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# 15 What Do Technical Communicators Need to Know about Writing?

**SUMMARY**

Responses of twenty-four technical communicators to questions about the writing they do for their jobs revealed a heuristic that new technical communicators can use to determine ways to write effectively in the various roles and contexts in which they find themselves. This heuristic consists of questions that encompass the amount and quality of writing technical communicators do, the nature of that writing, the genres technical communicators produce and the rhetorical strategies they use to produce them, their writing approaches and processes, the knowledge and skills they need, and the personal traits and qualities they should have. Our data suggest the range of answers that writers might give to these questions and how those answers often depend on factors such as the workplace, the nature of one's job, the industry, the project, and even one's personal work preferences and styles. In addition to sharing the variety of responses to these questions that our data revealed, we also present an extended example to illustrate how newcomers to the field can use these questions to determine the writing knowledge and skills they may need to be successful.

**INTRODUCTION**

Siena just started as a technical writer in a department with twenty technical communicators. Her department is in a division of a large, multinational corporation. The division creates specialized business software, and her department produces all the instructional and reference documents for that software. As a new writer, she is assigned to a team with three other writers to document one piece of the software. The software her team is documenting is targeted at a well-defined user group. Her teammates have all been at the company for at least three years. Her supervisor, Allie, has been with the company for thirteen years.

Siena is about to be assigned her first writing task. In anticipation of her meeting with her supervisor, she jots down several questions. She has some sense, from conversations with the other team members, of what she may be asked to do and what might be entailed in doing it. She is still learning the organization, however, and trying to determine its expectations—and what happens if and when those expectations are not met. She is a little anxious because she knows there is a lot she does not know yet or has not done. For example, she has never created a complete and fully usable set of online help topics. She wonders how much assistance she might get from her supervisor and teammates; how much assistance she might need; and what, precisely, she will need to know to be successful. She just earned her bachelor's degree in technical communication; however, does this mean she knows enough to take on this initial and, for her, high-stakes writing task? In this chapter, we present a heuristic that Siena could use to determine how best to approach that initial writing task and to determine what knowledge and skills she will need for it.

This chapter includes a review of what previous research tells us about writing in the field of technical communication; a description of a heuristic for analyzing the writing requirements of a writing task; an extended example based on our study of twenty-four technical communicators' writing practices; and a summary reviewing key information in the chapter. The review of previous research may be helpful to those interested in exploring in greater detail the topics covered in the chapter—for example, new contexts of technical writing, core competencies for technical communicators, the rhetoric of technical communication, and what writing means in the field. Our heuristic is divided into six categories with several questions within each category that writers can ask about the writing tasks they may perform. This section reveals how complex the act of writing is for technical communicators, while showing how that complexity can be managed. The extended example follows a new technical writer as she begins her first job, showing how she applies our heuristic to learn about her new responsibilities and to make a potentially overwhelming experience more comfortable and manageable. The conclusion reviews key concepts about the role of writing in technical communication and suggests ways that a new technical communicator can stay current in her or his knowledge and skills in this rapidly changing field.

**LITERATURE REVIEW**

Scholars in technical communication have long been concerned with the skills and knowledge that technical communicators need. For example, research has focused on employment ads, the expectations of employers and managers, and the experiences of technical communication graduates (see Carliner 2001; Thomas and McShane 2007; Lanier 2009). In the

past decade, however, research addressing the responsibilities and work lives of technical communicators has taken on a new urgency as the field has undergone significant change and as scholars have, increasingly, pondered the roles that those trained in technical communication (whether called technical communicators, knowledge workers, or something else—and this has been a point of debate) might play in the twenty-first-century workplace (see Whiteside 2003; Faber and Johnson-Eilola 2003; Giammona 2004; Slattery 2005; Conklin 2007). Many of these studies are concerned with identifying the new modes and contexts of practice emerging in workplaces because of changing technologies and evolving organizational structures. Conklin (2007), for example, explores the increasing importance of cross-functional teams and how work processes continually flow and adapt to changing needs, making interpersonal and project management skills vitally important (see also Anschuetz and Rosenbaum 2002; Kim and Tolley 2004; Rainey, Turner, and Dayton 2005; Ford 2007).

A number of the studies cited above focus on management of documentation processes and projects, which involve both interpersonal and technological skills. Most of these scholars focus on the "core competencies" that technical communicators should have. Slattery (2005, 354) argues that "information technologies appear to be the primary medium through which these competencies are enacted." Giammona (2004, 350), who interviewed and surveyed individuals regarded as leaders in the field, found that writing was the most important skill for technical communicators: "But the one common denominator was writing—everyone agreed that a technical communicator must, at the core, be able to write." Whiteside (2003), Hart-Davidson (2001), Hart (2000), and Hayhoe (2000) also emphasize the importance of writing and the ability to communicate. Hayhoe (2000, 151) stresses that writing is what distinguishes us in our profession.

The studies we have cited generally regard writing as a skill that technical communicators use extensively. Most of these studies also acknowledge that technical communicators use writing in combination with a complex and varied mix of additional skills, competencies, and knowledge sets. In many of these studies, the power and complexity of writing as a literacy practice sometimes seems to be in the background, or regarded as no more important, powerful, or complex than other aspects of technical communication. Yet writing may be the one competency that really binds together the array of practices we call technical communication. Other than writing, no particular set of practices seems to be constant in technical communication; rather, they vary from context to context. Writing, on the other hand, seems to work in relation to the other practices so fundamentally that, without it, the remaining set would be something quite different from technical communication.



While writing is almost always examined in relation to other skills and practices in technical communication scholarship, a few studies have focused on writing more exclusively. For example, Farkas (1999) develops a set of rhetorical principles for writing procedural instructions. His study distinguishes between human actions and system actions, and he provides several alternative models for procedures (50). Isakson and Spyridakis (1999) investigate the influence of semantic (meaning-making) and syntactic (grammatical and structural) features of a text for helping users remember information. They make suggestions about sentence structure and the placement of key information that can help readers use a text more effectively in interacting with technologies and following procedures. Schneider (2002) develops guidelines for helping writers avoid ambiguity and for determining what "clarity" really involves in particular writing situations.

Other scholars have sought to answer the question, "what counts as writing?" in technical communication. They suggest that "writing" does not necessarily look like what we usually mean by writing in some contexts. Mirel (1996), for example, has examined the rhetorical strategies that make data reporting effective in database output. She found that the classical elements of rhetoric—invention, arrangement, and delivery—are essential factors to consider in "writing" with data. She also found that structuring and organizing data in ways "that support readers' interpretive strategies" is key to effective data communication (102). Finally, Winsor (1992) questions several assumptions we commonly make about the nature of writing—for example, that it involves free creation of meaning, that a human being must be immediately present when writing occurs, and that writing requires the use of words. Her consideration of the writing that accompanies and facilitates many engineering activities reveals that none of these assumptions necessarily apply and that creativity or individual choice about what or how one writes is limited, and sometimes not even possible.

All of the studies we cite have helped with understanding emerging trends and needs in technical communication, with defining further research, and with developing curricula and courses. However, what they have not provided, as Hart and Conklin (2006) suggest, are detailed insights into the day-to-day writing practices of technical communicators—insights into the perspectives of technical communicators as they write in a variety of settings. The research study that gave rise to this chapter helps meet this need.

Specifically, our research focused on technical communicators in ac-

tual workplace settings. We constructed a questionnaire asking respondents how much and what they write; how they write; their perceptions of what writing means and entails in their work; and their perceptions of the skills needed, and the relative importance of those skills, to write effectively. We sent the questionnaire to thirty practitioners, including technical communication managers, writers in industry, contractors, and writers in consulting organizations. Our respondents were geographically dispersed through the midwest, northeast, and southwest United States. We received completed questionnaires from twenty-four practitioners, who, on average, had been in their current positions for three years and in the field for eight. Sixteen had earned graduate degrees in technical communication or in a related field. We analyzed their responses both quantitatively, by counting instances of things mentioned, and qualitatively, by looking closely at the rich explanations respondents provided in answering our questions.

More specifically, for our quantitative analysis, we tallied responses to every question—for example, types of documents produced, time spent writing, number of projects worked on. Our qualitative analysis focused on the narratives respondents provided. Our questions were open ended, and respondents were encouraged to tell us, for example, not just whether, but also how and with whom they collaborate, as well as how they go about planning and developing documents. We began by identifying broad themes that ran through these narratives, and then we developed more specific categories within the themes that we used to code the responses. The narratives provide rich detail to support our heuristic.

## HEURISTIC

Our research, along with prior studies, points to a number of questions that new technical communicators can ask to determine what they will need to know and do within their work contexts. We present in this chapter a heuristic that groups these questions into six categories:

1. amount and quality of writing entailed and expected,
2. nature of the writing,
3. genres and rhetorical strategies,
4. approaches to and processes for writing,
5. knowledge and skills, and
6. personal traits and qualities.

Each of these categories gets at different aspects of the writing technical communicators do and the skills and qualities they need to do that writing. Answering the questions within each category can assist technical communicators, especially those new to the profession, with determining what might be expected and needed from them in their work contexts. In this section, we present and briefly explain the questions that make up each of the six categories.

### CATEGORY 1: AMOUNT AND QUALITY OF WRITING ENTAILED AND EXPECTED

The amount of writing technical communicators do involves two aspects of their work: their job description and the specific tasks and projects they work on. Although job descriptions do not typically state, for example, "A technical communicator in XYZ Corporation will spend at least 85% of her time in writing tasks," the typical duties of technical communicators in any organization may involve a fairly consistent amount of writing. That amount, however, may vary from one organization to another. In our study, the amount of time writers spent on writing tasks ranged from somewhat less than half of their work time to nearly all of it. Specific tasks are also likely to influence the amount of time spent writing. This could mean that a technical communicator writes a lot but that all of her writing tasks involve brief documents. It could also mean that a person spends considerable time on tasks that do not involve what we often think of as writing. Instead, a technical communicator may spend many hours meeting with team members, talking to subject-matter experts (SMEs), carrying out research, and so on.

Knowing how much you will write as a technical communicator is important for several reasons, not the least of which is determining how best to manage your workload, time, and resources. Technical communicators need to plan and make informed decisions about managing competing demands, satisfying managerial and employer expectations, and, most importantly, meeting deadlines. As a result, our questions for this first category of our heuristic include the following:

- How much time will I spend writing?
- How many documents will I write at one time? How many in a year?
- How important will it be to write well? And what does it mean to write well in my industry, field, and company?

The final questions relate to the quality of one's writing and how important that is, in the context of the organization in which the technical communicator works, in relation to a particular workplace task, and in the context of the larger industry or field. Quality can involve a range of concerns, from deadlines (How much time do I have to write a document?),

to what is at stake in the writing (Could readers be physically hurt if they do not understand my document?), to audience (Is it internal or external to the organization?), to the value placed on writing and other forms of documentation by the organization. How quality is defined may also vary depending on the project, its circumstances, and the organization—for example, does it mean mechanical correctness, technical accuracy, rhetorical effectiveness, or some combination of these? Further, does it mean that all documents must meet certain standards for usability or does it refer primarily to things like readability, visual appeal, and conformity to stylistic or design standards?

### CATEGORY 2: NATURE OF THE WRITING

The second category of our heuristic is concerned with determining the kinds of writing one will be asked to do as a technical communicator and what that writing will entail. The kinds of documents you are assigned, and where and how they originate, can greatly determine how you write. Therefore, we recommend these questions for this category:

- How much of the content for my writing will I have to research and develop from scratch? How much will I take or borrow from elsewhere? And what, then, will I need to do with it?
- What will be involved in writing original documents in my organization? Will I need to locate and interview subject-matter experts; locate in-house source documents; locate outside sources, such as books, research studies, or Internet sources?
- What will be involved in reusing or repurposing existing documents in my organization? Will I need to know where and how to locate such documents? Will I be provided the relevant documents at the start of a project? Will I need to verify the completeness or appropriateness of the documents with which I am provided? Will I need to conduct additional research similar to what I would do when writing from scratch?

Another common practice in technical communication is for writers to work in teams to develop larger documents that are assembled and disseminated in various ways. Knowing which of these practices you will be engaging in will have a significant impact on the tasks you undertake as a writer, and on how much time and what resources those tasks require. All of these approaches to writing are likely to involve research, but they may differ in the kind of research, sources, and skills required. The nature of the writing you do can also influence the tools and technologies you use, the way you organize your work, the amount of time you allocate to various tasks and projects, and the amount of control or ownership you will have, ultimately, over the documents you write.



### CATEGORY 3: GENRES AND RHETORICAL STRATEGIES

The third category in our heuristic is closely connected with the previous one. New technical communicators need to know what kinds of documents they will produce and what the requirements and conventions are for those documents. Technical communicators need to know a variety of genres. They also need to be able to move easily between genres, and they need to understand the conventions of various genres and why those particular conventions exist. Technical communicators need, as well, to be prepared to produce new kinds of documents, since needs and expectations evolve within most work contexts and with new technologies.

Technical communicators need, in essence, to know how versatile and flexible they will need to be, both in regards to the kinds of documents they will be asked to write and in regards to the rhetorical strategies they will need. The key questions for this category include the following:

- What kinds of documents will I write and in what situations?
- What genres do I need to know and understand?
- What are the conventions for those genres?
- What rhetorical skills and strategies will be most helpful to me overall and for the particular genres and documents I will need to produce?
- How will I learn about my audience? What will I need to know about it?
- How will I determine my purpose(s) in writing? How will that purpose (or those purposes) influence the documents I produce?

The questions in this category encompass the various rhetorical concerns inherent in the work of technical communicators—concerns with purpose, audience, persuasion, and so on. Such concerns always need to be at the forefront for writers, which scholars have long stressed. Rainey, Turner, and Dayton (2005, 323), for example, found the "ability to write clearly for specific audiences directed by clearly defined purposes" to be one of the most important competencies for technical communicators. Similarly, Kim and Tolley (2004, 382–383) found that rhetorical skills and knowledge of audience are essential for technical communicators. We also believe that technical communicators need to be diligent in seeking and obtaining sufficient knowledge of their audiences, and of the rhetorical contexts of their work more generally. In short, rhetorical skill and competency remain central in the field.

### CATEGORY 4: APPROACHES TO AND PROCESSES FOR WRITING

As the three previous heuristic categories show, there is no single approach to writing; it depends not only on individual preferences and skills, but also on the project, company, type of document, technologies used in documentation processes, and so on. Further, writing processes, for our purposes, encompass a full range of tasks, including research, planning, drafting, reviewing and editing, revising, proofreading, and publishing. We recommend these questions for this category, and there are a lot of them.

- How do/will I write?
- What might influence how I write (e.g., individual preference, genre, organizational context, industry, tools, work environment, project complexity, deadlines)?
- What research skills will I need for my work? Or even for a particular project?
- What will I need for a project in terms of tools, skills, resources, information, and time? (This question speaks to being able to break down a project.)
- Will I write alone or as a part of a team of writers?
- What will I need to know about reviewing and editing? Will I have to review my own work? Will I review the work of others?
- Will I be open to having my own work reviewed and edited? Who will review my work? What will they focus on?
- How will I assure the technical accuracy of my work?
- How will I make sure the reviews I receive are useful?

Technical communicators need both an awareness of themselves as writers and an understanding of how the work they do—and for whom and with whom they do it—may influence their writing process. Writing processes vary considerably from one organizational setting to another. Significant variations in processes can be connected to any of several factors: individual preferences and differences; types of documents; the industry; tools; the job setting and work environment; and the specific requirements of the project, including its deadlines.

### CATEGORY 5: KNOWLEDGE AND SKILLS

In addition to knowing oneself as a writer, technical communicators also need to possess technical skills and knowledge. What this encompasses is, again, highly variable, depending on such factors as organizational context, industry (e.g., finance, transportation, telecommunication, health care), position, responsibilities, and so on. The questions to ask in this category include the following:



- What technologies will I have access to in my workplace? What or how much will I be expected to know about those technologies? And what technologies, more generally, will I need to know (hardware, software, digital communications technology, new media, etc.)?
- What will I need to know about the industry for which I write? Also, will I be expected to understand the industry for which I write when I begin, or can I learn about it on the job?
- What will I need to know about the subject about which I write? Will I be expected to be an expert on the subject matter about which I'm assigned to write? If not, will I be expected to know how to find the information on my own?

As a field, we have long debated the importance of skill with and knowledge of technology, especially relative to other knowledge and skills. Some argue that such skill and knowledge are essential and primary—technology is, after all, what we're about as a field. Others, however, argue that such knowledge is secondary—that knowing how to write, for example, is much more important. Many recent discussions place the importance of knowing technology somewhere in the middle, arguing that such skill is important but no more so than putting it into a larger context of other knowledge. This is what we do. Our findings, on which we elaborate further in our extended example, come down to this: technical communicators need to understand technology, and this means they need an aptitude for learning technology. Hart (2000, 291) says, "Most experienced technical communicators have yet to encounter software we couldn't begin using productively within a day, and become skillful within about a week. Mastery can certainly take far longer, but most of what we do doesn't require that level of mastery." Technical communicators certainly need technological skills; more importantly, however, they need the aptitude to learn and begin using new technologies as needed in their work.

### CATEGORY 6: PERSONAL TRAITS AND QUALITIES

The final category of our heuristic concerns the personal traits and qualities that can help technical communicators with their writing. Our questions for this category are as follows:

- As a technical communicator, will I primarily be expected to work alone or closely with others?
- Will I be expected to plan my own work processes, or will I have projects mapped out in detail by a supervisor or team leader?
- How adaptable will I need to be? How open-minded?

- What will it mean to be adaptable and flexible in my organizational context?
- How important will learning and acquiring new knowledge be in what I do?

As an example of the importance of this category, much of the research we have cited about technical communication competencies supports our findings that interpersonal skills are essential. Hart (2001, 73) says that such skills include being willing and able to interact face-to-face and often across professional, cultural, and linguistic boundaries: "*Communication is about contact between two people, not simply an exchange of words*" (emphasis in original). Interpersonal skills—the ability to listen and ask questions, in particular—are also essential to writing and to carrying out research for one's writing.

Equally, technical communicators need an interest in and passion for learning as well as an ability to adapt easily to change. Giammona (2004, 354) quotes Jack Molisani, who says, "Today, I would say the ability to learn quickly and adapt, a tolerance for change, hands-on technical skills appropriate to what you are documenting, experience in the industry in which you are writing, and communication skills are key."

### HEURISTIC SUMMARY

Technical communicators can analyze writing tasks in terms of six categories, or aspects, of writing situations. First, different tasks and contexts will require different amounts of writing and different definitions of and expectations with respect to the quality of that writing. Next, writing can involve very different characteristics from one situation to another, for example, writing from scratch, repurposing existing text, writing alone, or writing in a team. Third, the situated nature of writing calls for different genres—reports, instructions, proposals, help systems, or web pages, just to mention a few possibilities. These genres and situations call for different rhetorical strategies—persuasion and argumentation, carefully documented factual presentation, formal or informal style, technical or less technical language, all depending upon factors such as audience, purpose, and what is or is not at stake with the document. Fourth, different tasks and projects require various approaches or processes: research, collaboration, review. Approaches and processes may also be governed by standards within an organization or industry; they may be determined as well by the technologies to which a writer has access. Fifth, writing tasks and situations call upon various kinds of knowledge and skills. Although job descriptions and interviews are written to help employers screen prospective employees based on the education and skills they bring to the job, a technical writer will have to assess the particular competencies that a task will demand and to continually acquire new content knowledge as well as develop new skills for emerging technologies and technical processes. Finally, different situations and tasks demand different personal qualities. Some jobs can be done by working alone; most require a great deal of interpersonal interaction, whether for close collaborative teamwork or for engaging in tasks such as interviewing and reviewing. They may also involve varying amounts of technical aptitude. One requirement of most positions in technical communication is the ability to learn quickly and independently. While occasionally workplaces may be highly structured and routine, most often the twenty-first-century corporate settings of technical communication require flexibility and adaptability.



### EXTENDED EXAMPLE

In order to see how our heuristic might be applied in the workplace, let's return now to our writer, Siena, as she starts her first technical writing job. We will follow her in this example as she asks questions from our six-part heuristic and learns what writing involves in the company where she will be working. We will also share what the writers from our research had to say in relation to our six categories.

### AMOUNT AND QUALITY OF WRITING ENTAILED AND EXPECTED

As Siena enters the field, she wonders first just how much of her professional time will be devoted to writing. Some of the questions she has for her supervisor include

- How much time will I spend writing?
- How many documents will I write at one time? How many in a year?
- How important will it be to write well? And what does it mean to write well in my industry, field, and company?

Siena's supervisor, Allie, will likely answer her questions about the amounts of writing she will do the way most of our respondents did: most technical communicators, especially those recently hired, spend the majority of their time writing. Eighteen of our respondents said they spend at least one-quarter of each day on writing or writing-related activities. Sixteen (almost 66%) said that writing is what they do, primarily, in their jobs. All but two said that at least 25% of their jobs entail writing.

Allie tells Siena that she will start with just one project, but that she can expect to be working on additional projects very soon. Some will be

short, but others will involve months of work. Allie cannot give Siena an exact number, but she guesses that Siena could easily complete "20 or more" writing projects in a year. Overall, our respondents reported working on an average of 4.3 projects at a time and 29 projects in a year. As an example, Roberta, a medical writer in an advertising agency, said she typically juggles 4 projects at one time and completes 18 to 20 in a year. Olivia, who works for a consulting company, estimated that 80% of her work day involves writing. She said she often juggles 8 to 10 projects at one time.

Writers also often need to make decisions about quality. Siena becomes concerned about this as she thinks about juggling several projects. Allie tells her that projects occasionally have different levels of importance, depending on factors such as audience, purpose, and different stakeholders. Related to this, our findings suggested the importance of understanding just "how good" one's writing needs to be in any situation. We were initially surprised that some of our respondents said that writing skill and quality were not the most important things for them. For example, Madeline, a documentation manager, said, "Even without stellar writing skills, if you care about the user's experience, your documentation will have value." She added, "I don't consider perfect writing skills to be the most important skill, at least in our organization." Claire, a proposal writer, said, "Writing ability is necessary, but if I didn't possess the top three skills [interviewing, time management, and industry knowledge], Pulitzer Prize–winning writing skills would be useless in this position."

Most of our respondents, however, ranked quality in writing high in their work. Most said the ability to write well was essential, both in obtaining and in advancing in their jobs. One of these, a writer in a contract organization, said, "When I first began in this type of work, the ability to write and coherently construct a document was critical to my success in the position." Another, who now manages other writers, said, "Writing and editing skills—this is still number 1 for me, primarily because I cannot teach it. And the strong need for these skills is what makes me require a BA in tech writing." This respondent added that writers need not "excel at *all* [her emphasis] aspects of writing . . . as long as they're enthusiastic about having someone pitch in where they have weaknesses." Further, the ability to write well was defined broadly by most respondents—as encompassing, for example, stylistic and mechanical accuracy, sensitivity to audience and purpose, rhetorical skill, editing, clarity, and conciseness.

### NATURE OF THE WRITING

In addition to how much writing she will likely do in her job, Siena wants to know the kinds of writing she will be asked to do and what that writing will entail. She asks Allie, "Will I need to create documents entirely from scratch, or will I mostly repurpose existing documents, for example, for the purpose of single-sourcing?" Allie, as a manager, is happy to hear Siena ask these questions because they are important ones for new writers. Siena needs to know how to approach the writing tasks she's assigned. She needs to understand what, precisely, she's being asked to do and why, where and how all of it will fit within the larger context of the department and organization, and so on. By understanding which tasks might be original and which might entail repurposing previous work, she can do a better job managing projects and balancing tasks. Allie might say, "You will do some work from scratch, but often your work will involve reworking existing documentation. However, most important will be making sure you know which you'll be doing before you even begin."

Based on our findings, we decided that the most important questions for this category in our heuristic are

- How much of the content for my writing will I have to research and develop from scratch? How much will I take or borrow from elsewhere? And what, then, will I need to do with it?
- What will be involved in writing original documents in my organization? Will I need to locate and interview subject-matter experts; locate in-house source documents; locate outside sources, such as books, research studies, or Internet sources?
- What will be involved in reusing or repurposing existing documents in my organization? Will I need to know where and how to locate such documents? Will I be provided the relevant documents at the start of a project? Will I need to verify the completeness or appropriateness of the documents with which I am provided? Will I need to conduct additional research similar to what I would do when writing from scratch?

Twenty of our respondents (more than 80%) said they spend at least part of their time creating documents from scratch and that doing so is central to their roles; however, twenty of them, some the same and some different, also said that they spend at least part of their time rewriting or repurposing existing documents. Char, a technical writing manager at a security software company, talked about how her work encompasses both kinds of writing: "Writing means creating the user documentation. We do repurpose most of our guides and quick-start cards, updating information for each release. There are always new products to document, so that requires creating new documentation." Char talked about updating existing documentation for new releases as well as about how existing prod-

ucts may also require entirely new documentation: "Sometimes, based on feedback from the Consulting Engineers, we create new documents (offshoots) for existing products."

In technical communication, repurposing documents typically involves preparing them for delivery in multiple formats. Since single-sourcing is now so common, many writers repurpose documents for this reason. Madeline, a documentation manager in a software company, said, "I spend time thinking about how to structure information so that it can be reused . . . When you move towards single-sourcing, you have to think about how to modularize information as well as how to set up the underlying template structure so that the content outputs appropriately for different types of deliverables." For other respondents, repurposing meant reusing existing text as a way to save time. For example, Claire, a proposal writer, said, "Since many of the same topics are frequently discussed, my department maintains a library of standard, or boilerplate, text that is available for use as is or customizable."

### GENRES AND RHETORICAL STRATEGIES

Building on the previous questions, Siena also asks Allie if she can give her some idea of the types of documents she will be developing, including whether a new version of an existing document will be the same type of document as the original. At this point, Siena also should begin considering the larger rhetorical context of her work: Who will her audiences be for her writing? How will they read and use what she produces? What will be the purposes of the documents she produces? And finally, in what ways, if any, should her writing project an image of the company or the product? Allie may well tell her that in some situations these aspects of a project are spelled out very precisely; for many projects, however, the writer, or the team, ends up working and reworking these issues throughout the project.

In relation to the questions for this category of our heuristic, our research suggested that technical writers produce a variety of documents. When we reviewed the completed questionnaires, we counted fifty different types, which we ultimately grouped into thirty categories. The largest category, as might be expected, was that of manuals, guides, instructions, tutorials, and job aids (there were forty-one mentions of these). There were twenty-one mentions of documents such as newsletters, newsletter articles, articles for other kinds of publications, press releases, press kits, and blogs, and about twelve mentions of reports, product reviews, and minutes.

On average, each of our respondents writes eight kinds of documents.



Many are genres we commonly associate with the field, although new types of documents associated with new media are increasingly being added to these lists. As an example of the variety we found, Cecelia, one of the writers at a tax and accounting software company, listed the following: "Getting-started guides, installation instructions, walk-throughs/tutorials, user bulletins, report samples, online help (WebHelp), Captivate sequences (animated demos), training guides, conversion/comparison guides (guides for transitioning from one product to another), status reports, meeting minutes." Lists like these suggest that technical communicators need to know a variety of genres. They also suggest that writers need to be able to move easily between genres, and they need to understand the conventions of various genres. Technical communicators also need to be prepared to produce new kinds of documents, because needs and expectations evolve within most work contexts and with new technologies.

Finally, in relation to our questions about audience and purpose, we found that a common guiding principle for most technical communicators is that everything is driven by the needs of audiences. So how do technical communicators learn about their audiences? Diane, who writes for a financial company, relies on a variety of resources—her manager initially, but primarily the users themselves through interviews, follow-up queries, and observations. In our study, five respondents said they employ user interviews, and three of these also talked about observing the user with the product.

It did surprise us, however, that only six of our respondents (a quarter) talked about having direct contact with members of their audiences. The remainder (three-quarters) talked about having to rely on others in their organizations, on clients, on product documentation, and even on intuition. Within their organizations, audience information came from managers, SMEs, editors, sales representatives, and client representatives. While people in these roles may be familiar with users, accepting their assessment of audiences for technical documentation purposes presumes a familiarity with audience, especially as a rhetorical concept, that they very likely do not possess. What we conclude from these findings is that technical writers need to be diligent in seeking and obtaining sufficient knowledge of their audiences, and of the rhetorical contexts of their work more generally, employing a full range of strategies. In short, a writer like Siena may realize that she needs to begin thinking about her audiences as soon as she is assigned a project, and that she needs to be strategic in learning about and considering how best to address them. Directing questions about audience and purpose to her manager might be just one of multiple strategies Siena uses to establish an effective course for her work.

### APPROACHES TO AND PROCESSES FOR WRITING

The next category of our heuristic concerns how technical communicators actually write. Siena, in all likelihood, learned in school that there is no single writing process that works in every situation. She probably also developed confidence in her ability to write well. However, she wonders if she can count on that confidence in her new situation. Some questions she will ask Allie include

- Are any processes already set in place that I will be expected to follow, or can I work according to my preferences?
- Are the genres of writing specific to the company or to the industry?
- How complex will my projects be, and how firm are project deadlines?

In response to these questions, Allie informs her that the company has "SOPs—standard operating procedures"—for different documents, but that standards need to be adapted to particular situations because every project is unique. As she considers Allie's response, Siena also likely realizes that it often may be up to her to figure out the best process for each project.

Once Siena is assigned her project, she will likely have to determine, first, how best to research it. As most of our respondents acknowledged doing, she will need to consider questions like these:

- Who are the appropriate SMEs, and how accessible are they?
- Are there documents already existing that support or explain the technology?
- Can I get access to and use the technology?

After Siena has researched the product and its users, she will begin, at some point, putting words, images, or multimedia together to compose the document. She will then need to know the answers to such questions as

- What tools and skills are required for the project?
- What will be the best way to break the project down into stages of development?
- Will I need to team up with other writers on some stages of the project?

This is where writers put their rhetorical knowledge to work in the service of the actual writing. As suggested previously, effective writers have a repertoire of rhetorical strategies they can draw on. More than a few



of our respondents, for example, talked about planning their documents very deliberately, often by using outlines and templates. For these writers, organization of the document is a primary concern. Others talked about creating planning documents to move into composing, and some talked about diving right in and drafting.

Finally, Sienna should understand the review and editing process in her company. She will want to know

- Will I edit my own work?
- Will I edit the work of others?
- Who checks the technical accuracy of my work?

Several of our respondents stressed the importance of the review and editing stages of the writing process, emphasizing the contributions that others can make to one's writing. In fact, more than half said that editing their own and their colleagues' work is one of the tasks they do most often. Maureen said that in her organization, which is focused on marketing, "Everything is reviewed by someone else." Further, she said, "account managers assign projects to me, and then review what I've written to double-check I've covered the client's requirements AND adhered to brand standards."

The review processes our respondents described were almost as varied as their writing processes. Susan, the manager at the company specializing in tax and accounting software, described a review process that involves a range of constituents: "When the SME is happy with the doc (or, often, when they've run out of time to hone further), the doc is routed for formal review to multiple departments: Development (which includes the SME), Support, Training, at least one other Tech Comm staff member, and other interested parties (e.g., Sales) as required." The process Susan described is a complex one that involves negotiation, interaction, and sometimes even office politics.

### KNOWLEDGE AND SKILLS

Technical communicators like Siena also need to possess technical skills and knowledge. This certainly involves skills with the technologies needed to write, design, and edit documentation. It also includes knowledge of, or ability to learn about, the technologies they will write about: for example, finance, transportation, telecommunication, health care, and so on. Siena, therefore, wonders how prepared she is for the demands of a real professional workplace. The questions she'll want to ask herself—or her manager—include the following:

- What technologies will I need to know (hardware, software, digital communications technology, new media, etc.)? How much skill will I need with these technologies?
- What will I need to know about the industry for which I write? Also, how important will it be to be familiar with the industry for which I will be writing?
- What will I need to know about the subject about which I write? Will I be expected to be an expert on the subject matter about which I'm assigned to write? If not, will I be expected to know how to find the information on my own?

Siena needs to be flexible in learning and using technology, both that which is new to her as well as that which she may already know but may be using in new ways or for new purposes.

Our respondents certainly agreed that technological skill is important: nineteen ranked it among the top skills they themselves have. Fourteen also said that knowledge of technology was essential for obtaining their jobs. Maureen, a writer in a marketing agency, summed it up: "The computer is king. If you can't use it, you're dead. I work from my home office, and spend 95% of my work time in front of the computer." Susan also stressed the importance of technology, but said that for her it is not number one: "Obviously, we need writers who are comfortable with the considerable technical aspects of the job and who won't panic when the software they're documenting crashes repeatedly, as software under development so often does. And it's definitely an advantage if they've had some experience in the actual tools that we use. That said, I never hire based on tools expertise because (a) they change all the time, and (b) we can teach these skills to a new writer." On the topic of writers learning tools, Susan had this to say: "I want writers to become experts on the product they document, not on a certain type of deliverable and the tools used to develop it. So everyone in TC needs to learn most of these tools. This makes for some variety in their work, but it means they have to be flexible and quick learners."

When asked what they use in their everyday work, respondents identified sixty-four different tools. We were also able to pull from our data several areas of specialized knowledge that relate to technology. These include knowledge of document design, web design, project management, multimedia design, content management, editing, single sourcing, and computer programming. Of course, mastery of all of these tools and areas of knowledge would be impossible, which is, again, why so many of the respondents stressed the ability to learn new tools. Further, outside of



Microsoft Office and a few other tools—namely Dreamweaver, Photoshop, FrameMaker, and RoboHelp—most tools were mentioned by only a few respondents, suggesting that there is great variety in what writers in the field are using.

### PERSONAL TRAITS AND QUALITIES

As she gains experience, Siena increasingly realizes that she is going to have to deal with many different personalities and work styles. Her coworkers also will tell her that projects seldom proceed as anticipated, and, as a result, she will often have to respond to contingencies. The questions she will want to ask herself, and perhaps her manager, include the following:

- As a technical communicator, will I primarily be expected to work alone or closely with others?
- Will I be expected to plan my own work processes, or will I have projects mapped out in detail by a supervisor or team leader?
- How adaptable will I need to be? How open-minded?
- What will it mean to be adaptable and flexible in my organizational context?
- How important will learning and acquiring new knowledge be in what I do?

All of the writers who responded to our questionnaire identified traits and qualities that they have found important in their work. Interpersonal skills, for example, were viewed by most of our respondents as essential. Few jobs exist in which technical communicators work alone, with little or no need to talk to and negotiate with other people. Time and again, previous studies and our own research have made it clear that the technical communicator needs to be a "people person," outgoing, good at oral communication as well as writing, and adept at working effectively with a variety of people. As mentioned previously, technical communicators also need an interest in and passion for learning as well as an ability to adapt easily to change. Our research supports this. In short, if our writer, Siena, loves learning and has a desire to learn—if she's someone who is not afraid to learn new things—she will likely do very well as a technical communicator.

## CONCLUSION

The twenty-first-century technical communication workplace is not monolithic. Your formal education is a vital foundation for a career as a technical communicator, but you also need to continue learning, and this

starts the first day on the job. It is common for technical communicators to change jobs, often because they want the challenge of working in a new industry or of doing different kinds of writing. Many also take on added responsibility or new roles within their organizations (e.g., as managers or supervisors). As our writer, Siena, advances in her career, she will very likely internalize the heuristics we have made explicit in this chapter, but she will continue to seek answers to the questions about writing in whatever new situation and context she finds herself.

In particular, she will look for indications of what is expected in terms of good writing and how it is typically accomplished for particular tasks. She will want to see how genres are adapted to workplace contexts, subject matter, organizational goals, user needs and expectations, technologies and media, and other factors specific to a situation. She will expect to have to learn new subject matter, new writing and editing technologies, and new project and content management tools. She may also have to learn to work in organizational structures that are different from any in her past experience. She may have to work with colleagues, clients, or users whose cultural or national backgrounds are different from her own, or who speak English differently than she does. But one thing will probably remain the same for Siena—she will enjoy and welcome the challenges of new technologies; of working with a variety of people; of figuring out organizational processes, structures, and cultures; and of developing communication products and processes that truly connect with others to help them do their work.

### DISCUSSION QUESTIONS

1. Our research suggested that knowing your audience is one of the most important things in technical communication. What are some possible approaches to learning about audience? What can you do when you aren't able to talk directly with the members of an audience? What might be some other ways to find out about the people who will use what you write?
2. How would you describe yourself as a writer? What do you believe are some characteristics or qualities you possess that will assist you with the writing you will do in your career?
3. You probably have learned a lot of research skills in school. You may also have done client-based projects in some of your technical communication courses, where you had to apply these skills to the projects that the clients asked you to do. Based on your own experience and the findings from our research, what research skills do you think will serve you best as you begin your work in the field? How do you anticipate using those skills?
4. Susan, the technical communication manager at a tax and accounting software company, said, "I want writers to become experts on the product they document." Assuming you do not have such expertise when you are hired, what strategies might you use to become an expert, as she suggests? How much time do you think you would need to acquire the expertise you need?
5. How important do you believe it is to be familiar with the industry for which you will be writing? How might you acquire that familiarity? Also, do you think it will be more important to know about writing and to have the skills for being effective as a writer? Explain your perspectives on this.
6. Arrange to interview a technical communicator in a local industry or organization. Plan your interview to focus on a sampling of questions from at least three of the heuristic categories in this chapter. Report to your class on how closely the technical communicator's perspective aligns with what we've reported from our research in relation to these categories.
7. How might the technology used in your professional workplace compare with or differ from the kinds of technology you learned in school and the ways you used it in school? How can you best prepare yourself for using the technology that you may end up using in your work?
8. Find a technical document for a technology that interests you. Assume that you work for the company that developed this technology and that you have been asked to write another document about the technology for a different purpose or audience. Outline a plan for completing this task, using some of the relevant heuristic questions in this chapter.
9. Do you believe that your education has prepared you adequately for the writing you will do in your job? In what specific ways might that writing differ from the writing you did for your courses, both within and outside of technical communication? You might also contact a technical communicator in the workplace and ask what courses they recommend you take and what they believe you should know before completing your program and entering the field.
10. Working with another student, find technical communication job ads that interest each of you. Then take turns interviewing each other for the job you chose. As the interviewer, plan interview questions based on the ad but also using ideas from the heuristics in this chapter. Do not tell your partner what the questions will be prior to the interview.

As the interviewee, prepare for your interview by relating the heuristics in this chapter to the requirements of the ad. What qualities, knowledge, skills, and experience do you have that you think will make you a good candidate for the position? What requirements do you lack? Can you present yourself in ways that could compensate for what you lack? Do the heuristics help you do that?

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