

International Center for Leadership in Education



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How to Use the Resource Kit

Today, electronic forms and workplace documents require precise understanding and accurate reading and writing skills. The traditional strategies that students learn for reading comprehension need to be adjusted for document, technological, and quantitative (DTQ) literacy skills, because readers are no longer dealing only with long sections of prose text. Writing strategies also need adjustment to meet the requirements of clear technical writing skills.

This kit is designed to be used by teachers, administrators, and other educators in middle and high schools. Because many of the topics and activities include rigorous and relevant real-world application, the kit also is useful for workplace skill development. The chapters are filled with hundreds of strategies for helping students attain DTQ literacy skills from a wide variety of sources.

Where to Start?

To use this comprehensive resource, educators can pick and choose the strategies that best meet the needs of their students. The kit does not need to be used sequentially. Teachers can select strategies based on the literacy needs of the student population, high-stakes assessment results, or the content-specific skill requirements for students.

For orientation purposes, chapters 1-2 should be read first to get the overall picture, along with the beginning of Chapter 3, which introduces the 14 core DTQ literacy skills.

Redefining Literacy in Grades 7-12

Chapter 1: Welcome to the 21st Century Workplace

Chapter 1 provides background information, definitions, and a rationale for this kit.

Chapter 2: Introduction to Teaching DTQ Literacy

Chapter 2 is about how to assess students' literacy skills informally and use formal assessment results to choose the right strategies to match student need. This chapter provides general information on how to use this kit and directs readers to chapters for specific student needs.

Chapter 3: Teaching DTQ Literacy

Since Chapter 3 will be referred to often, educators should familiarize themselves with the content and organization of the chapter before moving on to the other sections and strategies.

Chapter 3 describes the 14 skills that are at the core of DTQ forms of literacy. The skills are grouped into three parts:

Part 1: Previewing the Document or Source

1. understanding the structural complexity
2. understanding the organization
3. understanding the amount of information

Part 2: Understanding the Task

4. determining the relationship between the task and the document
5. comprehending the question, purpose, or prompt to initiate the task
6. identifying given and requested information
7. setting an action goal

The Appendix has numerous print examples that can be used when teaching these skills as well as recommendations for online sources to use when integrating the skills with technology and electronic media.

The Appendix also contains many sample DTQ tasks to use for assessments.

Part 3: Completing the Process

8. locating information
9. cycling through the document or multiple sources
10. integrating information
11. generating inferences
12. formulating and calculating
13. taking action
14. evaluating results

The skills are explained and vocabulary concepts are highlighted. Four types of strategies are offered for each skill:

1. strategies that meet the needs of most populations
2. strategies for special populations
3. strategies for quantitative tasks (that require mathematical problem solving)
4. strategies for tasks that include the use of technology or electronic media

Chapter 4: Assessing DTQ Literacy

Chapter 4 contains detailed explanations of what elements to assess for each of the 14 core skills in DTQ literacy and what characteristics to look for in student performance. Chapter 4 also contains numerous examples of ideas for rigorous and relevant assessments that incorporate DTQ literacy. These assessments fall in Quadrant D of the International Center for Leadership in Education's Rigor/Relevance Framework.TM The assessments are all at the upper levels of Bloom's taxonomy. In addition, all of the suggested assessments include predictable or unpredictable real-world applications of skill and thinking.

Redefining Literacy in Grades 7-12

Chapter 5: Writing to Do

Chapter 5 includes strategies for technical writing in the workplace and community, and in personal lifestyle situations. In addition, the numerous “before and after” writing examples are good models for effective technical writing and offer opportunities for student practice. This chapter also contains suggestions for assessing technical writing using real-world criteria.

Chapter 6: Graphic Organizers for Reading to Do

Chapter 6 is about using and adjusting research-based strategies, most notably the use of graphic organizers, which are among the most beneficial strategies and the easiest to use. Since many of the traditional research-based strategies taught in the classroom are tied to reading and understanding prose text, educators need to adjust the strategies to fit documents and other sources of technical information, including the Internet. The traditional strategies are presented as well as the DTQ-adjusted versions.

Chapter 7: More on Quantitative Literacy

Chapter 7 presents additional strategies specific to the mathematical problem-solving tasks required for quantitative literacy. Background information is included about quantitative literacy, and Quantiles are introduced. The chapter includes key strategies, a framework for teaching quantitative thinking skills, and numerous examples.

Although this chapter was developed for math and science teachers, it also may be beneficial to special education teachers, career and technical education teachers, and teachers in any content area that requires students to deal with technical text and perform mathematical thinking and reasoning. The strategies also can be used in conjunction with the quantitative literacy examples in the Appendix, released items on state tests, and content-specific

How to Use the Resource Kit

examples in the Appendix, released items on state tests, and content-specific examples from any math, science, economics, and career and technical education course.

Chapter 8: Leadership for DTQ Literacy

Chapter 8 provides education leaders with strategies for putting DTQ literacy strategies in place in the schools and community.

Appendix: Resources

The Appendix contains a comprehensive and detailed list of online resources along with many examples to use when teaching or assessing the DTQ literacy skills throughout the kit.

Other Resources in the Kit

The DVD has a presentation by author Lin Kuzmich on DTQ literacy. The CD has graphics, checklists, templates, and other material for teaching DTQ literacy. In the binder pockets are maps for the Lexile Framework[®] for Reading and the Quantile Framework[®] for Mathematics.