltered instruction that provides more details on developing language objectives and strategies for the different content areas. Sheltered Instruction Observation Protocol (SIOP) is an evidence-based program stemming from sheltered instruction that provides an explicit framework, lesson plans, and activities (additional resources can be found at [www.cal.org/siop](http://www.cal.org/siop)).

## CONCLUSIONS

Best practices of literacy instruction cannot occur without the use of formative assessments of writing and reading skills. It is important to quickly and accurately identify ELs who are having persistent struggles in the areas of language and literacy development. If curriculum-based assessments or school benchmark assessment data suggest an EL is struggling, then additional diagnostic assessments using informal or standardized reading measures are important in identifying the specific skills that need additional support. ELs already face the challenge of improving English language proficiency while learning content knowledge and building academic skills. Therefore, it is essential that we monitor progress closely so we can modify instruction if language and literacy development are lagging.

Creating an inclusive, inviting, supportive, and safe classroom environment will help ELs feel comfortable to talk with peers and teachers more freely. We need ELs to be able to express their developing ideas in English, or in their L1, to help improve academic learning. A supportive environment allows us to spend more time using the practices and strategies discussed throughout this chapter, and encourages ELs to think deeply about the content and the English language more generally. ELs are an important, and rapidly growing, group of people who will help lead us into the next era. It is our responsibility and duty, as educators, to do all we can to help all children grow and flourish into successful and fulfilled citizens of the world.



## REFERENCES

- Alderson, J. C. (1984). Reading in a foreign language: A reading problem or a language problem? In J. C. Alderson & A. H. Urquhart (Eds.), *Reading in a foreign language* (pp. 1–27). London: Longman.
- Alderson, J. C. (2000). *Assessing reading*. Cambridge, UK: Cambridge University Press.
- Au-Yueng, K., Hipfner-Boucher, K., Chen, X., Pasquarella, A., D'Angelo, N., & Deacon, H. (2015). Development of English and French language and literacy skills in EL1 and ELL French immersion students in the early grades. *Reading Research Quarterly, 50*, 233–254.
- August, D., Carlo, M., Dressler, C., & Snow, C. (2005). The critical role of vocabulary development for English language learners. *Learning Disabilities Research & Practice, 20*, 50–57.
- August, D., & Shanahan, T. (Eds.). (2006). *Developing literacy in second-language learners: Report of the National Literacy Panel on Language-Minority Children and Youth*. Mahwah, NJ: Erlbaum.
- Baker, S., Lesaux, N. K., Jayanthi, M., Dimino, J., Proctor, C. P., Morris, J., et al. (2014). *Teaching academic content and literacy to English learners in elementary and middle school* (NCEE 2014-4012). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from [http://ies.ed.gov/ncee/wwc/publications\\_reviews.aspx](http://ies.ed.gov/ncee/wwc/publications_reviews.aspx).
- Ball, E., & Blachman, B. A. (1991). Does phoneme awareness training in kindergarten make a difference in early word recognition and developmental spelling? *Reading Research Quarterly, 26*, 49–66.
- Bialystok, E. (2011). Reshaping the mind: The benefits of bilingualism. *Canadian Journal of Experimental Psychology, 65*, 229–235.
- Calhoun, M. B., Al Otaiba, S., Cihak, D., King, A., & Avalos, A. (2007). Effects of a peer-mediated program on reading skill acquisition for two-way bilingual first-grade classrooms. *Learning Disability Quarterly, 30*(3), 169–184.
- Carlo, M. S., August, D., McLaughlin, B., Snow, C. E., Dressler, C., Lippman, D. N., et al. (2004). Closing the gap: Addressing the vocabulary needs of English-language learners in bilingual and mainstream classrooms. *Reading Research Quarterly, 39*, 188–215.
- Carrier, K. A., & Tatum, A. W. (2006). Creating sentence walls to help English-language learners' develop content literacy. *The Reading Teacher, 60*(3), 285–288.
- Chao, J., Schenkel, J., & Olsen, L. (2013). *Educating English language learners: Grantmaking strategies for closing America's other achievement gap*. Retrieved from [https://edfunders.org/sites/default/files/Educating%20English%20Language%20Learners\\_April%202013.pdf](https://edfunders.org/sites/default/files/Educating%20English%20Language%20Learners_April%202013.pdf).
- Chen, X., & Pasquarella, A. (2017). Learning to read Chinese. In C. A. Perfetti & L. Verhoeven (Eds.), *Reading acquisition across language and writing systems: An international handbook*. Cambridge, UK: Cambridge University Press.
- Chen, X., Ramirez, G., Luo, Y., Geva, E., & Ku, Y.-M. (2012). Comparing vocabulary development in Spanish- and Chinese-speaking ELLs: The effects of metalinguistic and sociocultural factors. *Reading and Writing, 25*, 1991–2020.
- Cummins, J. (1979). Linguistic interdependence and the educational development of bilingual children. *Review of Educational Research, 49*, 222–251.
- Cummins, J. (1981). The role of primary language development in promoting educational success for language minority students. In California State Department of Education (Ed.), *Schooling and language minority students: A theoretical framework*. Los Angeles: Evaluation, Dissemination and

- Assessment Center, California State University, Los Angeles.
- D'Angelo, N., Hipfner-Boucher, K., & Chen, X. (2017). Predicting growth in English and French vocabulary: The facilitating effects of morphological and cognate awareness. *Developmental Psychology, 53*(7), 1242–1255.
- de Sousa, D. S., Greenop, K., & Fry, J. (2010). The effects of phonological awareness of Zulu-speaking children learning to spell in English: A study of cross-language transfer. *British Journal of Educational Psychology, 80*(Pt. 4), 517–533.
- Defior, S., & Serrano, F. (2018). Learning to read Spanish. In C. A. Perfetti & L. Verhoeven (Eds.), *Reading acquisition across language and writing systems: An international handbook*. Cambridge, UK: Cambridge University Press.
- Douglass, S. H., & Sampson, C. (2013). High-ELL-growth states: Expanding funding equity and opportunity for English language learners. *Voices in Urban Education, 37*, 47–54.
- Ehri, L., Nunes, S., Willows, D., Schuster, B., Yaghoub Zadeh, Z., & Shanahan, T. (2001). Phonemic awareness instruction helps children learn to read: Evidence from the National Reading Panel's meta-analysis. *Reading Research Quarterly, 36*, 250–287.
- Eunice Kennedy Shriver National Institute of Child Health and Human Development. (2000). *Report of the National Reading Panel: Teaching children to read: Reports of the subgroups (00-4754)*. Washington, DC: U.S. Government Printing Office.
- Genesee, F. (Ed.). (1999) *Program alternatives for linguistically diverse students*. Santa Cruz, CA: Center for Research on Education, Diversity and Excellence.
- Genesee, F., Geva, E., Dressler, D., & Kamil, M. (2006). Synthesis: Cross-linguistic relationships. In D. August & T. Shanahan (Eds.), *Developing literacy in second-language learners: Report of the National Literacy Panel on Language-Minority Children and Youth* (pp. 153–174). Mahwah, NJ: Erlbaum.
- Geva, E. (2014). The cross-language transfer journey: A guide to the perplexed. *Written Language and Literacy, 17*, 1–14.
- Gottardo, A., Pasquarella, A., Chen, X., & Ramirez, G. (2016). The impact of language on the relationships between phonological awareness and word reading in different orthographies: A test of the psycholinguistic grain size theory in bilinguals. *Applied Psycholinguistics, 37*(5), 1083–1115.
- Gottardo, A., Yan, B., Siegel, L. S., & Wade-Woolley, L. (2001). Factors related to English reading performance in children with Chinese as a first language: More evidence of cross-language transfer of phonological processing. *Journal of Educational Psychology, 93*(3), 530–542.
- Gough, P. B., & Tunmer, W. E. (1986). Decoding, reading, and reading ability. *RASE: Remedial and Special Education, 7*, 6–10.
- Graham, S., & Hebert, M. (2011a). *Writing-to-read*. New York: Carnegie Corporation of New York.
- Graham, S., & Hebert, M. (2011b). Writing-to-read: A meta-analysis of the impact of writing and writing instruction on reading. *Harvard Educational Review, 81*, 710–744.
- Graham, S., Liu, X., Aitken, A., Ng, C., Barlett, B., Harris, K. R., et al. (2017). Effectiveness of literacy programs balancing reading and writing instruction: A meta-analysis. *Reading Research Quarterly, 53*(3), 279–304.
- Graham, S., Liu, X., Bartlett, B., Ng, C., Harris, K. R., Aitken, A., et al. (2018). Reading for writing: A meta-analysis of the impact of reading interventions on writing. *Review of Educational Research, 88*(2), 243–284.

- Graham, S., & Santangelo, T. (2014). Does spelling instruction make students better spellers, readers, and writers?: A meta-analytic review. *Reading and Writing: An Interdisciplinary Journal*, 27, 1703–1743.
- Harper, C., & de Jong, E. (2004). Misconceptions about teaching English-language learners. *Journal of Adolescent and Adult Literacy*, 48, 152–162.
- Hart, B., & Risley, T. R. (1995). *Meaningful differences in the everyday experience of young American children*. Baltimore: Brookes.
- Hipfner-Boucher, K., Pasquarella, A., Chen, X., & Deacon, S. H. (2016). Cognate awareness in French immersion students: Contributions to French reading comprehension in the early elementary grades. *Scientific Studies of Reading*, 20, 389–400.
- Kieffer, M. J., & Lesaux, N. K. (2007). Breaking down words to building meaning: Morphology, vocabulary and reading comprehension in the urban classroom. *The Reading Teacher*, 61, 134–144.
- Kieffer, M. J., & Lesaux, N. K. (2010). Morphing into adolescents: Active word learning for English-language learners and their classmates in middle school. *Journal of Adolescent and Adult Literacy*, 54, 47–56.
- Koda, K. (2007). Reading and language learning: Crosslinguistic constraints on second language reading development. *Language Learning*, 57, 1–44.
- Kuo, L., & Anderson, R. C. (2006). Morphological awareness and learning to read: A cross-linguistic perspective. *Educational Psychologist*, 41, 161–180.
- Lam, K., Chen, X., Geva, E., Luo, Y. C., & Li, H. (2012). The role of morphological awareness in reading achievement among young Chinese-speaking English language learners: A longitudinal study. *Reading and Writing*, 25, 1847–1872.
- Lesaux, N. K., Lipka, O., & Siegel, L. S. (2006). Investigating cognitive and linguistic abilities that influence the reading comprehension skills of children from diverse linguistic backgrounds. *Reading and Writing*, 19(1), 99–131.
- Lesaux, N. K., Rupp, A. A., & Siegel, L. S. (2007). Growth in reading skills of children from diverse linguistic backgrounds: Findings from a 5-year longitudinal study. *Journal of Educational Psychology*, 99(4), 821–834.
- Lovett, M. W., Lacerenza, L., & Borden, S. L. (2000). Putting struggling readers on the PHAST track: A program to integrate phonological and strategy-based remedial reading instruction and maximize outcomes. *Journal of Learning Disabilities*, 33(5), 458–476.
- Lovett, M. W., Lacerenza, L., Borden, S. L., Frijters, J. C., Steinbach, K. A., & De Palma, M. (2000). Components of effective remediation for developing reading disabilities combining phonological and strategy-based instruction to improve outcomes. *Journal of Educational Psychology*, 92(2), 263–283.
- Markos, A., & Himmel, J. (2016, March). *Using sheltered instruction to support English learners*. Washington, DC: Center for Applied Linguistics Practitioner Brief.
- McBride-Chang, C. (2004). *Children's literacy development*. London: Oxford University Press.
- McFarland, J., Hussar, B., Wang, X., Zhang, J., Wang, K., Rathbun, A., et al. (2018). *The condition of education 2018* (NCES 2018-144). Washington, DC: U.S. Department of Education, National Center for Education Statistics.
- National Governors Association Center for Best Practices & Council of Chief State School Officers. (2010). *Common Core State Standards for English language arts and literacy in history/social studies*,

- science, and technical subjects*. Washington, DC: Authors. Retrieved from [www.corestandards.org](http://www.corestandards.org).
- National Science Teachers Association. (2014). *Next Generation Science Standards*. Arlington, VA: Author.
- Nelson, N., & Calfee, R. (1998). The reading–writing connection. In N. Nelson & R. Calfee (Eds.), *Ninety-seventh yearbook of the National Society for the Study of Education, Part 2* (pp. 1–52). Chicago: National Society for the Study of Education.
- Odlin, T. (2003). Cross-linguistic influence. In C. Doughty & M. Long (Eds.), *The handbook of second language acquisition* (pp. 436–486). Oxford, UK: Blackwell.
- Olson, C. B., Land, R., Anselmi, T., & AuBuchon, C. (2010). Teaching secondary English learners to understand, analyze, and write interpretive essays about theme. *Journal of Adolescent and Adult Literacy, 54*, 245–256.
- Pasquarella, A., Gottardo, A., & Grant, A. (2012). Comparing factors related to reading comprehension in adolescents who speak English as a first (L1) or second (L2) language. *Scientific Studies of Reading, 16*(6), 475–503.
- Ramirez, G., Chen, X., Geva, E., & Luo, Y. (2011). Morphological awareness and word reading in English language learners: Evidence from Spanish- and Chinese-speaking children. *Applied Psycholinguistics, 32*, 601–618.
- Sàenz, L. M., Fuchs, L. S., & Fuchs, D. (2005). Peer-assisted learning strategies for English language learners with learning disabilities. *Exceptional Children, 71*, 231–247.
- Saunders, W. M., & Goldenberg, C. (2010). Research to guide English language development instruction. In D. Dolson & L. Burnham-Massey (Eds.), *Improving education for English learners: Research-based approaches* (pp. 21–81). Sacramento, CA: CDE Press.
- Scarborough, H. S. (2001). Connecting early language and literacy to later reading (dis)abilities. In S. Newman & D. K. Dickinson (Eds.), *Handbook of early literacy development* (pp. 97–110). New York: Guilford Press.
- Shanahan, T. (2016). Relationships between reading and writing development. In C. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (2nd ed., pp. 194–207). New York: Guilford Press.
- Stahl, S. A., & Nagy, W. E. (2006). *The literacy teaching series: Teaching word meanings*. Mahwah, NJ: Erlbaum.
- Stanovich, K. E. (1984). The interactive–compensatory model of reading. *Remedial and Special Education, 5*, 11–19.
- Sun, H. L., Sun, D. J., Huang, J. P., Li, D. J., & Xing, H. B. (1996). The description on the corpus systems of modern Chinese studies. In Z. S. Luo & S. L. Yuan (Eds.), *The studies of Chinese and Chinese character in computer era* (pp. 459–466). Beijing, China: Tsinghua University.
- Sun-Alperin, M. K., & Wang, M. (2011). Cross-language transfer of phonological and orthographic processing skills from Spanish L1 to English L2. *Reading and Writing, 24*, 591–614.
- Swanson, H. L., & Hoskyn, M. (1998). Experimental intervention research on students with learning disabilities: A meta-analysis of treatment outcomes. *Review of Educational Research, 68*, 277–321.
- Tierney, R. J., & Pearson, D. P. (1983). Toward a composing model of reading. *Language Arts, 60*, 568–580.
- Tierney, R., & Shanahan, T. (1991). Research on the reading–writing relationship: Interactions, transactions, and outcomes. In R. Barr, M. Kamil, P. Mosenthal, & D. Pearson (Eds.), *The handbook*

*of reading research* (Vol. 2, pp. 246–280). New York: Longman.

Wigfield, A., & Guthrie, J. T. (1995). *Dimensions of children's motivations for reading: An initial study* (research report no. 34). Athens, GA: National Reading Research Center.

# Index

The pagination of this electronic edition does not match the edition from which it was created. To locate a specific passage, please use the search feature of your e-book reader or select a page number link below.

Note. *f* or *t* following a page number indicates a figure or a table.

- Academic integrity, [122](#)
- Affixes, [225](#)
- After the End* (Lane), [100](#)
- Allegro, S., [37](#)
- Alphabet practice
  - for handwriting development, [218–219](#), [218f](#)
  - for SWD, [368–369](#)
- Analysis/critique
  - of informational text sources, [117–118](#)
  - of literary texts, [68–71](#), [70t](#)
  - questions for framing, [323–324](#)
  - reading–writing connections and, [322–324](#)
- Apps, [197–202](#)
  - content, [198](#), [198t](#)
  - for planning, [278–279](#)
  - presentation, [199–202](#), [201f](#), [202t](#)
- Arenstad, Mrs., [195–197](#)
- Argument and counterargument, [326–327](#)
- Argument from consequences strategy, [149](#)
- Argument from example strategy, [149](#)
- Argumentation, [136–139](#)
  - from consequences, [143](#)
  - critical questions and, [142–144](#)
  - critical standards and, [137](#), [142–143](#)
  - development of, [135–136](#)
  - dialogic approaches to, [137–138](#)

- from example, 143
- as social activity, 137
- student writing studies and, 68
- as writing to learn, 118

Argumentation schemes, 149

Argumentation vee diagram, 143–144

Argumentative writing, 135–161

- argumentation defined, 136–139
- computer support for, 141–142, 141*t*
- and concerns about conflict/competition, 139
- content-area, instructional support for, 152–155
- dialogic approaches supporting, 139–144, 141*t*
- elementary students and, 170–172
- historical, 154–155
- literary, 152–153
- in persuasive essays, 300
- real-world social contexts and, 140
- self-regulated strategies for, 144–146, 147*t*–148*t*, 148–152
- student role playing and, 140
- success criteria for, 335
- and writing to learn, 171–174, 179

Asaro, Ms., 246–254

Ask and answer critical questions (ASCQ) condition, 149–150

Assessment

- standardized, planning for, 282
- of SWD, RTI and, 377–380
- by teachers, 17

Assessment for learning, 334–356

- Activity 1: clarifying success criteria, 335–338, 336*f*, 337*f*
- Activity 2: eliciting performance samples, 338–343, 338*t*
- Activity 4: engaging students as peer supports, 349–353, 350*t*
- Activity 5: helping students take ownership, 353–356, 354*f*
- Activity 3: providing feedback, 343–345, 346*t*–347*t*, 347–349
- versus* of learning, 333

Audiences

- real, 16, 17*f*, 45–47
- types of, 315

Authenticity

- of digital *versus* school literacies, 56–57
- town guides and, 62
- of writing tasks, 56–57

Author personae, identifying, 315–316

Autism spectrum disorders (ASD); *see* Students with disabilities (SWD)

Backchanneling, 195–197  
Balanced Literacy Diet, The, 393–394  
Balius, A., 100  
Basic interpersonal communication skills (BICS), 388  
Bear, H., 19f  
Best practices in writing instruction, 12–23  
    and acquisition of student knowledge, 20–21  
    reading/reading instruction and, 22–23  
    and studies of writing interventions, 13  
    supportive classrooms and, 14–17  
    and teaching of foundational skills, 21–22  
    and wisdom of professional writers, 12  
    and wisdom of teachers, 12–13  
    writing strategies and, 18–20  
Bias, presentation, 341  
Bilingualism  
    and relation between L1 and L2, 388–389  
    simultaneous *versus* sequential, 387  
Bird, L., 16  
Blazic, A., 193  
Blogs, education-focused, 190  
Book wheels, 85, 86f  
Brainstorming, 273–274  
Breault, B., 86–87  
Brief writes, 341–342  
Burke, K., 91  
Burnden, Mrs., 199  
  
Caldwell, D., 20f  
California Writing Project (CWP), ELs and, 394  
Cassidy, K., 192–193  
CAST Science Writer, 45  
Characters, focus on, 296–299  
Children’s Literacy Initiative, 44  
*Christmas Carol, A* (Dickens), 98  
Chromebook, 193  
Churchill, W., 12  
Cisneros, S., 87, 91  
Classroom groups, writing rules for, 58–60  
Classrooms; *see also* Writing classroom setup  
    supportive, writing development and, 14–17  
Cluster/web/mindmap approach, 274–275  
Cognate relationships, 399



Cognitive academic language proficiency (CALP), 388–389

Cognitive processes, phases of, 62–63

Cognitive skills

- examples of, 165*t*
- writing development and, 10–11

Cognitive strategies, examples of, 163

Cognitive Strategies Instruction in Writing (CSIW), 263, 294

Collaboration; *see also* Writing communities

- importance of, 36–37
- in writing development, 38–40

Collaborative writing

- balancing with individual writing, 74
- digital text and, 189
- examples of, 62–63
- Hayes and Flower model of, 62–63
- in persuasive essay revision, 302–305

*College, Career, and Civic Life Framework for Social Studies Standards, The*, 35–36

Collins, S., 199

Common Core State Standards (CCSS)

- digital technology and, 205
- foundational writing skills and, 189
- SWD and, 374–375
- writing instruction and, 4

Communication

- individual writing and, 63
- writing as, 314–316, 315*f*

Compare-and-contrast

- essays using, 121
- sentence-writing skills and, 128

Composition skills

- nine steps of, 64–67, 65*f*
- SWD and, 365–366, 371–372

Computer support, for argumentative writing, 141–142, 141*t*

Concept mapping, 114

Content apps, 198, 198*t*

Content-area knowledge, ELs and, 399–400

Content-area subjects

- argumentative writing and, 152–155
- and writing to learn, 162–163 (*see also* Writing to learn)

Cool Cat Teacher blog, 190

Copying exercises

- for handwriting development, 219
- as tool for learning, 127

Counterargument, [326–327](#)  
Couros, G., [190](#)  
Criterion evaluation software, [341](#)  
Critical reading  
    for persuasive writing revision, [301–302](#)  
    revision process and, [292–293](#)  
Critical standards  
    for argumentation, [137](#), [142](#)  
    SRSD strategy and, [149](#)  
Crosby, B., [191](#)  
Cross-language transfer, [388–389](#)  
    word-reading skills and, [392–394](#)  
C-SPACE mnemonic, for narrative genre, [337–338](#), [337f](#)  
Curriculum-based measurement (CBM), [342](#)  
    SWD and, [378–379](#)

D’Aoust, C., [101](#)  
Davis, V., [190](#)  
DC Public Schools, Instagram site of, [195](#)  
“Death by Tree,” [101](#), [103f](#)  
Decoding practice, [313](#)  
Dialogue, [91–92](#), [93f](#)  
Dickens, C., [98](#)  
Dictation practice, phonics instruction with, [313–314](#)  
Digital storytelling apps, [200](#)  
Digital technologies, youth literacies and, [56–57](#)  
Digital text, [187–197](#)  
    blogs, [189–192](#)  
    characteristics of, [187–189](#)  
    multimodal nature of, [187–188](#)  
    nonlinearity and, [188](#)  
    social media tools, [194–197](#)  
    wikis, [192–194](#)  
Digital tools; *see also* Writing with digital tools  
    and apps that support writing, [197–202](#)  
    elementary student use of, [45](#)  
    grammar/writing skills and, [185–186](#)  
    handwriting and, [212](#)  
    professional learning networks and, [202–204](#), [204t](#)  
Directives, as feedback, [345](#)  
Disciplines, writing instruction in, [34–35](#)  
Discourse synthesis, [118](#), [167–170](#)  
*Dogs Don’t Tell Jokes* (Sachar), [297](#)

Editors, prepared, 42

Edmodo, 197

Edublog, 190, 191

Educational applications; *see* Apps

Eighth-grade students

- argumentative writing and, 140, 150–151
- narrative writing and, 86–87
- persuasive writing revisions in, 300–305
- role playing and, 140
- saturation research writing and, 105
- spelling skills and, 127

Elementary classrooms, peer conferences in, 40–41

Elementary education

- learning protocols in, 165–166, 172*t*
- summary writing in support of, 168–169

Elementary school

- dedicating time for writing in, 33–34
- fostering student motivation in, 67

Elementary students; *see also* specific grades

- argumentative writing and, 171–172
- and SWH for writing to learn, 175–176

“Eleven” (Cisneros), 91

Eleventh-grade students, writing to learn and, 5, 5*f*

Eliciting student performance samples, 338–343, 338*t*

- with brief writes and prompts, 341–342
- with exit tickets, 342–343
- with posttests, 343
- with pretest preceding instruction, 339–341
- with teacher questioning, 339

Emotions chart, for showing, not telling, 96*f*

Encoding practice, 313

English learner (EL) instruction, 385–401

- adjustments to, 395
- component skills in, 391–392, 391*f*
- dual-language approach to, 399–400
- language-based writing/reading supports and, 394–400
  - building academic vocabulary, 396–399
  - building content-area knowledge, 399–400
- linguistic interdependence hypothesis and, 388–389
- linguistic proximity and, 389–390
- literacy skill development and, 390–400
- reading–writing relationship in, 391, 391*f*

English learners (ELs)

- background characteristics of, 387–388
- California Writing Project and, 394
- demographic in U. S. schools, 386
- home languages of, 386
- L1 skills of
  - assessment of, 393–394
  - support of, 388–390
- metacognitive knowledge and, 394
- prior education/language experiences of, 387–388
- reading–writing relationship in, 391, 391f
- Spanish-speaking, 386–387, 389, 393, 395, 397, 400
- spelling and reading words and, 392–394
- strengths and challenges of, 385

Environment, in writing classrooms, 37–38

Essays, analytical *versus* applied, 117

Etymology, spelling instruction and, 228

Evaluation criteria, revision process and, 291–292

Evaluation strategy

- for narrative writing revision, 297–299
- for persuasive writing revision, 300–305, 306, 402f

Evidence-based practices (EBPs), 3–28

- best practices and, 12–23 (*see also* Best practices in writing instruction)
- digital tools and, 186–187
- handwriting and, 216
- reading comprehension and, 6–7, 6f
- writing development and, 7–11

Exams, standardized, planning for, 282

Exit tickets, 342–343

Expectancy–value model of motivation, 55

Facebook, 195

Fagin, L., 99

Fairy tales, text modeling and, 318–319

Families, as writing resources, 44–45

Feedback, 343–349

- defined, 343
- effective, 344
- frequency and immediacy of, 349
- for higher-level skills, 347t, 352
- for lower-level skills, 346t
- manner of delivery, 344–345, 346t–347t
- for SWD, 372
- teacher, 290

- varying focus of, 347–348
- visibility and usefulness of, 352–353
- on writing strategies, 347*t*, 348

Fifth-grade students

- backchanneling and, 195
- C-SPACE mnemonic and, 338
- genre structure and, 266
- handwriting instruction and, 221
- with learning disabilities, 145, 148
- rubrics and, 338
- talking it out and, 273
- writing centers and, 40
- and writing from source text, 282
- writing to learn and, 5

First-grade students

- English learner, 399
- “kid writing” approach and, 44
- narrative writing checklist for, 336, 336*f*
- teaching letter forms to, 217

Formative assessment; *see* Assessment for learning

Foundational skills

- and best practices in writing instruction, 21–22
- CCSS and, 189

Fourth-grade students

- argumentative writing and, 140
- genre structure and, 267
- narrative writing revisions and, 296–300
- presentation apps and, 199
- question strategy and, 272
- summary writing and, 168
- writing centers and, 40
- and writing for real purpose, 17*f*
- and writing from source text, 282
- writing tools and, 45
- writing workshop for, 34, 37, 41

Frank, A., saturation research paper on, 105*f*

Freewriting, 275–276

Freytag pyramid, 85, 85*f*

Genre structure, SRSD and, 265–267, 266*t*

Genre-based mnemonics, 266*t*

Genres

- playing with, 60–61

- study of, 33
- types to emphasize, 23–24
- for writing to learn, 179–180
  - argumentation, 171–174, 179
  - journal (learning protocol) writing, 164–167, 179
  - multimodal representations, 176–178, 179
  - science-writing heuristic, 174–176, 174f, 179
  - selection of, 179
  - summary/discourse synthesis, 167–170, 179
  - teaching strategies for, 180
- GIST approach to summary, 320
- Glogs, 193
- Goal setting, providing for students, 15
- Goals
  - attractive, 55–56
  - for persuasive writing, 305–306
- Google Classroom, 45
- Google Docs, 193
- Grammar instruction, for SWD, 370–371
- Graphic organizers, 114
  - in argumentation, 143–144
- Greetings from the World, 193
- Guardian website, “Secret Teacher” section of, 190
- Guide to Creating Student-Staffed Writing Centers, A: Grades 6–12* (Kent), 41–42
  
- Handwriting, 211–222
  - assessment of, 214–215
  - best practices in teaching, 215–220, 216t, 218f
  - digital tools and, 212
  - goal setting and self-monitoring and, 220–221
  - legibility of, 214–215, 219–220
  - poor skills in, 212–213
  - promoting beyond primary grades, 221–222
  - SWD and, 363–364, 368–369
  - teaching
    - importance of, 212–214
    - practices supporting, 220–221
    - writing development and, 211
- Hillenbrand, L., 85
- Historical arguments, instructional support for, 154–155
- Historical figures, saturation research papers on, 101–102, 104–105, 105f
- Historical reasoning, SRSD framework and, 172–174
- History, writing instruction in, 35–36

Horizons of possibility thinking, 82  
*House on Mango Street, The* (Cisneros), 87, 89, 90f, 91  
*Hunger Games, The* (Collins), 199

iBook Author app, 200  
Idea stations, 38–39  
iMovie, 199–200  
Individualized education program (IEP), SWD and, 380  
Individuals with Disabilities Education Improvement Act (IDEA), RTI for SWD and, 377  
Informational text sources, 110–111  
    crediting, 122–123  
    original, 112  
    paraphrasing, 122–123  
    sentence-combining exercises and, 126–128, 129f  
    strategies for writing-to-read tasks, 118–119  
    structures of, 119  
    writing about, 112–119  
        with analysis and interpretation, 117–118  
        guiding principles for, 118–119  
        with questions, 116–117  
        by selecting and reframing/reorganizing, 113–115  
        with summaries, 115, 116f  
        by taking notes, 113–114, 115f  
    writing original, 119–126  
        and avoiding plagiarism, crediting sources, paraphrasing, 122–123  
        using models, 120–122  
        using scaffolding, 123–124, 124f, 125f, 126

Informatives, as feedback, 345  
Instagram, 195  
Intellectual disabilities; *see* Students with disabilities (SWD)  
Interrater reliability, 340  
Intrarater reliability, 341  
iTooch English, 198, 198t

Journal writing, 164–167  
    metacognitive writing and, 164, 165t  
    protocol for, 118  
    for writing to learn, 179  
*Jungle, The* (Sinclair), 5

Knowledge  
    metacognitive, ELs and, 394  
    shared, in reading–writing connection, 312–314, 313f

student acquisition of, 20–21, 20f, 21f  
vocabulary, ELs and, 396–399

Knowledge crafting, 119–120

Laurents, A., 319

Learning; *see also* Writing to learn  
argumentation and, 118  
argumentative writing and, 171  
assessment for (*see* Assessment for learning)  
copying as tool for, 127  
multimodality and, 177  
pictorial summaries and, 177  
student ownership of, 353–356  
    and opportunities for self-evaluation, 356  
    and setting individual goals, 355  
    using self-evaluation, 355–356  
summary/discourse synthesis and, 167  
SWH in support of, 176  
writing activities for, 117–118

Learning disabilities, students with; *see* Students with disabilities (SWD)

Learning Is Messy blog, 191

Learning strategy, definition and examples, 262–263

Legibility, handwriting, 214–215, 219–220

Leming, S., 99

Letter forms, teaching  
    to first-grade students, 217  
    to SWD, 368

Limited English proficiency (LEP), 385

Linguistic interdependence hypothesis, 388–389

Linguistic proximity, 389–390

Linwood, B., 5

*List Poem, The* (Fagin), 99

Literacy(ies)  
    comparing, 73  
    components of, 390  
    youth, 56–57

Literary arguments, instructional support for, 152–153

Literary comprehension, writing as tool for, 69–71, 70t

Literary text analysis, studies of, 68–71, 70t

Literate communities, 56, 63–64

Longmire, C., 22f

Longmire, W., 5

Lowry, L., 195–196



MacArthur, S., 194

Mapping, 274–275

McKnight, K., 190–191

Mediators, examples of, 167

Memory snapshot paper, 100–101

Metacognitive knowledge, ELs and, 394

Metacognitive skills, examples of, 165*t*

Metacognitive strategies, examples of, 163

Metacognitive writing, student development in, 165

Micro-blogging; *see* Social media tools

Middle school students, promoting handwriting of, 221–222

Mind mapping, 274–275

Mitchell, D., 191

Modeling

- for original informational text, 120–122
- of planning strategies, 267, 268*t*–269*t*, 269–270

Moretti, V., 17

Morphemes

- inflectional, 226
- types of, 225

Morphological awareness, 225–226

- of ELs, 396–397
- explicit instruction of, 398–399

Morphology, spelling instruction and, 225–226

Motivation

- expectancy–value model of, 55
- SWD and, 366–367, 372–373

Motivation for writing, 51–78

- assumptions about, 75
- authentic tasks and, 58–60
- challenging tasks and, 60–64
- checking students', 74
- and comprehensive view of writing, 67–71, 70*t*
- factors influencing, 52–53
- and making task attractive, 56–58
- and management of writing skills, 64–67, 65*f*
- multiple meanings of, 52–55
- practices for fostering, 55–64
  - attractive goals and, 55–56
  - student attitude and, 64–65
- teacher's role in promoting, 72–75, 72*t*

Motivational capabilities, writing development and, 10–11

Motivational practices, 14–15

Multimodal composition  
teaching strategies for, 178  
for writing to learn, 176–180, 179

Multimodality, assumptions about, 188

My Access evaluation software, 341

*Mysteries of Harris Burdick, The* (Van Allsburg), 86–87, 88f

Nargazian, J., 98

Narrative writing, 81–107  
bringing elements together, 98–105  
blending genres, 101–102, 104–105, 105f  
and “I Remember” poem, 99–100  
and memory snapshot paper, 100–101, 102f, 103f  
characteristics and value of, 81–83  
cognitive benefits of, 82  
language demands of, 83–84  
purposes of, 105–106  
revision of, 296–300  
rubric for, 336, 336f  
story features of, 83  
student motivation and, 82–83  
teaching elements of, 84–97  
dialogue, 91–92, 93f  
plot structure, 85–87, 85f, 86f, 88f  
point of view, 87, 89, 90f, 91  
showing not telling, 93, 94f, 95–97, 96f  
theme, 97  
and theme *versus* topic, 97–98

National Writing Project, 34

National Writing Project’s College, Career, and Community Writers Program, 43, 44

*Next Generation Science Standards*, 34–35

Nibali, Mr., 254–257

Ninth-grade students  
handwriting instruction and, 214  
literary texts and, 68–69  
narrative writing and, 87  
wikis and, 193  
and writing to learn, 167

Note frames, 114, 115f

Note taking, 113–114, 115f  
teaching, 109

*Number the Stars* (Lowry), 195–196

Oatley, K., 81  
O'Brien, G., 127  
Olsen, C., 31, 43, 46, 47  
Olson, C. B., 100, 102*f*  
Orthotactics, spelling instruction and, 226–228  
Outlining, 276–277

Paired writing, 38  
Paragraph construction, teaching, 22  
Paraphrasing, types of, 122–123  
Patchwriting, 122  
Peer conferences, 37–39  
    in elementary grades, 40–41  
Peer responses  
    supporting, 42–43  
    teaching students to give/receive, 40–43  
Peer review, 349–353  
    of revisions, 290–291, 296–300  
    student preparation for, 349–353  
        by making feedback visible and useable, 352–353  
        with mixed-ability and homogeneous groups, 353  
        with specific praise, 352  
    by teaching effective feedback practices, 351–353  
    with think-alouds, guided practice, 350–351, 350*t*  
Peer reviews, of persuasive writing, 306  
Peer-assisted learning strategies (PALS), 395  
PEG Writing system, 341, 348  
Persuasive writing, 20*f*  
    development of, 171–172  
    revision of, 300–305, 301*f*  
Peters, J., 105  
Phonics instruction, 23  
    with dictation practice, 313–314  
    spelling and, 229, 234  
Phonological and Strategy Training (PHAST), 398–399  
Phonological skills, of ELs, 392–393  
Phonology, spelling instruction and, 224–225  
Photographs, writing about, 100–101  
Pictorial summaries, learning and, 177  
Plagiarism, avoiding, 122  
PLAN and WRITE intervention, for argumentative writing, 150  
Planning, 251–285  
    defined, 262

- in management of writing skills, [65f](#), [66](#)
- Planning strategies instruction, [262–280](#)
  - common approaches, [272–280](#)
    - brainstorming, [273–274](#)
    - cluster/web/mindmap, [274–275](#)
    - freewriting, [275–276](#)
    - outlining, [276–277](#)
    - planning technology, [278–279](#)
    - storyboard/drawing, [277–278](#)
    - Talk It Out, [272–273](#)
    - writing from plan, [279–280](#)
  - examples of, [263](#)
  - genre structure and, [265–267](#), [266t](#)
  - modeling and, [267](#), [269–270](#)
  - for persuasive writing, [300–305](#)
  - with question asking, [271–272](#)
  - SRSD and, [264–265](#)
  - for understanding writing requirements, [270](#)
- Planning technology, [278–279](#)
- Playing with genres, [60–63](#)
- Plot structure, [85–87](#), [85f](#), [86f](#)
- Point of view, [87](#), [89](#), [90f](#)
- Posttests, [343](#)
- POW mnemonic, for informational text writing, [123–124](#), [124f](#), [125f](#), [126](#)
- Practice-based professional development (PBPD) framework, SRSD instruction and, [150–151](#)
- Practice-feedback loop, [349](#)
- Praise
  - effectiveness of, [15](#), [345](#)
  - specific, [352](#)
- Presentation apps, [199–202](#), [201f](#), [202t](#)
- Presentation bias, [341](#)
- Pretests, [339–341](#)
- Principal of Change, The: Stories of Learning and Leading blog, [190](#)
- Professional Learning Networks (PLNs), [202–204](#), [204t](#)
  - development of, [203](#), [204t](#)
- Professional writers, for identifying best practices, [12](#)
- Prompts, writing; *see* Writing prompts
- Purposes, real, [16](#), [17f](#), [45–47](#)
  
- Quadblogging, [191–192](#)
- Queries, as feedback, [345](#)
- Questions, generating/answering, about informational texts, [116–117](#)
- Quick Time app, [199](#)

Quill.org, sentence-combining example from, 128, 129f

Rater drift, 341

Rayburn, S., 195

Reading, critical, revision process and, 292–293

Reading comprehension

and persuasive writing revision, 306

revision process and, 289

writing instruction and, 6–7

Reading instruction, writing development and, 22–23

Reading skills, writing instruction and, 6–7

Reading–writing connections, 309–332

benefits of, 311–312

communication and, 314–316, 315f

in EL instruction, 391, 391f

final thoughts on, 328–330

functional combining and, 316–328, 316f

with text analysis/critique, 322–324

with text summarizing, 319–321, 321f

with text synthesis, 324–328, 326f

with text-modeling instruction, 317–319

instruction implications of, 310

shared knowledge/shared process and, 312–314, 313f

teacher support and, 328–330

Reflective writing, student development in, 165

Reilly, Mr., 197

Reliability

interrater, 340

intrarater, 341

Resources, accessing and using, 43–45

Response cards, 339

Response to intervention (RTI); *see* RTI

Revising, 287–308

cognitive models of, 288–290

definitions of, 288

goals for, 288

instructional examples, 295–305

eighth-grade persuasive writing, 300–305

fourth-grade narrative writing, 296–300

in management of writing skills, 65f, 66

metacognitive/self-regulation skills and, 289–290

by proficient *versus* struggling writers, 288–289

reading comprehension skills and, 289

- research on instructional approaches to, 290–295
  - critical reading, 292–293
  - evaluation criteria/self-evaluation, 291–292
  - peer review, 290–291
  - strategy instruction, 293–294
  - summary of, 294
  - teacher feedback, 290
  - word processing, 293
- SWD and, 365–366
- writing criteria and, 289

Revision conferencing, 315

Rewriting, conditions for, 60

Robbins, J., 319

Role playing, argumentative writing and, 140

Romano, T., 92

RTI

- tiers of, 377–380
- writing assessment and, for SWD, 377–380

Rubrics, for teaching success criteria, 336–338, 336f, 337f

Run-on sentences, 255

Sachar, L., 297

“Said Is Dead,” 92, 93f

Saturation research papers, 101–102, 104–105, 105f

Scaffolding, of informational text writing, 123–124, 124f, 125f, 126

Science education

- argumentative writing and, 171–172
- multimodal composition and, 176
- and SWH for writing to learn, 174–176, 174f

Science-writing heuristic (SWH), 118

- for writing to learn, 174–176, 174f, 179

Scientific argumentation, teaching, 35

Screencastify app, 199

*Seabiscuit* (Hillenbrand), 85, 85f

Secondary education; *see also* specific grades

- and argumentation in writing to learn, 172–174
- dedicating productive time for writing in, 34–36
- fostering student motivation in, 67
- learning protocols in, 167
- writing centers in, 41–42
- writing studies and, 68–71

Second-grade students

- sentence construction and, 246–254

- sentence-combining exercises for, 247–248, 249f, 251f, 252t
- spelling patterns and, 22f
- “Secret Teacher” section, of Guardian website, 190
- Self-regulated strategy development (SRSD), 263–265
  - argumentative writing and, 144–146, 147t–148t, 148–152
  - effect size of, 264–265
  - evidence base of, 266–267
  - genre structure and, 265–267
  - genre-based mnemonics and, 266t
  - and models of informational text, 121
  - PBPD framework and, 150–151
  - steps of, 264
  - and student ownership of learning, 353
  - SWD and, 371
  - for teaching persuasive writing, 172–173
- Self-regulation
  - argumentative writing and, 144–152
  - revision process and, 289–290
  - and student ownership of learning, 353–356, 354f
- Senses word wall, 93, 94f, 95
- Sensory cluster graphic organizer, 101, 102f
- Sentence construction, 240–260
  - challenges of, 241
  - direct instruction for, 241–243
  - instructional recommendations for, 246–257, 246f
  - recommendations, 257–258
  - in second-grade class, 246–254
    - and correctness *versus* effectiveness, 253–254
    - exercises, 248–250, 249f, 251f
    - measuring improvement, 254
    - skill sequence, 250, 252t, 253
    - sources for material, 248
  - sentence combining and, 243–245
  - SWD and, 364–365
  - teaching, 21–22
  - in tenth-grade class, 254–257
    - revising, 255–257
    - run-on sentences/sentence fragments, 255
- Sentence fragments, 255
- Sentence-combining exercises, 257–258
  - example of, 128, 129f
  - informational text sources and, 126–128, 129f
  - in second-grade classroom, 247–248, 249f, 251f, 252t

- sentence construction and, 243–245
- sequence of, 250, 252*t*, 253
- sources for, 248
- for SWD, 370
- in tenth-grade classroom, 256–257
- types of, 248–250, 251*f*
- Sentence-level skills, SWD and, 370–371
- Sentences, run-on, 255
- Sentence-writing skills, informational source text for improving, 127–128, 129*f*
- “Seventh Grade” (Soto), 95
- Seventh-grade students
  - argumentative writing and, 143, 150
  - Edmodo and, 197
  - handwriting and, 221
  - memory snapshot papers and, 101
  - persuasive writing and, 20*f*
  - presentation apps and, 199
  - science-writing heuristic and, 174
  - teaching about theme, 98
- Shakespeare, W., 319
- Sheltered instruction, for ELs, 399–400
- Sheltered Instruction Observation Protocol (SIOP), 400
- Shinas, V., 188
- Show Me app, 199
- Showing, not telling, 84, 93, 94*f*, 95–97, 96*f*
  - emotions chart, 96*f*
- Sinclair, U., 5
- Sixth-grade students
  - backchanneling and, 195
  - handwriting and, 221
  - with learning disabilities, 148
  - SRSD instruction and, 145
  - writing syntheses and, 169
- Snapchat, 195
- Social media, integration into instruction, 195
- Social media tools, 194–197
- Social relationships, in writing workshops, 37–38
- Sondheim, S., 319
- Soto, G., 95
- Source material; *see also* Writing from source material
  - defining, 108–109
  - uses of, 108
  - writer/teacher uses of, 109–110



Spelling, 222–234  
academic success and, 222–223  
assessment of, 229  
best practices for, 21, 22f  
and English irregularities *versus* predictability, 223–224  
etymology and, 228  
instructional recommendations by grade level, 232t–233t  
knowledge sources and teaching examples, 230t  
morphology and, 225–226  
orthotactics and, 226–228  
phonology and, 224–225  
reading–writing connections and, 311–312  
SWD and, 363–364, 369  
teaching, 229–234  
writing development and, 211

Spelling instruction, copying strategy and, 127

Spelling invention, 311–312, 314

Spelling skills, of ELs, 392–394

Stack of Marking blog, 190

Starkey, T., 190

STEM lessons, 191

STOP and DARE strategy, historical argumentative writing and, 154–155

Story grammar, 83

Storyboard/drawing strategy, 277–278

Storytelling apps, digital, 200

Stowe, H. B., 5

Strategies instruction  
example of, 263  
revision process and, 293–299  
for SWD, 371

Structures Writing program, 123–124, 124f, 125f, 126

Student Blogging Challenge, 191–192

Student performance samples, eliciting; *see* Eliciting student performance samples

Student writing, evaluating, 74–75

Students with disabilities (SWD), 361–384  
assessment of, RTI and, 375–377, 376t  
CCSS and, 374–375  
evidence-based instruction for, 367–373, 380  
composition skills, 371–372  
handwriting, 368–369  
motivation and, 372–373  
sentence-level skills, 370–371  
spelling, 369

- transcription, [367–369](#)
- and inadequate writing instruction, [361–362](#)
- instruction adaptations for, [375–377](#), [376t](#)
- research-supported teaching practices for, [362–363](#)
- writing challenges for, [362–367](#)
  - composition skills, [365–366](#)
  - motivation, [366–367](#)
  - sentence-level skills, [364–365](#)
  - transcription, [363–364](#)

Success criteria

- clarifying, [335–338](#), [336f](#), [337f](#)
- sources of, [335](#)
- teaching
  - examples for, [335–336](#)
  - rubrics for, [336–338](#), [336f](#), [337f](#)

Summaries

- approaches and examples, [115](#), [116f](#)
- macro rules for, [115](#), [116f](#)
- pictorial, learning and, [177](#)
- reading–writing connections and, [319–321](#)
- scaffolding approach to, [321](#)
- templates for, [321](#), [321f](#)

Summary/discourse synthesis

- teaching strategy for, [169–170](#)
- for writing to learn, [167–170](#), [179](#)

SWoRD platform, [45](#)

Talk It Out strategy, [272–273](#)

Teacher feedback, [290](#)

Teachers, as source for best practices, [12](#)

Teacher’s role, in fostering motivation, [72–75](#), [72t](#), [75](#)

Technology Integration Planning Cycle for Literacy and Language Arts (Hutchison and Woodward), [201–202](#)

Tenth grade

Tenth-grade students

- pictorial summaries and, [177](#)
- sentence-combining exercises for, [256–257](#)
- sentence construction and, [254–257](#)

SWD, [146](#)

- write-to-read activities and, [6f](#)
- writing classroom setup and, [31](#)
- and writing for authentic audiences, [46](#)
- writing strategies and, [19f](#)

Test of Legible Handwriting (TOLH), 214

Text sources, 108–109; *see also* Source material

Text summaries, reading–writing connections and, 319–321

Text synthesis, reading–writing connections and, 324–328, 326*f*

Text-modeling instruction, reading–writing connections and, 317–319

Text-speak, 185

THE READER strategy, 153

Theme, 84, 97–98  
*versus* topic, 97–98

Theme statements, 98, 99*f*

Think-alouds, 267, 268–269  
modeling with TONES mnemonic, 268*t*–269*t*  
in persuasive writing revision, 302

Third-grade students  
author biographies by, 315  
Children’s Literacy Initiative and, 44  
collaborative writing and, 16*f*  
content apps and, 198  
“I Remember” poem and, 99  
question writing and, 6*f*

Threshold theory of cross-language transfer, 389

TodaysMeet, 196

TONES mnemonic, 266*t*  
for modeling think-alouds, 268*t*–269*t*, 269–270

Toontastic 3D, 200, 201*f*

Town guide, preparing, 62–64

Transcription skills, SWD and, 363–364, 367–369

Translating, in management of writing skills, 65*f*, 66

TREE BRANCH mnemonic, for writing compare-and-contrast essays, 121

Twain, M., 12

Twitter, 195  
for Professional Learning Networks, 203

*Uncle Tom’s Cabin* (Stowe), 5

University of Nebraska, Cognitive Strategy Instruction in Writing, 371

Van Allsburg, C., 86

Venn diagrams, 114

Vocabulary, language, and prediction (VLP) procedure, 314

Vocabulary knowledge, of ELs, 396–399

Vuong, P., 101

Walker, D., 12

Waters, S., 191

Webb, C., 195

What Works Clearinghouse Practice Guide  
on elementary writing communities, 37  
on elementary writing instruction, 33  
on integrating writing and reading, 44  
peer conferences and, 40  
on secondary writing instruction, 34

Wikijunior, 193

Wikis, 192–194

Word banks, 397–398

Word Identification Strategy Training (WIST), 398–399

Word processing  
advantages of, 16–17  
revision process and, 293

Word walls, 398

Word-reading skills, of ELs, 392–394

WRITE mnemonic, 41

*Write What Matters* (Romano), 92

Writers  
expert *versus* novice, 261–262  
motivating (*see* Motivation for writing)

Writer’s voice, 56

Writing  
actions/skills involved in, 10–11  
apps that support (*see* Apps)  
avoidance of, 311  
cognitive and affective processes in, 7–8  
importance of, 4–7  
individual  
balancing with collaborative writing, 74  
communication and, 63  
paired, 38  
persuasive, development of, 171  
playing with, 60–61  
social dimension of, 63  
sociocultural and cognitive traditions and, 31–32  
as versatile tool, 4–5  
working together on, 15–16, 16*f*

Writing activities, improved comprehension and, 6*f*

Writing assessment; *see* Assessment

Writing centers, in secondary schools, 41–42

Writing classroom  
group formation in, 58–60, 63

- literate community in, 56
- Writing classroom setup, 31–50
  - and accessing/using resources/tools, 43–45
  - building writing communities and, 36–43
  - collaborative writing development and, 38–40
  - and opportunities to write for audiences/purposes, 45–47
  - positive environment and, 37–38
  - for productive time for teaching writing, 32–36
    - in elementary classrooms, 33–34
    - in secondary schools, 34–36
  - research suggestions for, 47
  - for SWD, 373, 376t
  - and teaching students to give/receive peer responses, 40–43
- Writing communities, 9–10
  - building, 36–43
- Writing development, 7–11
  - cognitive/motivational capabilities and, 10–11
  - context and, 8–10
  - genre and, 8–9
  - technological tools and, 16–17
- Writing exams, standardized, planning for, 282
- Writing from source material, 108–134; *see also* Informational text sources
  - benefits of, 111–112
  - planning for, 280–282
- Writing instruction
  - adaptations for SWD, 375–377, 376t
  - common approaches, 272–280
    - brainstorming, 273–274
    - cluster/web/mindmap, 274–275
    - freewriting, 275–276
    - outlining, 276–277
    - storyboard/drawing, 278–279
    - Talk It Out, 272–273
    - writing from plan, 279–280
- Common Core State Standards and, 4
- evidence-based, for SWD, 367–373
- improved reading skills and, 6–7
- neglect of, 3–4, 32, 311
- scientific study of, 13
- stages of, 19f
- students with disabilities and (*see* Students with disabilities (SWD))
- teacher assessments and, 17

Writing interventions, scientific study of, 13

- Writing models, cognitive, processes in, 261
- Writing opportunities, 45–47, 73
- Writing prompts, 341–342
  - cognitive/metacognitive, 165*t*
  - in elementary education, 165–166, 172*t*
  - rhetorical/content, 172*t*
  - SWD and, 370
  - for writing to learn, 163, 179
- Writing skill exercises, using informational text sources for, 126–130
  - guiding principles for, 130
  - for improving handwriting/spelling skills, 127
  - for improving sentence-writing skills, 127–128, 129*f*
- Writing skills
  - CCSS foundational, 189
  - foundational, teaching, 21–22, 22*f*
  - managing, 64–67, 65*f*, 73–74
- Writing strategies, 18–20, 19*f*
  - SWD and, 366
  - for writing to learn, 180
- Writing studies
  - of literary text analysis, 68–71, 70*t*
  - of oral/written argumentation, 68
- Writing tasks
  - attractiveness and authenticity of, 55–58
  - authentic, writing rules for group formation, 58–59
  - challenging, 58
    - playing with genres, 60–61
    - preparing town guide, 62–64
  - collaboration in, 62–63
  - interesting, 57–58
  - special, 280–282
- Writing to learn, 162–184
  - activities for, 117–118
  - genres for, 163–178
    - argumentation, 171–174
    - journal (learning protocol) writing, 164–167, 165*t*, 172*t*
    - multimodal representations, 176–178
    - science-writing heuristic, 174–176, 174*f*
    - summary/discourse synthesis, 167–170
  - principles for, 178–180
  - self-regulated view of, 163
  - theory of, 163
- Writing with digital tools, 185–208

best practices for, [186–187](#)  
Writing workshops, approaches to, [33–34](#), [46](#)  
Wyatt, S., [191](#)

Youth literacies, [56–57](#)

Zatarain, J., [87](#), [89](#)

# About Guilford Press

[www.guilford.com](http://www.guilford.com)

Founded in 1973, Guilford Publications, Inc., has built an international reputation as a publisher of books, periodicals, software, and DVDs in mental health, education, geography, and research methods. We pride ourselves on teaming up with authors who are recognized experts, and who translate their knowledge into vital, needed resources for practitioners, academics, and general readers. Our dedicated editorial professionals work closely on each title to produce high-quality content that readers can rely on. The firm is owned by its founding partners, President Bob Matloff and Editor-in-Chief Seymour Weingarten, and many staff members have been at Guilford for more than 20 years.



# Discover Related Guilford Books



Sign up to receive e-Alerts with new book news and special offers in your fields of interest:

<http://www.guilford.com/e-alerts>.