

Four Research Issues

David K. Farkas

Associate Fellow, Puget Sound Chapter

I have been engaged in various kinds of technical communication research for almost 20 years. During this time, I have encountered some research issues that are important and difficult but not well addressed by research. I am pleased, therefore, to have a chance to recommend these issues to my colleagues in academia and industry as topics for investigation. Each of these issues has direct implications for both teaching and practice in technical communication.

USING THE OUTLINER IN WRITING INSTRUCTION

I am convinced that the outlining feature available in many word processing programs is a powerful tool for planning and composing almost all forms of expository prose. For many years, I have been an outliner evangelist, strongly encouraging both students and professionals to work in outliner mode, right up until final editing and formatting. My anecdotal evidence is that outliners dramatically increase writing speed and quality.

To the best of my knowledge, however, outliners have not become pervasive in the teaching of writing. Why? Am I mistaken about their effectiveness? Or, are writing instructors at various educational levels unaware of outliners, unconvinced of their value, or unable to teach their use? Perhaps the impediments are more logistical. Are word processing programs with good outliners unavailable in many writing laboratories? Have writing assignments become too short for outliners to be useful?

This article has been peer reviewed.

I suspect that outliners seem too structured and mechanical in their operation to fit contemporary models of composing, in particular the stage of invention/brainstorming. I suggest that this is a superficial view—that creating and rapidly manipulating provisional hierarchies of ideas makes sense within the present understanding of rhetorical invention. On the other hand, if outliners do not fit the model of composing but are nonetheless effective, then the present model of composing needs to be expanded. I suggest, therefore, that a fruitful area for investigation is the use, actual and potential, of outliners in the practice and teaching of writing.

THE CONSEQUENCES OF CONTEMPORARY GUIDELINES FOR PROSE STYLE

In the early 1980s, we enthusiastically embraced empirically derived guidelines for clear writing, especially those developed by the Document Design Center and Carnegie Mellon University. Some of these guidelines, such as avoiding the passive voice and lengthy sentences, are venerable precepts that long preceded the Document Design Center. However, in the early 1980s, new guidelines were added, and the older ones were given new specificity. In addition, research findings from such disciplines as cognitive psychology and linguistics were brought to bear in support of these guidelines, and many new studies were conducted.

Now, these stylistic guidelines have been absorbed into the mainstream of writing instruction, particularly in technical and professional writing. We teach students to eschew nominalized forms, write short sentences, and use subject-verb-object syntax

with concrete agents. We ask students to maintain a low threshold when deciding whether words and phrases are unessential and warrant deletion. To be certain, these stylistic guidelines and the research cited in their support represent a major advance in writing instruction; however, my colleague Mary Coney and I have pondered this question: does instruction based on these kinds of guidelines hinder students from developing a greater subtlety of expression?

One well-known book that reflects many of the prose guidelines of the 1980s is Joseph Williams's *Style: Ten lessons in clarity and grace* (1989). This book actually focuses very largely on clarity, frequently demonstrating how to revise bureaucratic prose. There is, in fact, little emphasis on grace, and grace is the lesson writers learn least well. Might this be because, having become aggressive denominators, sentence splitters, and subject-verb-object aficionados, they are not attuned to learning the nuances of syntax and sentence rhythm?

One might take the practical view that educators are doing well enough by just teaching students to write direct, clear prose. Indeed, this may be true, at least in instructing future engineers and accountants rather than future professional communicators. However, Mary and I see much value in trying to ascertain whether current instruction in functional prose style provides a smooth and consistent pathway toward true prose mastery or whether our best writers need to somehow unlearn aspects of instruction. The answer to this very subtle and difficult question might effect advances in writing instruction that would benefit future engineers and accountants, as well as future technical communicators.

THE PSYCHOLOGY OF INTIMIDATION AND IMPATIENCE IN DOCUMENTATION

How much information should documentation provide? It is clear that users resist detailed information: many are impatient (or are compelled by workplace pressures) to start using the software and immediately accomplish real work. Some enjoy exercising their problem-solving skills and relish the challenge of working things out by trial and error. Many people simply hate to read complex prose.

If just a glimpse at a lengthy help topic or section of a manual turns users away, a reasonable alternative is minimalist documentation—and, of

course, the best user interfaces we can design. The problem with minimalism is that, often, stripped down documentation does not cover all the special situations users confront from time to time and may not provide adequate guidance for fundamental tasks.

It is clear that users resist detailed information: many are impatient (or are compelled by workplace pressures) to start using the software and immediately accomplish real work.

Some users of minimalist documentation either fail to complete tasks or develop faulty mental models of the product that will get them in trouble later. Some users complete tasks successfully but expend so much effort in the process that they wish they had been given more complete and explicit guidance initially. What should we do about this difficult trade-off between users' information needs and resistance to documentation?

A workable strategy is to "layer" information so that users start with minimalist information but can display more detail when they need it. Layering, however, adds its own form of complexity, because users must decide to view more information and then take some action to get it.

I think that foundational studies, conducted in realistic settings, of user impatience and intimidation are needed. How do users facing various kinds of work pressures and anticipating various kinds of computer tasks respond to different kinds of visual and semantic complexity? What is the exact psychology of intimidation and impatience in scanning and reading documentation? What kinds of cost-benefit analyses do users engage in when they see different levels of detail, kinds of information, and kinds of documentation interfaces (for example, pop-up definitions and jumps to "overview" information)?

Furthermore, do people have unrealistic expectations about learning curves for computer software in comparison with other technologies they are required to master? If so, what are the causes—marketing hype in the computer industry or more fundamental factors? Finally, if, indeed, users make bad choices (that is, if they really *should* invest more time looking at documentation), how can we moderate users' feelings of intimidation and impatience, both through changes in the design of

documentation and through means extrinsic to the documentation? Progress in computer documentation may now depend less on studies of how users learn computer tasks than on studies of users' affective responses to documentation and their strategies for effectively using their time and energy.

TEXT DISCOURSE IN MULTIMEDIA

Face-to-face communication is aural, visual, and interactive but does not provide a text artifact for study. Text lacks the sensory breadth and interactive nature of face-to-face communication; but, as "frozen" discourse, it can be studied readily and, therefore, is the basis for what is perhaps the key form of literacy, the ability to deeply analyze and understand complex argument and exposition.

Television and cinema largely recapture the sensory breadth of face-to-face communication but not the interactivity. Multimedia can recapture some of the interactivity. For example, consider an interactive multimedia "interview" with a public figure. But what about text in multimedia?

Multimedia "radicals" welcome a posttext world. In *Understanding hypermedia* (1993), Cotton and Oliver speak of hypermedia as a return to "the richer pre-print modalities of expression" after the "anesthetic of monochrome words" (p. 88). A conservative stance regards multimedia (like television) as a threat to text literacy. However, in contrast with television, communicators can develop, within multimedia,

techniques for integrating video closely with text so that multimedia truly will support and enhance traditional text literacy.

For example, opposing political candidates might be asked to construct a multimedia package cooperatively, in which voters can selectively view video clips, heavily augmented by text, on a range of issues. As a candidate speaks, his or her main points or the structure of an entire argument might display. Furthermore, the voter might pause the video and follow hypertext jumps to the other candidate's refutation and to objectively compiled factual and statistical background information.

To design such multimedia interfaces is difficult, requiring both designers and researchers with expertise in psychology, media studies, rhetoric, and computer science. Nonetheless, I believe there is no more pressing research goal in the area of multimedia than to support traditional text literacy.

These four research issues—and others like them—challenge technical communicators. Research findings will provide exciting applications for both education and professional practice. Ω

REFERENCES

- Cotton, Bob, and Richard Oliver. 1993. *Understanding hypermedia: From multimedia to virtual reality*. London, England: Phaidon Press.
- Williams, Joseph. 1989. *Style: Ten lessons in clarity and grace* 3rd ed. Glenview, IL: Scott, Foresman and Co. (Now published as *Style: Toward clarity and grace*. 1990. Chicago, IL: University of Chicago Press.)