

Book Review

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The IEEE Guide to Writing in the Engineering and Technical Fields

—Reviewed by

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Index Terms—Correspondence, engineering reports, instructions, professional communication, proposals, technical writing.

The *IEEE Guide to Writing in the Engineering and Technical Fields* is a concise manual for engineers, technical professionals, scientists, researchers, teachers, and students to improve their writing skills. Each chapter is short—ranging from 20 to 40 pages—and the entire book is 200 pages, including appendices. The book accomplishes its purpose of providing recommendations for writing activities and for “assessing the social situation of writing, then using that assessment to make writing decisions” (p. 5). Throughout the book, the authors offer short, manageable takeaway lessons to help readers make writing decisions and learn IEEE style for references.

The first part of the book introduces the importance of writing in the engineering workplace, and the necessity of understanding the social situation of writing. In Chapter 1, the authors announce their practical approach to teaching different aspects of writing by directing readers to consider the purpose, audience, identity, and context of documents when making decisions when writing. Lloyd Bitzer’s framing of the rhetorical situation very much informs this practical model. The authors contrast how this guide teaches writing with transmission models (that envision communication as a one-way dissemination of information), correctness models (that assume that precision is the main goal of writing), psychological

models (that analyze the production and reception of writing), and social models (that show how culture influences writing). The authors offer a hybrid practical model that combines features from the other models.

In Chapter 2, the authors provide guidance for writing decisions at the micro-level of word choice and sentence construction, and the macro-level of document organization and sectioning. They offer advice about and short examples of heading names, hedges, dependent and independent clauses, transition words, and other writing logistics. However, they frame these standard tips about best practices with advice about remembering your purpose and audience, and choosing the mechanisms that satisfy both.

The next part of the book—Chapters 3 to 6—is organized like other engineering communication textbooks insofar as it covers common genres of writing in the workplace. It arranges the genres into general purposes of writing to know, enable, convince, and correspond. Chapter 3 offers advice about different types of reports and specifications as informative documents. The chapter not only provides definitions of the different types—functional versus technical specifications and progress versus final reports, for example—it also offers advice about writing content for the standard parts of each of these documents, such as introductions, methods, findings, recommendations, work progress, product descriptions, design considerations, technical details, policies, test plans, and references.

Chapter 4 introduces different types of imperative writing, such as instructions and guidance. It

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details the purpose, occasion, and audience of tutorials, training materials, directions, procedures, instructions, and guidance. The chapter gives advice about deciding how much background information to include in these documents, and it briefly covers how to usability test instructions and guidance, a section that could have benefitted from expansion, given the guide's emphasis on paying attention to audience. The chapter recommends how to structure and write content for these documents, and it considers special considerations such as warning labels.

The audience, purpose, and occasion of persuasive documents, such as proposals and business plans, are the subject of Chapter 5. It discusses how to design these documents while keeping audiences' pre-existing beliefs, values, and goals in mind. Finally, Chapter 6 offers information about the purpose, occasion, and audience of correspondence such as letters, memos, and emails. It explains how to factor in workplace roles, context, format, common ground, frequency, composition, time, tone, and generic constraints when writing.

Compared to other engineering communication textbooks and manuals, this guide is short and manageable, yet its approach still considers the rhetorical and contextual dimensions of writing. Because it is brief, the guide does not explicitly cover ethics, risk communication, information graphics, presentations, and global or international

communication. It also does not provide as many examples or complete samples of the genres and best practices discussed. Instructors and trainers would have to select their own examples and work those examples through the framework provided by this guide. Rather than embedding citations in the body of chapters where heuristics and rules of thumb are provided, the book offers lists of additional references at the end of each chapter, where readers can find more details and information. Finally, as with other textbooks, some genres are missing, such as reviews, evaluations, and regulations.

Nevertheless, these limitations do not diminish the value of the book in giving a concise and convenient overview of standard engineering communication genres and a rhetorically grounded framework for readers to use when writing in the engineering workplace. The book has potential for use in writing-intensive courses, where students must compose documentation for labs and projects, as well as for in-house training for employees. Its hybrid framework for making decisions as you write is flexible and can be applied to many different writing situations. Furthermore, the guide offers valuable, basic help on writing mechanics. It offers readers an approach to engineering communication that can help them think about the decisions that they make when they write and make thoughtful, informed choices in their writing.