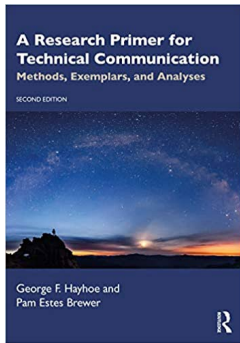


Book Review Editor

Russell Kirkscey, *Penn State Harrisburg*



A Research Primer for Technical Communication: Methods, Exemplars, and Analyses (2nd Edition)

George F. Hayhoe and Pam Estes Brewer, Authors

New York, NY

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Reviewed by Jennifer Wilhite

El Paso Community College
Burges Early College High School

George F. Hayhoe and Pam Estes Brewer's (2021) second edition of *A Research Primer for Technical Communication: Methods, Exemplars, and Analyses* addresses research approaches and potential cognitive-emotional stresses with two goals: (1) to introduce how to critically read and carefully write research-based technical communication and (2) to analyze technical writing in such a way that the reader learns how to judge validity of texts. Hayhoe and Brewer's primer achieves its objectives for its broad audiences, which include those reading research and/or preparing to conduct industrial projects, students in classes/programs that require research projects, and professors teaching classes and/or directing graduate students in designing, conducting, and reporting technical communication research.

Hayhoe and Brewer divide their 12-chapter text into two parts. Part I: "Methods" includes seven chapters that situate the role of research in the field of technical communication, instruct researchers in the comprehensive processes of conducting and

reporting research, and explain quantitative and qualitative methods. Instructors will find Part I invaluable when introducing beginners to essential terms, and veteran researchers will appreciate the concise refresher. Each chapter introduces its purpose and objectives, directs the student/writer through content with examples and scaffolded exercises that review skills and reinforce concepts, then concludes with a comprehensive yet succinct summary. Part II: "Exemplars and Analyses" consists of five chapters that center a collection of timely research articles as examples of the methods introduced in Part I. The subsequent commentary sections analyze how well each article follows the processes described in Part I. Experienced researchers will find the commentary sections valuable guides to drafting clear research publications; beginning researchers can follow the mentor texts as they structure their work. Part II also includes practice exercises that scaffold students beyond academic drills with sections called "For Further Study," which ask readers to apply concepts and skills to suggested journal articles.

Instructors can use Chapter One, "Research: Why We Do It and Why We Read It," to describe the purpose and types of research found in technical communication. The authors begin their primer by encouraging the reader to "apply the research of others to your own practice" (p. 4), which is vital to understanding how researchers approach projects. Chapter Two, "The Research Phases and Getting Started," guides readers through a research report and provides a worksheet that breaks down how to articulate research goals and craft research questions. Directors of graduate projects will especially appreciate the step-by-step guide for creating research questions, and writers in industry will find the worksheet helpful in articulating goals for research proposals as well as project design. One of the most important aspects of research, "gaining the informed consent of the participants," (p. 19) is also introduced.

Chapter Three, "Reviewing the Literature," navigates the differences and purposes of primary and secondary research. Students may struggle with these concepts, so the authors offer a discussion about the "reasons for doing secondary research as part of a primary research project" (p. 38) and carefully guide the reader through the process of reading/writing an annotated bibliography as a preparatory step before reading/writing a literature review. Chapter Four, "Analyzing Quantitative Data," provides a guide for evaluating and planning viable quantitative research. The authors limit their discussion to a "statistical analysis of hypothesis testing" (p. 56) that does not overwhelm the beginning writer with mathematical formulas. In addition, they discuss

quantitative designs commonly found in technical communication publications. To ensure even the newest writer's ability to utilize software for data analysis, the authors provide a step-by-step guide with figures that are screenshots from actual Excel and Jamovi worksheets. While invaluable for those just beginning with programs like Excel, the speed at which software is updated might leave the figures outdated before the third edition of this book is printed.

Chapter Five, "Conducting a Qualitative Study," compares quantitative research with research based on qualitative studies. Instructors will find the focus on evaluating rigor by establishing parameters for credibility, transferability, and dependability an important foundation, and their students will find the guide through coding, categorization, and research easy to apply to their projects. Chapter Six, "Conducting Surveys," introduces a process a novice researcher could follow when designing, implementing, and analyzing surveys. Surveys are used in both qualitative and quantitative research and, while a single chapter cannot provide complete steps to mastery, it does introduce enough content for a beginner "to conduct a valid survey and to understand what limitations might constrain its reliability" (p. 117). Chapter Seven, "Conducting Usability Studies" defines and historically situates usability studies in technical writing. The discussion will help academic and industry writers decide if a usability study fits their project. As there are myriad potential methods employed in usability studies, the authors provide concise and precise overviews of the most common methods and define "five characteristics of usability" (p. 150) to guide consumers of research in ascertaining the rigor of a usability study.

Each chapter in Part II begins with a review of its corresponding chapter from Part I and then provides context for a mentor text, a detailed commentary, meticulous analyses, authentic exercises, and a "For Further Study" section. This structure supports instructors as they move their students from theory to practice. For example, Chapter Eight "Analyzing a Literature Review," provides the context and text of a literature review followed by commentary that applies the skills from Chapter Three in a rhetorical analysis of the purpose, audience, organization, and hypotheses of the review. Chapter Eight's exercises build on those in Chapter Three and scaffold beginning researchers towards independently writing and analyzing literature reviews in the "For Further Study" section. Instructors can use Chapter Nine, "Analyzing a Quantitative Research Report" to remind students of the skills presented in Chapter Four, which provides further context for—and the full text of—the article introduced in Chapter Eight. The

rhetorical analysis adheres to the pattern established in Chapter Eight. Chapter Ten, "Analyzing A Qualitative Research Report" reviews the skills from Chapter Five, then provides a context for the mentor text: an IEEE-style article. The commentary section evaluates the article's style, purpose, audience, and organization. Then the analysis section deconstructs the qualitative report's findings to demonstrate how a student or experienced research can ascertain the codes/processes by which the writers arrived at their conclusions and the rigor of those conclusions. Chapter Eleven, "Analyzing a Report on the Results of a Survey" continues to build on skills presented in Chapter Six and with an APA-style article, complete with appendix, which contains the survey from which the article's conclusions are drawn. Instructors can use the commentary to explain what makes the article "an excellent example of a report of survey results" (p. 255) and then use the exercises to ask students to emulate the design of the mentor text to craft viable survey questions and address population/sample issues. The final chapter, Chapter Twelve, "Analyzing a Report on the Results of a Usability Study," is an accumulation of the skills and concepts introduced throughout the book. The chapter points out "some minor flaws" of a 2018 usability study but focuses on the mentor text's "rigorous investigation of user preference using industry-standard tools" (p. 290). Experienced researchers will appreciate the detail with which commentary and analysis explain how the authors address their purpose and audience, how the organization of the text reflects its purpose, and how the article's authors' methods achieve and fall short of validity and reliability. Invaluable to the beginner researcher, the book concludes with an appendix consisting of instruction and practice exercises that introduce APA and IEEE citation styles and reviews the merits of citation managers. Unfortunately, the book does not include a glossary, but it does contain an index that will guide readers to definitions of key terms.

Instructors with classes of beginning researchers, as well as professors directing graduate writing projects, can use Hayhoe and Brewer's text to successfully scaffold key complex research concepts. The book also serves as a refresher for veteran researchers. Academic and industry writers can complete complex projects by following this detailed, but uncomplicated, guide from the beginning stages of understanding research to the ending stages of publishing results.

Author Information

Jennifer Wilhite holds a graduate certificate in Technical Writing and a PhD in Rhetoric and Composition Studies. She teaches Senior Practical Writing and Dual Credit English Composition classes at Burges Early College High School and El Paso Community College in El Paso, Texas. Her research centers graduate writing supports offered at the university level.