

# 9 WRITING TECHNICAL CONTENT FOR ONLINE SPACES

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Until this century, printed manuals were the standard genre for technical documentation.<sup>1</sup> If you bought software (e.g., a word processing program) or hardware (e.g., a computer), you received a hard-copy user manual with information about the product and instructions about how to use it. If you worked as a technical communicator, your job likely involved creating content for print user manuals.

Although print manuals were the conventional and dominant format for product information and instructions for many decades, they have several shortcomings:

- They are expensive to produce. They often run to hundreds of pages, and the associated production, printing, and shipping costs are high.
- Although technical content dates quickly, manuals are slow and expensive to update. This results in a situation where printed manuals are often out of date, refer to a different version, or have inaccurate information. These inaccuracies reduce the credibility of the organization, and, more seriously, lead readers to make errors. You have probably had to use manuals with inaccurate instructions. It is frustrating and can even be dangerous.
- Printed manuals also pose usability problems for readers, who have to navigate long documents, sometimes hundreds of pages, to find answers to questions or learn how to use software, machines, or services.

In sum, printed manuals served a purpose in terms of providing needed instructions and information, but they were cumbersome to develop, produce, update, and use.

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In the past two decades, print manuals have become less prominent, and the term “technical documentation” has given way to the broader concept of “user assistance.” User assistance acknowledges that users access a variety of resources on different platforms and devices to learn how to carry out tasks using a product or service. Online user assistance formats include web content, knowledge bases, video, discussion forums, tutorials, e-learning courses, and user interface text. Unlike traditional printed user manuals, this approach enables users to access only the information they need, when they need it, in short, targeted chunks, known as topics. Topics have a limited and specific purpose. They may be delivered on a website as a response to a user query or combined in different ways and delivered in multiple formats. You probably often use topic-based online technical content. For example, if you need to learn how to use a feature of a software program, you might access a website with targeted information that responds to your specific query.

Because various types of user assistance have become more prominent, approaches to developing content have also changed, and many technical communicators now work in teams, creating short-form content, or topics. As a technical communicator, part of your job may involve developing topic-based user assistance content.

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### TOPIC-BASED WRITING: A NEW RHETORICAL SITUATION

Accessing and using content in manuals is quite different to accessing and using topic-based content. A key difference is that manuals are linear, with an obvious beginning, middle, and end. Consider how you read a book. You have static navigation devices: e.g., page numbers, a table of contents, section headings, and an index. Users access topic-based content, on the other hand, using specific, personalized search queries. Consider how you search for and use information online. To find and navigate information, you rely on very specific contextual cues, like clear titles, short descriptions, and headings, as well as navigation devices like links to related information.

Because users access and use content in different ways in manuals compared to topics, it follows that different processes are involved in planning and developing content for these two formats. For this reason, you need to be familiar with and understand the differences between topics and manuals, the characteristics of topics, and the writing and rhetorical skills required to create content for, and to work in, such contexts.

Of course, print manuals still ship with many types of products, e.g., cars, home appliances, and self-assembly furniture. Developing content for manuals that will be printed or delivered as PDFs continues to be their main job for some technical communicators. Nevertheless, the new context for technical writing in many situations is to develop short-form, topic-based content. The focus of this chapter, therefore, is on the trend towards online, topic-based user assistance, that has replaced manuals for many types of products and services.

## RESEARCH BASIS FOR TOPIC-BASED USER ASSISTANCE

Several research developments influenced the shift from long-form linear manuals to modular content in the form of topics. Among them, two were pivotal: Information Mapping®; and minimalism.

Information Mapping® is a system of organizing complex technical information into labelled chunks, developed by Robert E. Horn. It is characterized by information blocks—units of information, and information maps—collections of blocks (Horn 179). Its principles include:

- Categorizing information into types: e.g., procedures or concepts.
- Chunking information into individual blocks.
- Labelling each information block to tell readers what they are reading, and to enable them to scan the content for parts that are relevant to them.

Content designed using Information Mapping® principles is faster to read, easier to process and recall, and results in more accurate task completion (Information Mapping Inc. 11). This system has influenced topic-based writing in several ways, as we will see later in the chapter.

Figure 9.1 shows an example of a document designed using information mapping principles. The document is an information map. Each chunk of content is an information block. The figure shows how this content is easier to scan and to process than long paragraphs of text with no contrast, which is one of the main benefits of information mapping.

John M. Carroll's research on minimalism in the 1980s demonstrated the poor usability of manuals, and advocated task-focused user assistance in minimalist documentation. Carroll rejected the prevailing tendency for instruction manuals to concentrate on explaining a system, instead of helping users to complete tasks using the system. His research was instrumental in the movement towards short-form instruction and topic-based content. These four principles of minimalism (van der Meij and Carroll 21) have influenced the design of instructional materials:

<b>How to design information using an information mapping® approach</b>									
<b>Introduction</b>	This document explains the terms, rules, and advantages of information mapping.								
<b>Terms and Definitions</b>	Information mapping uses these key terms. <table border="1"> <thead> <tr> <th>Term</th> <th>Definition</th> </tr> </thead> <tbody> <tr> <td>Information units</td> <td>Organizing content into chunks and modules.</td> </tr> <tr> <td>Mapping</td> <td>Formatting content to show relationships and functions of parts of the content.</td> </tr> <tr> <td>Information types</td> <td>Categorizes content according to its function.</td> </tr> </tbody> </table>	Term	Definition	Information units	Organizing content into chunks and modules.	Mapping	Formatting content to show relationships and functions of parts of the content.	Information types	Categorizes content according to its function.
Term	Definition								
Information units	Organizing content into chunks and modules.								
Mapping	Formatting content to show relationships and functions of parts of the content.								
Information types	Categorizes content according to its function.								
<b>Rule 1: Replace prose with structured text</b>	Use information blocks instead of paragraphs.								
<b>Rule 2: Replace prose with graphics</b>	Use tables and charts to illustrate data. Use decision graphics and flow charts to illustrate procedures.								
<b>Rule 3: Use consistent terms</b>	Avoid unnecessary variation in terminology. Use terms precisely.								
<b>Advantages of the method</b>	Enables readers to scan. Enables readers to understand the content. Enables readers to read more quickly. Ensures a common understanding of content. Reduces errors and risks.								

Figure 9.1: Content Designed Using Information Mapping Principles.

1. Choose an action-oriented approach. This principle recognizes that people want to get started with a product immediately, and instruction should support users' desire to act.
2. Anchor the tool in the task domain. This principle explains that instruction needs to describe tasks that users can do, rather than features of the system.
3. Support error recognition and recovery. This principle suggests that writers should try to prevent errors and help users to recognize and fix errors they do make.
4. Support reading to do, study, and locate. This principle is concerned with ensuring that instruction does not overload users but helps them to find additional information if they need it.

This four-part approach to minimalism enhances usability by shifting the focus in instructional materials to what people need to do with a system,

instead of describing the features of the system. The key characteristic of research on minimalism that influenced topic-based writing was the focus on user tasks. Further, Carroll's work "influenced an IBM technical writer to architect the original DITA [Darwin Information Typing Architecture] schemas for structuring content" (Evia 35). As we will see later in the chapter, DITA is a predominant standard in topic-based writing.

## THE EMERGENCE OF TOPICS

From the early 1990s, the research of Carroll, Horn, and others led to changes in the design of user assistance. For example, experts including JoAnn Hackos and Ginny Redish explored why structured content with less text is suitable for online readers.

By the 1990s, many software products shipped with online help as well as, or instead of, printed manuals. Online help continued to use a book metaphor, but it introduced the genre of topic. Each "book" contained individual topics (akin to pages in a book) that explained a concept or listed steps in a procedure. Help systems also continued to provide navigation options that corresponded to print manuals, such as a table of contents and an index. They were innovative, however, because they offered additional navigation features that were absent in print manuals: e.g., hyperlinks and search tools. These navigation features have become commonplace in online systems, but they were novel in the 1990s. Users could perform searches of a whole database using a search tool, instead of using an index, or chapter or section titles, to find content. Topics also contained hyperlinks to related topics. Technical communicators wrote topics and created help systems using help authoring tools (HATs), such as *RoboHelp*. For users of the help system—e.g., in a word processing application like *Microsoft Word*—the results were presented in topics, each of which responded to a unique and specific query (e.g., how to copy text, or how to save a document).

The internet has changed how many types of user assistance are created and delivered. Today, instruction manuals are often published online in PDF format, and are less likely to be printed and shipped with a product. A more significant change is that online topics have replaced manuals and online help for many types of products and services, especially for software, applications, and online services.

Recently, we have seen an increasing focus on personalization, the practice of presenting users with the information they need in the moment, and that is specific to their context of use. As we will see later in the chapter, several features of topic-based content enable it to be personalized.

## TOPIC CHARACTERISTICS

A topic is a unit of information, usually about a single subject. Topics are structured, classified according to type, and designed to be personalized and reusable. Mark Baker used the phrase “every page is page one” (also the title of his book on the subject of topic-based writing) to describe a central characteristic of topics. Each one is self-contained, and when readers encounter a topic, it is outside of the context of any other information on the subject. As writers, we have to work on the assumption that every topic we write may be the first or only information readers encounter: hence, every page is page one (EPPO). We cannot make assumptions about what the reader already knows about the subject. Unlike a manual that a reader is likely to read, or at least perceive, in a sequence, a topic has to function as an independent rhetorical unit.

### “EVERY PAGE IS PAGE ONE” (EPPO) CHARACTERISTICS

Baker described seven characteristics that define topics.

1. **Topics are self-contained.** You will find all the information you need to complete a process or understand a concept in an individual topic.
2. **Topics have a specific and limited purpose** (Baker 88). The content is modular, so each topic can be a building block for a larger document. But a single topic has all the information a reader needs for a specific procedure or concept.
3. **There are different types of topics**, each type with its own characteristics. Each topic has characteristics that identify its type (Baker 97): e.g., procedural topics list steps.
4. **Topics establish their context.** They explain the situations in which they are relevant, either through text (such as titles, headings, and short descriptions) or visuals. This characteristic helps readers to orient themselves.
5. **Topics assume the reader has a certain level of expertise** (Baker 123). They do not explain basic information, only the amount of information needed for the subject at hand.
6. **Topics “stay on one level”** (Baker 130). They do not switch between beginner and expert levels, or abstract and concrete information, for example.
7. **Topics include links.** Although each topic only covers one concept or procedure, abundant hyperlinks enable readers to find out more about related concepts and procedures. This feature makes topics flexible for users.

If you have ever accessed an online support or help center, you have probably used topic-based content.

The best-known system for implementing topic-based writing is DITA. This system is based on XML (eXtensible Markup Language). DITA has many advantages, including its focus on structure and information types, and its potential to enable reusability and personalization. DITA is used in many technical communication workplaces, and you may see job advertisements that mention, or require applicants to know, DITA.

## DITA TOPICS

DITA was originally developed by IBM, and in 2005 it was donated to Oasis, the nonprofit standards body for open-source projects. The Oasis DITA specification defines a topic as “the basic unit of authoring and reuse. All DITA topics have the same basic structure: a title and, optionally, a body of content. Topics can be generic or more specialized” (Oasis “2.2.1.1 *The Topic as the Basic Unit of Information*”).

All DITA topics are structured; each piece (or element) of content is labelled, and each element has a specific function. DITA topics usually have all the following elements. Some topics will have many additional elements.

- **Topic:** every topic in DITA begins with a topic element, written as `<topic>`. This element contains the topic ID, as well as other attributes (e.g., the product name or the target audience).
- **Title:** every topic contains a title.
- **Short description or abstract:** this element provides some context about the content of the topic.
- **Prolog:** this element contains metadata about the topic.
- **Body:** this element contains the main topic content, in paragraphs, lists, and so on.
- **Related links:** topics enable readers to read around a subject, and to get more information if they need it, through abundant hyperlinks.

These elements are key to document creation because they allow you to create and sequence content in ways that are consistent and user-friendly.

Technical communicators use markup to identify parts of a topic in DITA. If you have used HTML, you know that markup tags provide information about content, but the user does not see the markup, only the content. Figure 9.2 shows an example of a DITA task topic. The information enclosed in angle brackets (`< . . . >`) is markup. This is not part of the content; it identifies elements of the content (e.g. the title, short description, context, and individual steps in the procedure).



```

1  <task id="0001">
2    <title>How to save a file</title>
3    <shortdesc>Whenever you create a file, you need to
.   save it to be able to access it later.
4    </shortdesc>
5    <taskbody>
6      <context>File saving is an essential office
.   administration procedure. In almost any application you
.   use, you will need to save files.
7
8      <steps>
9        <step><cmd>Click on the File menu.</cmd></step>
10       <step><cmd>Click on the Save menu item.</cmd></step>
11       <step><cmd>Type a name for your file.</cmd>
12       <step><cmd>Select a location to save your file, that
.   you will be able to access later.</cmd>
13         <info>make a note of the file name and location
.   to be sure you can access the file later.</info></step>
14       <step><cmd>Click on Save in the dialog box.</cmd>
15     </steps>
16     <result>Your file is now saved to the location you
.   selected and using the file name you typed. </result>
17     <postreq>You can access the file whenever you need to
.   use it again!<CDATA[<?xml version="1.0"
.   encoding="UTF-8"?>]>.</postreq>
18   </taskbody>
19 </task>
20

```

Figure 9.2: DITA Topic with Markup.

Topics are combined into larger collections of content using DITA maps. A map is a list of all the topics about a subject, and it describes a particular combination of those topics. It is roughly analogous to a table of contents for a book. Maps “organize topics and other resources into structured collections of information. DITA maps specify hierarchy and the relationships among the topics” (Oasis “2.2.2.1 Definition of DITA Maps”).

Although DITA is widely used, it is quite complex and restrictive, and some writers and writing teams prefer to develop topics using other tools. Many alternatives to DITA have emerged. These include Markdown, Lightweight (Lw)DITA, AsciiDoc, DocBook, and schema.org. Some writing teams use wikis to create collections of topics, and some even create topics using word processing applications like *Microsoft Word*.



## INFORMATION TYPES

As content users, we expect different types of information to have different characteristics. For example, procedures have steps, recipes have lists of ingredients, forms have fields to be completed, meeting minutes have notes and action points, and so on.

Likewise, structured content is organized according to its type. A feature of DITA, for example, and as its name suggests (Darwin Information Typing Architecture), is that content is categorized by type. Three types of topics are widely used: task; concept; and reference.

- Task topics provide instructions, usually organized in steps, that explain how to do a procedure: e.g., how to set up a social media profile.
- Concept topics explain an idea or give background information, e.g., what a profile is and its purpose.
- Reference topics usually give some kind of extra information, often in tables, e.g., features lists.

These classifications allow the system to ensure that topics are fit for purpose. They “tell the writer how the topic should be written and [tell] the reader how it should be read” (Baker 97).

## SINGLE SOURCING, CONTENT MANAGEMENT, AND REUSABILITY

You may have heard of the term “single sourcing.” This practice involves creating small chunks of content that are centrally stored and can be assembled for use in multiple output formats (Bridgeford 3). This is an important principle in topic-based writing. Topics are written once and stored in a single location, such as a content management system or a database. A technical communicator creates a topic in one source file that can be used in multiple artifacts, e.g. the same content can be used to create instructional topics, knowledge base articles, and website content. Several topics can be combined to produce a longer product, such as a PDF.

A drawback of traditional publishing and printing is that it is difficult to reuse content that is stored in a single, and often sizable, file such as a PDF. Extracting short segments to reuse in other output formats (e.g., on a website) is complicated. The main advantage of single sourcing is that content only needs to be created once, but if the content is managed effectively, it can be reused multiple times.

Reusability is an important goal for organizations because it saves on the costs of developing new content for each version of a product or each

device or platform on which the content appears. Effective content management also ensures consistency, because the content only needs to be updated once in the source file, and the updates are reproduced in the output, wherever that content is used. Single sourcing and reusability depend, therefore, on effective content management.

## STRUCTURED CONTENT

An important characteristic of topic-based writing is that topics are structured. Evia discusses our “obsession with order and rules” (37) as a long tradition in technical communication, and one that helps readers to process content. Structured content is a method of ordering topic content in a specific way that can be processed by machines. This feature means that it can be reproduced in different ways for different types of user and product. In other words, it can be personalized. Structured content also helps organizations to streamline translation and localization processes (Wachter-Boettcher 155). This is an important consideration when online content needs to be offered in multiple languages.

Structured content has characteristics that users do not need to be aware of, but that technical communicators need to use and understand. One characteristic of structured content is that content is separate from formatting. If you usually develop content using a word processor, like *Microsoft Word*, your document layout and content are integrated. You apply styles (such as headings, bullet points, or captions) to parts of your text as you write. The disadvantage of this approach is that it restricts how you use the content and its constituent parts. It also ties your content to an application. When you copy your text into another application, the formatting may not transfer, or may look different.

To structure content, technical communicators label each element of content to show its function, e.g. heading, body text, caption, list, and so on, but they do not apply formatting (e.g. type size, font, or space) to the element. The content formatting is described in a separate style sheet, and formatting depends on how the content is delivered to the user, e.g. depending on their device and application.

As you can see in Figure 9.2, which is structured using DITA tags, the content is described using tags that explain its structure (e.g., title, steps, result) but the content is not formatted, and the tags do not describe the formatting. The content will look different on different platforms, or depending on how it is combined with other content to build a personalized information product.

## USER BEHAVIOR AND PERSONALIZATION

Think about a recent product you bought or a service you wanted to use online (e.g., setting up a social media account). How did you figure out how to proceed?

As Carroll's research about minimalism showed, users want to explore and get started quickly. They often attempt to use a product before reading instructions. They may try to use even complex applications without accessing user assistance. If they encounter an error or struggle with a task, they may search for an answer online. If the search produces multiple possible answers, they have to select from among the many options, and perhaps deal with information overload.

For these reasons, users are often frustrated. They need user assistance that is clear, concise, targeted, and precise. It must help them to deal with their current situation, whether they are trying to understand a feature or solve an immediate problem. Instead of navigating through a whole website or system, they want to read only the content that is relevant to their query. This is known as personalized content.

Content that is structured and managed facilitates personalization. Topics can be combined in different ways and output formats, for different devices, depending on the user's query and context. When users have a problem or a query (e.g., how do I access a service?, or how do I set up or start using a new product?), they may find assistance on a knowledge base, a self-service portal, a website, or a video platform. All these sources use content developed by technical communicators; in many cases that content is topic-based, and it is often multimodal—a combination of text and images or video. The content is generated for the user, based on the user's query, the device, the mode of delivery, the application, and other user criteria. Effective personalization depends on effective use of metadata.

## THE IMPORTANCE OF METADATA

You have probably heard the term “metadata” many times. Metadata are data about data, or information about content. The reader does not usually see the metadata, but the information enables the content to be stored, accessed, retrieved, sorted, and delivered to the right user depending on their query. Metadata are, therefore, essential for ensuring that content is reusable and can be personalized. Examples of metadata include:

- File name
- File size
- File location

- Change history
- Audience
- Author name
- Word count
- Keyword
- Tags (e.g., in a DITA file) that define parts of the content (e.g. title, headings, lists, captions, and so on).

If you look at the properties of a document in a word processing program, for example, you will see various types of metadata. Some fields are already populated by the program, and you can add others (e.g., keywords or comments). These metadata will not be visible to the reader, but they contain important information that can identify a file in a database.

Figure 9.3 shows metadata for the *Microsoft Word* document for this chapter, its Summary Properties. Some of these metadata were generated by the program (e.g. the file name). I added others, including keywords and comments. You will not see this information in the final chapter. These are data *about* the chapter.

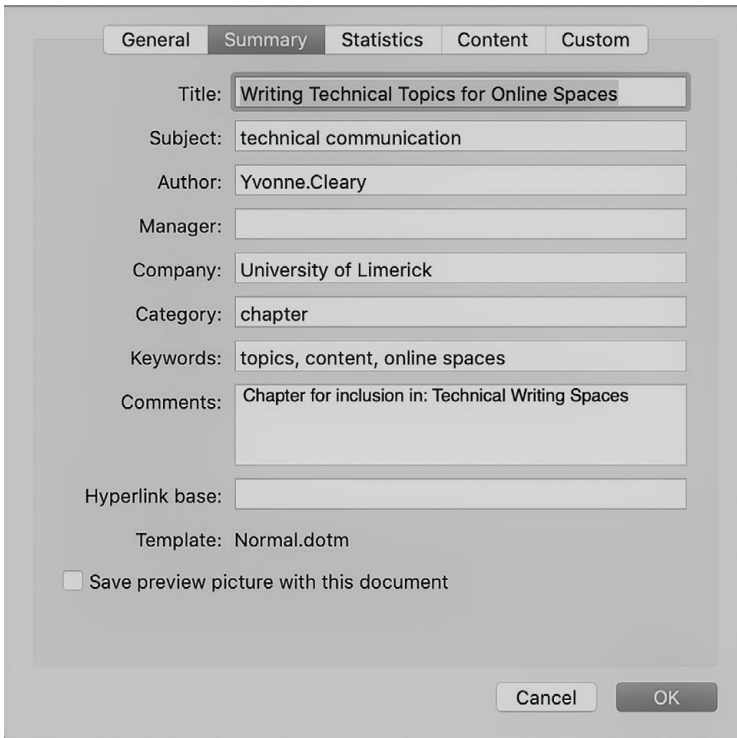


Figure 9.3: Chapter Metadata: Summary Document Properties

## WRITING TOPICS: WHAT WRITING SKILLS DO YOU NEED?

You need to employ varied skills to write effective topics. Although this type of writing may seem simple, because it is minimalist, in fact, you will need to master many writing skills:

- **Applying technical writing principles.** Many of the writing principles you learn on technical writing courses apply to writing topics. You need to write in a clear, direct, active style that is appropriate for the audience, to ensure your content is clear and understandable. You also need to reduce verbiage and roundabout phrasing. Users need topics that are precise, clear, and concise.
- **Summarizing content.** Writing abstracts/summaries is a technical writing skill that is applied in many writing contexts. For example, reports, journal articles, and e-learning content all contain summaries. In topic-based writing, topics usually include a short description that summarizes the content.
- **Selecting appropriate content.** In any rhetorical situation, you have to develop the skill of choosing content that is relevant, helpful, and appropriate. The principle holds in topic-based writing. Users do not want to be patronized with information that is too basic, or confused by information that is too advanced. Your topics must be purposeful and helpful. Even though topics are usually short, decisions about what content to include, and what to omit, require skill that comes with practice and experience.
- **Taking a disciplined approach to writing.** While all writing requires discipline, this principle is essential in topic-based writing. As we have seen, an important characteristic of topics is that their purpose is limited to answering one question. To ensure that you focus only on the topic content, it is helpful to write one topic at a time, and to avoid thinking about the topic as part of a larger body of information. This principle is captured in Baker's phrase, 'every page is page one.'
- **Chunking information.** Chunks are blocks of information. We saw in the Information Mapping approach how chunks can help users to scan and process information more quickly. Because topic-based writing is modular, rather than linear, chunking is an essential skill.
- **Applying other principles of information mapping.** As well as chunking information into blocks, other information mapping principles help you to write focused topics. Labelling content clearly ensures readers can process it effectively. In topic-based writing,

labels include the topic title, headings, and short descriptions. Categorizing information into types, each with its own characteristics ensures that readers know how to use topics. As we have seen, the three most common information types are task, concept, and reference. Each of these topic types has its own rhetorical characteristics. For example, task topics are written as steps, concept topics are written as paragraphs, and reference topics typically include tables.

- **Applying principles of minimalism.** A central principle of minimalism is its task orientation. Focusing on tasks and actions in your topics helps readers to avoid making, and to recover from, errors.
- **Writing metadata.** A skill that technical communicators increasingly require is the ability to write good metadata. Even though your readers will not see the metadata, effectively labeling your content ensures that it is reusable, consistent, searchable, scalable, and responsive.

### ADDITIONAL SKILLS FOR WRITING TOPICS

Several skills in addition to writing are becoming essential in many technical communication workplaces, as technical communicators move from writing long-form documents to shorter, topic-based content. As more organizations move user assistance online and self-service portals become more commonplace, demand for these skills will increase further.

### COLLABORATION

Sole technical communicators were responsible for the design and delivery of individual parts of manuals, or even entire manuals, in the past. This model of content development has become known as the craft tradition of technical communication (Bridgeford 7). As manuals have been replaced by user assistance topics for many products and services, you are much more likely to work with teammates to develop collections of topics, that are stored in content management systems. You may be assigned a set of topics that you have to create, track, and update individually. Nevertheless, you are likely to work with developers to ensure the content is correct, with graphic designers to select appropriate visuals, and with other writers to develop standards, style guidelines, and review processes. Teams are often interdisciplinary and virtual, with members located in different sites and possibly even different countries.

For all these reasons, collaborating effectively within interdisciplinary teams to produce useful and consistent topics is an essential skill. Tracy

Bridgford describes the skills required for true collaboration in a content management environment as “networked agency” (8–10).

### USING TOOLS FOR TOPIC-BASED WRITING

The technologies we have discussed so far are tools, for they are human creations we use to achieve a specific objective—much in the same way we use a hammer to pound a nail or a saw to cut a piece of wood. In addition to these tools, we need to use applications like word processors and text editors. In industry, these applications are also known as tools. Although topic-based writing is now commonplace, there is no industry standard application or approach that you need to learn. Depending on the organization you work in, you may use one or more of the following approaches:

- Create topics using a word processor.
- Create topics in a wiki.
- Create topics using the DITA open toolkit.
- Create topics using lightweight markup languages such as Markdown or text document formats like AsciiDoc.
- Use DITA editors such as Oxygen XML Editor.
- Use applications such as MadCap Flare or FrameMaker, or in-house editors.
- Use content repositories, such as a database or content management system.

Indeed, you may combine more than one of these approaches, or use additional approaches not listed here to develop topics in industry.

### TRENDS IN TOPIC-BASED ONLINE USER ASSISTANCE

Approaches to technical communication are continually evolving because this is a dynamic profession that is heavily influenced by developments in technology. For that reason, you will need to be prepared to learn new tools, applications, and strategies all the time. These are some current trends in topic-based writing that are likely to influence how you work in the future.

### INTELLIGENT CONTENT

The term “intelligent content” describes content that is “structurally-rich and semantically-categorized, and is therefore automatically discoverable, reusable, reconfigurable, and adaptable” (Rockley and Gollner 33). The more adaptable and responsive content is to a user’s specific query, the



more “intelligent” it is. According to Carlos Evia, “[topic-based] writing is the basis of several technical communication and intelligent content practices” (9). We have discussed many of these practices in this chapter:

- Developing reusable content.
- Using metadata.
- Structuring content.
- Identifying suitable applications for content development and management.

Combining these practices facilitates the development of intelligent content, now a goal in many organizations.

### **MICROCONTENT**

Topics may be the dominant technical communication output format for now, but even shorter formats are becoming commonplace. Microcontent comprises short snippets of content that are embedded in a device or application. This content may be as short as a word or a phrase. Ari Hoffman explained contexts where users use microcontent, and why writers need to prepare to write in this way:

Printed user manuals moved onto a desktop screen, the desktop turned into a laptop, the laptop into a smartphone, then into a smartwatch, washing machine, VR headset, or even an Alexa on your customer’s night stand. We need to stop “writing manuals” and start crafting usable, findable micro-content. (7)

The Information 4.0 Consortium describes the future of content as “molecular” rather than modular.

### **USER- OR AI-GENERATED CONTENT**

A trend that you have probably noticed, and perhaps even contributed to, is the movement towards user-generated content. Users are adept at solving problems, and when we solve problems, we often like to share our solutions, either through discussion forums, videos, or other formats. This content is then available for other users. You may have used user videos on YouTube or discussion forums online to understand a procedure. If so, you have used user-generated content.

Although user-generated content is often accurate and accomplished, sometimes it provides incorrect information, or content that discredits the product or organization. For these reasons, many organizations employ

technical communicators to moderate or curate user-generated content. In such a role, your job is to ensure that the content is correct and reflects well on the organization. You may also incorporate user-generated content into professional user assistance topics.

Another recent trend is towards automatically generated content using artificial intelligence systems. Topics developed using generative AI may have many inaccuracies, and your role may be to test and revise these topics.

## CONCLUSION

In contemporary work contexts, technical communicators are likely to work in teams, and to write topics, or short chunks of content, that may be combined to generate information products. Topics have several characteristics that distinguish them from other forms of content; in particular, they exist as independent rhetorical units. The best-known topic-based writing system is DITA, but technical communicators use many approaches to develop topic-based content. Likewise, many skills are required, that fall into three broad categories: writing, collaboration, and using tools. Because technical communication is a dynamic discipline, topic-based approaches to writing will continue to evolve into the future. It is important for you to be aware of the state of the art and to keep up with trends and practices.

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## TEACHER RESOURCES

### OVERVIEW OF TEACHING STRATEGIES

Topic-based writing for online delivery is a paradigm shift. Most students, most teachers, too, are familiar with writing long documents, and with solo writing projects. Technical content is already perceived as difficult. Add to that the many new terms and concepts in topic-based writing. For all these reasons, this subject might seem intimidating to students. It’s a subject that we as instructors may struggle with too.

I teach this content through various activities that I outline in more detail in this chapter: Cleary, Yvonne. “Teaching Topic-Based Writing.” *Teaching Content Management in Technical and Professional Communication*, edited by Tracey Bridgeford, Routledge, 2020.

I find it helpful to introduce students to the idea of topics by asking them to explore professional topics that are available online (see Activity 1). This activity helps them to recognize that they are already familiar with this genre. They have probably used topics multiple times. When they are familiar with the features of the genre, I ask them to work on Activity 2.

### ACTIVITY 1: EXPLORE THE FEATURES OF PROFESSIONAL, PUBLISHED TOPICS

Find examples of online topics (e.g., in the Amazon Knowledge Center, the YouTube Help center, or the Broadcom Knowledge Base).

1. Ask students to discuss the ways in which a topic matches Baker’s topic characteristics. In which ways does it differ from those characteristics?
2. Compare and contrast topics from different organizations. Look at headings, subheadings, summaries, short descriptions, body text, and links, for example.

3. Look at the source code for a topic (e.g., in Google Chrome, you can view the source code by clicking on View/Developer/View Source). In the source code, find examples of metadata.

## ACTIVITY 2: DEVELOP A TOPIC

1. Provide a list of example topics (e.g., for common tasks or concepts that students will understand or be familiar with).
  - Assign each student an individual topic to work on. Ask them to write a topic. They should include metadata and label parts of the content in ways outlined in this chapter. It is not necessary to use DITA or to use specialist software. They can use Microsoft Word or a similar word processing tool. An alternative is to use a wiki, where each student develops content for one page of the wiki. This approach enables students to collaborate on a large body of content.
  - Discuss in class how the topics could be combined in different ways to create longer documents.
  - Discuss in class how this type of writing differs from writing essays or longer documents.

## DISCUSSION QUESTIONS

1. Based on your understanding of this chapter, explain how topics differ from other technical writing formats, such as manuals. In what ways are topics more useful and usable than printed manuals?
2. Find an example of an online topic. Identify the topic type (task, concept, or reference). What are the features of this topic? Consider, for example, headings, short descriptions, formatting, visuals, and links.
3. In a small group, discuss each of Baker's seven Every Page is Page One characteristics. Which of these characteristics would you find easiest to apply in your writing? Which ones have the most impact for readers?
4. Consider the skills needed for topic-based writing that are discussed in this chapter. Which of these skills have you developed? Which ones would you like to develop further? What strategies or activities would help you to develop these skills?