

# 9

## Why Heading Structure Matters

**T**HE STEPS OUTLINED in Chapters 5–8 form the foundations of textbook development. These foundations include getting information from competition analysis, market research, instructors who are potential users of the book, and professional peer reviews; reflecting on your mission; identifying your audience; choosing and developing your style and voice, and establishing your teaching goals and learning objectives. The next steps involve organizing your course content into a sequence of parts and chapters and then developing a system of text headings for each chapter. Your final writing outline is the basis for text headings, which you use to develop your table of contents.

Because headings have high visibility, and because your book will be sold largely on the basis of its table of contents (TOC), it is worth whatever time it takes you to get the organization and headings right. This task should be done at the very beginning, not after you have written your manuscript. Authors who try to insert headings after drafting and while rushing to revise often discover that they need to rearrange their chapters. Textbooks are written to outlines rather than outlined after the fact. Thus, you should know what is going to be in every chapter of your book before you even start. This point cannot be stressed enough. Your publisher probably will require that you provide a whole-book working TOC with your prospectus. That TOC goes out for review along with your prospectus before your book is even signed, and your revised TOC may be printed in your publisher's sales catalogue before you have even finished drafting. Take care to develop your TOC on the basis of your mission, market research, and competition analysis. (See Chapter 4.)

### The Organization of Your Book

Scope and sequence is a phrase from el-hi publishing referring to the range of topics you will cover and in what order. This is a more challenging task than you may think, even for a well-organized college course, because alternative scopes and sequences may be equally commendable

on some grounds. Decide what topics you definitely will, will not, and might cover. Then identify the broadest topical areas and experiment with sequencing them, making sure that prerequisite knowledge is presented first. For example, in a textbook on genetics a chapter on Mendelian inheritance probably should precede a chapter on chromosome theory, and in a textbook on finance a chapter on equities probably should precede a chapter on derivatives.

In the planning stage, begin with a *brief TOC*, which sets out the proposed organization of your book in terms of parts and chapters, with headings and subheadings to follow later in the process. Textbooks commonly have a Part I that serves as an introductory or foundational unit. Chapters in Part I typically cover core concepts and background information necessary for studying the subject. For example, a Part I in an introduction to archaeology textbook might define and describe the basic subdivisions within the field, identify the underlying assumptions or basic theoretical orientations, or briefly survey the field's history and philosophy. Subsequent parts might then cover the rest of the course content in one of several possible ways, depending on the book's story and mission. Parts and chapters may be organized according to timelines of prehistory, for example, or by geographic region, or by steps in the process of doing archaeology.

### ***Develop Parts and Chapters***

Parts in a textbook represent units of study. Parts and chapters may progress in a chronological, hierarchical, or horizontal topical fashion, depending on your subject and what you are intending to accomplish. Chronological development is progressive, like a story. The narrative describes steps in a process, a sequence of change, or changes over time. Hierarchical development is classificatory and analytical. The exposition arranges information either inductively (specific to general) or deductively (general to specific). Horizontal development treats all topics equally or in parallel rather than subsuming some in relation to others. Other organizational principles may also apply.

Suppose your mission is to empower readers to find and evaluate information on the Internet efficiently and effectively. Because the mission is processual, chronological development might be best. Chapters in Part I might provide background information on the Internet and might explain why it is useful or important to be able to find and evaluate information there. Chapters in Part II might then go on to describe how to find and evaluate information on the Internet. Part III chapters might follow by laying out the knowledge and skills readers need to find and evaluate online information efficiently and effectively. Chapters in Part IV might demonstrate reader empowerment through specific applications to selected careers or subject areas. Thus, the TOC (completely hypothetical) might look something like this.

**Part I The Internet**

- Chapter 1 Internet Technology and the Information Age
- Chapter 2 Living and Working Online

**Part II Navigating Cyberspace**

- Chapter 3 How to Locate Information on the Internet
- Chapter 4 How to Read Screens and Websites
- Chapter 5 How to Evaluate Online Information

**Part III Becoming an Information Expert**

- Chapter 6 Improving Your Efficiency and Effectiveness on the Internet
- Chapter 7 Knowing Where to Go
- Chapter 8 Using Databases
- Chapter 9 Using Subscription Services
- Chapter 10 Taking Advantage of Information Software

**Part IV Applying Internet Skills**

- Chapter 11 Doing Online Academic Research
- Chapter 12 Doing Online Market Research
- Chapter 13 Being a Smart Online Consumer
- Chapter 14 Using Online Resources at Work

Try to have three to six parts, and organize the content so that each part has two or more chapters. For an undergraduate course in which chapters likely will be assigned at a rate of one a week, try to have 14 to 18 chapters to approximate the number of weeks in a semester or other teaching period. By convention each such chapter should be under 40 book pages in length. An alternative is to have more chapters at less length, which may be especially appropriate for complex topics with many technical terms requiring a lot of exposition. Having brief modular chapters is the trend, also adaptive for online applications.

***The Art of Chunking***

As you determine the boundaries of your chapters, keep in mind the principle of chunking from cognitive psychology. People remember information most efficiently not as bits but as meaningfully networked groups of bits, or chunks (Miller 1956). You remember chunks because of their strong internal associations and their usefulness to you. Learning involves acquiring, relating, and using those chunks.

In textbook development chunking involves choosing the right type and amount of content to present at the right time and place for optimizing learning. For example, In a textbook on financial securities, if being able to trade bonds effectively is a desired learning outcome, you would chunk information about bond trading in a chapter on

that subject rather than burying the information in a chapter on fixed-income securities.

### ***Write Good Titles***

Giving titles to parts and chapters requires some thought and flexibility. It is not unusual for titles to change from draft to draft as editorial advice comes in and messages and market concerns become clearer. Following are some tips on giving titles to parts and chapters.

#### **Tips on Writing Titles**

- Give clear, brief, simple names to parts and chapters.
- Pack as much specific information as possible into titles without making them too long.
- Avoid making part and chapter titles too long through formal usages or subtitles.
- As a rule of thumb, make titles one to eight words in length, including articles and conjunctions. No chapter or part title needs to exceed ten words.
- Identify the core concept, subject, or theme of the part or chapter.
- As much as possible, use concrete nouns.
- Within reason, use parallel structure in wording the names of parts and chapters.
- Most important: Write straightforward titles without attempting to be comic, coy, clever, or cryptic.

With your well-worded brief TOC in hand, you can go on to develop your writing or drafting outline and, better, your system of text headings.

## **Develop Chapter outlines for Your TOC**

Your chapter outlines consist of the system of headings that lay out the contents of each chapter listed in your brief TOC. You can develop a working table of contents from your writing outline (the topical outline or list that authors use as reminders for drafting). Note, however, that a writing outline is not the same as a table of contents. A writing outline formally lists the sequence of topics in a way that is hierarchical and logically exhaustive. It is telling you what to write. A system of text headings and subheadings, on the other hand, is functional and natural for learning a subject rather than for expressing a form. Headings in a TOC chunk information in a way that tells readers what to learn. The chapter outline thus helps the reader to construct meaning from text.

The concept of meaning construction comes from linguistic studies and has been applied to learning theory in education. The idea is that learning is not passive information retrieval but is an active orga-

nization of new information in relation to the learner and the learner's past experience. The learner interprets information according to his or her intentions for using it and in relation to his or her existing mental frameworks. Thus, meaning is not exclusively in your text, nor exclusively in your reader; rather, it must be negotiated. The headings that make up your table of contents are a form of this negotiation. Each heading represents a conceptual organizer or framework for acquiring or integrating content.

### ***Distinguish Your Writing Outline from Your TOC***

The difference between writing outlines and tables of contents often confuses even experienced authors and editors. That this whole chapter is devoted to the subject of headings testifies to their importance in exposition, however, as well as in textbook publishing. As you will see, headings play a significant role not only in learning, but also in topical balance, textbook packages, and marketing and sales.

A writing outline expresses the book's logical development and the author's progression of thought, using a conventional outline format with Roman numerals, the Roman alphabet, Arabic numbers, etc. The product is layers of logically differentiated subtopics that are exhaustively subsumed under larger topics. Some items serve only as abstract or analytical categories—umbrella concepts that are inclusive of the topics that actually will be addressed in the writing. The outline, then, is a system of classifying information, a taxonomy.

In contrast, the headings in a final chapter outline in a table of contents group information in a functional, informational way. All the headings are real and all have actual content under them; that is, they are not empty pegs or logical abstractions. Every heading is followed preferably by three or more paragraphs of text. Your TOC, therefore, is more like a roadmap or a concept web than a taxonomy.

The following examples illustrate the difference between a writing outline and a corresponding chapter outline. The example assumes that the topic of motivation is intended as one main section of text within a chapter that contains other topics as well.

#### **Example: Writing Outline for a Section of Text**

- I. Motivation
  - A. Definition
  - B. Types
    1. Extrinsic
    2. Intrinsic
  - C. Sources
    1. External
    2. Internal

- D. Theoretical Perspectives
1. Behavioral
  2. Humanistic
  3. Cognitive
  4. Social Learning

**Headings for the Above Section of Text (and the TOC)**

- <A> What Is Motivation?
  - <B> Extrinsic and Intrinsic Motivation
  - <B> External and Internal Sources of Motivation
  - <B> Theoretical Perspectives on Motivation
    - <C> Behavioral Views
    - <C> Humanistic Views
    - <C> Cognitive Learning Theory
    - <C> Social Learning Theory

As you can see, the writing outline guides the author, while the text headings serve the reader. The headings convey relationships among core concepts, and these headings are organized in levels different from—but no less logical than—the formal writing outline.

***Use Levels of Heading Appropriately***

Textbooks can have up to five levels of heading, but three is optimal in most subjects and standard practice in introductory texts. The levels of heading are differentiated through book design using different sizes, styles, and colors of type. A-heads (<A>) are the most general and inclusive and also the most prominent visually; B-heads (<B>) are subsumed under A-heads, are next-most prominent visually, and appear on their own lines. C-heads (<C>) are subsumed under B-heads and, like D-heads, often start on the same line as their text. D-heads (<D>) are also distinguished typologically but are the least prominent heading on the page. Glance at pages in textbooks sitting on your bookshelves to see the way levels of heading are differentiated. Notice how different levels of heading use space on the page. You might also see topical subheadings used as marginalia.

Proper headings, like elements in a formal outline, follow the “rule of two;” that is, if an A-head has B-heads, there must be two or more B-heads, and if a B-head has C-heads, there must be two or more C-heads, and so on. A singleton A-head, B-head, or C-head is not good practice and reveals poor organization of content. Also, at every level, headings must have sufficient copy under them to warrant their separate existence and the space they take on the page. Having a one-paragraph A-head section, for instance, is not good practice and usually indicates either topical underdevelopment or inappropriate use of headings as logic pegs or conceptual placeholders.

Not all editors today are aware of these standards or the underlying reasons for them. Also, the style of headings in textbooks differs from styles dictated by professional organizations for journal writing. For example, American Sociological Association guidelines might require that you make A-heads all caps or that you underline and indent A-heads and have B-heads flush left on their own line, etc. However, textbook headings normally are never all capitals, underlined, or indented, and if your book is being designed rather than going to print as camera-ready copy, then all your efforts in formatting will be wasted. A copyeditor must pencil changes or reformat your disk—an unnecessary expense that is charged to your book. For this and other reasons, instead of clinging to formatting guidelines for journal articles, you would be wise to follow consistently your publisher's Author Guidelines for differentiating among levels of heading and keyboarding them.

Unless instructed not to do so, use the <A>, <B>, and <C> notational system to identify levels of heading (the carets indicate you do not intend the actual letters to be set into type). That way, publishing personnel always will be able to tell consistently which level of heading you intend. Alternatively, supply a chapter outline that clearly shows intended levels of heading that your copyeditor can use as an authoritative guide. Inconsistency in heading structure that finds its way into print can destroy the organizational integrity of your book.

## How to Craft Headings

The best way to start developing your writing outline into a system of headings—and by extension into your table of contents—is to convert your Roman-numeral items into questions. These questions are your A-heads. They focus the reader's attention on a particular quest for enlightenment and identify your broad theme or unifying concept. The paragraphs you write under an A-head should introduce the theme, define the concept, or provide background or context for the discussion to follow. The last sentence or two of an A-head section can briefly forecast your answer to the question by identifying the topics in your B-heads. This gives the student readers what they need to begin learning what you want them to know.

The question–answer approach to heading development is challenging and works better for some subjects than for others. Initially, however, this approach is worth trying. The question–answer structure is pedagogically sound for exposition, helpful to students, and especially appropriate for instruction based on learning objectives or outcomes. Furthermore, in study skills training, students are coached to convert text headings into questions to answer for reading comprehension and review.

The next level of items in your formal outline—those that are real versus purely logical—become your B-heads. B-heads should be worded to answer directly the question posed in the A-head under which they are subsumed. The paragraphs under B-heads elaborate their function of answering the A-head question. All the B-heads should consistently have wording parallel in structure and grammatical agreement; that is, the wordings should not switch from one form or part of speech to another. Headings also should be worded to provide straightforwardly the most solid and specific information possible in the least possible space. A heading that simply says, “Introduction” or “Research” or “Criticisms” conveys insufficient information.

Based on the discussion so far, what is wrong in the following example of headings?

**Example: Poor Subheadings**

- <A> What Are the Stages of Cognitive Development?
  - <B> Theories of Cognitive Development
  - <B> Sensorimotor
  - <B> Observing the Preoperational Child
  - <B> Poured Concrete Operations
  - <B> What Are the Hallmarks of Formal Operational Thought and How Can You Encourage Formal Operational Thinking in Children?

In the example, the first B-head does not directly serve its A-head question; that is, “theories of cognitive development” are not “stages of cognitive development.” The reader is confused at the outset. In addition, the B-heads lack parallel grammatical agreement and style; that is, the B-heads switch between noun phrases, verbal phrases, and additional questions. The wording of the fourth B-head contains a distracting, not-so-clever, pun. The last B-head is too nonconforming compared with the other B-heads and would unnecessarily take up a lot of space on the page. The net effect of the headings is that students’ efforts to make sense of information are compromised rather than aided.

**Example: Corrected Headings**

- <A> What Are Theories of Cognitive Development?
- <A> What Are Piaget’s Stages of Cognitive Development?
  - <B> Sensorimotor Stage
  - <B> Preoperational Stage
  - <B> Concrete Operational Stage
  - <B> Formal Operational Stage

In the first A-head of the corrected version, the concept of stage theories could be defined and contrasted with non-stage theories. Then, key theorists and background information on their work could be identified in added B-heads. In the B-heads under the second A-head of the corrected version, “observations” and “hallmarks” and other conceptual organizers for each stage could be taken up in added C-heads.

Avoid repeating the exact same headings in similar contexts within a chapter or in different chapters. Each heading in a textbook should be unique. In headings, repetition is not “system” but monotony. Imagine reading a chapter describing six alternatives in which six of the B-heads read “Benefits of. . .” and the other six read “Drawbacks of. . .” Your eyes are glazing over at the thought.

Readers intuitively count on your headings to get a clue about the topical differentiations you are making, so keep in mind that headings are supposed to serve the learner. In exposition, obscurantist headings are mean-spirited. It bears repeating that headings should be straightforward, economical, informative, unique, and strong. They articulate the bones to which the sinews and flesh of your prose attach.

The C-heads in your chapter outline are derived from items in your writing outline denoted by Arabic numbers. C-heads give the details, examples, or other elaborations that directly support their B-head. The “rule of two or more” applies throughout, and, again, for every heading, you must have something substantive to say.

## What Headings Really Mean

There is no one right way to construct a system of headings. Depending on your goals and emphasis, for example, you might recast your lesson on cognitive development in other ways.

### Example: Alternative Heading Structure A

- <A> What Is Cognitive Development?
- <A> What Are Some Theories of Cognitive Development?
  - <B> Piaget’s Theory of Cognitive Development
  - <B> Neo-Piagetian Theories
  - <B> Vygotsky’s Theory of Cognitive Development
  - <B> The Constructivist View
- <A> What Are Piaget’s Stages of Cognitive Development?
  - <B> The Sensorimotor Stage
  - <B> The Preoperational Stage
  - <B> The Concrete Operational Stage
  - <B> The Formal Operational Stage

**Example: Alternative Heading Structure B**

- <A> What Is Piaget’s Theory of Cognitive Development?
  - <B> Developmental Processes
    - <C> Schemes
    - <C> Accommodation
    - <C> Assimilation
    - <C> Equilibration
  - <B> Developmental Stages
    - <C> Sensorimotor Stage
    - <C> Preoperational Stage
    - <C> Concrete Operational Stage
    - <C> Formal Operational Stage
- <A> How Is Piaget’s Work Viewed Today?
  - <B> Criticisms of Piaget’s Stages
    - <C> Limitations of Theories Based on Stages
    - <C> Impact of Culture on Development
    - <C> Relationship of Gender to Development
  - <B> Influences on Neo-Piagetian Theories
    - <C> Information Processing
    - <C> Constructivism
    - <C> Ecological Models of Development
  - <B> Piaget’s Influence on Education
    - <C> Developmentally Appropriate Education
    - <C> Focus on the Learning Process
- <A> What Is Vygotsky’s Theory of Cognitive Development? Etc.

Notice that the differences between these two examples reflect differences in both organization and emphasis. Your heading structure, in other words, reflects the amount of information you are providing, the amount of differentiation you are making within and between topics, and each topic’s relative importance in your scheme of things. How much do you have to say? About what? At what level of specificity? And how important is it?

The levels of heading thus signify their function as conceptual organizers. In Example A, for instance, the author regards “The Constructivist View” as a standalone B-level topic equal in importance to the other B-head topics in that section. Author A wants us to remember constructivism as a major theoretical orientation in the study of cognitive development. In Example B, in contrast, “Constructivism” is a C-head subsumed under “Influences on Neo-Piagetian Theories,” which the author has chosen as the more important conceptual organizer. Author B wants us to remember constructivism as only one of several Neo-Piagetian theories of cognitive development.

The relative importance you give to your topics in this way becomes a roadmap to your beliefs and values as an author in your subject area,

a blueprint to your philosophical stances on the topics you consider. Intentionally or otherwise, your headings reveal what learning you feel is most important for your readers to acquire and retain.

## What Is Topical Development?

Topical development refers to the amount of elaboration or depth of coverage, number of subtopics, and number of words (or amount of space) you devote to a topic. For each topic there is an optimal level of development for your course, mission, and audience, and it is up to you to find it.

### Example: Thinking about Topical Development

How will you develop the topics in Part III Blood Collection for your introduction to phlebotomy text? Chapters in previous units have already discussed the health, safety, and legal issues involved; the quality, care, and treatment of blood specimens; and some basic background biology. Your readers will be aspiring EMTs, nurses, or phlebotomy technicians, and you hope they will go on to the second-tier course that leads to phlebotomist certification.

For the unit on blood collection, say you decide to have an introductory chapter and a chapter for each of the three main blood collection techniques: venipuncture, skin puncture, and arterial blood collection. The introductory chapter will define the three types of blood collection, when and with whom they are used, and why. The chapters on the three techniques will have A-heads explaining at similar depth the equipment, routine procedures, and possible complications. As needed, subheadings will differentiate techniques for different patients (e.g., adults, children, infants).

To maintain focus, level, and consistency in topical development, you decide to leave out special collections and non-blood collection procedures as well as procedures in special contexts, such as point-of-care testing, and in special settings, such as donor care centers. You also keep the underlying science and medical terminology to a minimum so as not to encroach too much on the second-tier course.

Your plan makes sense. As you draft, however, you discover that venipuncture is requiring much more space and really needs to be two chapters, while dermal puncture and arterial blood collection need only one chapter each. This not a case of topical overdevelopment or underdevelopment, because the facts call for more explanation and therefore greater coverage of one topic over the other two topics with which it is grouped. Thus, this

decision probably is appropriate for content that is hierarchically organized.

In the example, topical overdevelopment might occur if you considered additional content and examples only for venipuncture and not for the other methods. Topical underdevelopment might occur if you referred to special collection techniques without elaborating on them, especially if that topic were expected or required in the introductory course. If your chapters expressed chronologically organized content (e.g., steps to becoming a phlebotomist), rather than hierarchically organized content, then you would call out the parts and chapters differently. Venipuncture, skin puncture, and arterial blood collection might be three A-heads in the chapter, “How to Get a Blood Sample,” for example, and that chapter might follow “How to Use Blood Collection Equipment” or precede “How to Avoid Complications in Blood Collection.”

### ***Overdevelopment and Underdevelopment***

Underdevelopment of topics is a serious flaw in exposition, because it does not cover the topic adequately or provide enough information to aid comprehension. With overdevelopment, in contrast, readers always are tempted to skip over unneeded passages once they have achieved comprehension. Overdevelopment also may make your book too dense or too long.

Too many headings can be a sign of overdevelopment in the form of topical over-differentiation. When developing sections in terms of your chapter outline, take care not to chop up text too finely. A surfeit of headings followed by brief copy particulates information, becomes visually confusing to readers, and also eats up valuable space on the page.

Some authors go the other way, however, and spin out page after page of narrative without providing enough subheadings for the reader to organize the material conceptually or to gain some visual relief. As a rule of thumb, chapters in most content areas ideally have a minimum of three and a maximum of eight A-head sections of text. Undergraduate textbooks typically have at least one heading of some type per each spread (two facing book pages). To analyze the organization and heading structure of this book, examine its TOC in the frontmatter.

### ***Characteristics of Good Topical Development***

Following is a list of guidelines for providing good topical structure and organization.

#### **Guidelines for Good Topical Structure and Organization**

- Begin each A-head, B-head, and C-head section of text with a thesis statement or question in the introductory paragraph.

- Promptly explain the purpose of taking up topic. Avoid making it a surprise or a mystery for the reader to solve.
- Group or cluster ideas or points into meaningful chunks of closely related information.
- Avoid logically exhaustive or taxonomic development.
- Avoid imbalance or inconsistency in topical development. Each section of narrative should embrace a reasonable amount of meaningful information.
- With topics of equal importance, avoid under-developing some (i.e., making them too narrow or brief) and over-developing others (making them too broad or long).
- Take care to see that sections of text lead naturally and coherently from one to the next. Avoid abrupt endings, and make clear transitions.
- Avoid encyclopedic exposition in which each topic is treated without reference to any others. This unhelpful kind of organization is known in the trade as the “recipe card,” “scattershot,” or “encyclopedic” approach to instruction.
- Avoid leaps of faith in which you assume the reader is filling in logical steps (or gaps) in your progression of thought.
- Support each main idea or point using specific examples, data, evidence, or arguments.
- Avoid underdevelopment of abstract ideas and also unsupported claims.
- Treat topics fully in the context of their greatest relevance. Avoid reiterating topics repeatedly in all relevant contexts.
- Define key terms and concepts fully in the context where they are first used meaningfully.
- Avoid introducing a topic that is not taken up substantively until later in the book.
- Cross-refer to previous chapters as needed, but avoid forecasting, as this does not remedy poor topical development. Authors who frequently cross-reference to future chapters undermine the reader’s trust.

### ***How Headings Guide Topical Development***

A-head and B-head sections are the most important conceptually and thus should contain the longest copy, or the most paragraphs. C-head and D-head sections, while they contain important details, are briefer. Avoid consigning the meat of your chapters to long C-head or D-head sections, especially as these levels of heading typically are omitted from the frontmatter TOC.

At the other extreme, three sentences are regarded as the minimum for copy under a C-head. The following hypothetical example shows

an inappropriate treatment of sections in terms of level of heading and length of copy as indications of relative importance.

**Example: Inappropriate Topical Development**

<A> What Are the Stage Theories of Cognitive Development?

Stage theories postulate that individuals progress in their cognitive development through a specific number of defined stages.

<B> Piaget's Theory

Jean Piaget, a Swiss psychologist, studied children's learning behavior at different ages and concluded that there are specific stages of cognitive development, shown in Table 2.1. <Insert Table 2.1>

<B> Vygotsky's Theory

Lev S. Vygotsky, a Russian psychologist influenced by the work of Piaget, conducted experiments to clarify Piagetian stages and study how children move from one stage to another.

<B> Neo-Piagetians

Theorists In the decades following Piaget's contributions to cognitive psychology and the study of child development, new research led to criticisms of Piaget's stage theory. It was found that children do not all move through all the stages by certain ages and may not even move through the stages in the same sequence. Piaget's conclusions were also criticized because they did not seem to take into account the impact of culture and enculturation on child development. Neo-Piagetian theorists revised the definitions of the stages to attempt to account for these factors.

<A> What Are Piaget's Stages of Cognitive Development?

<B> The Sensorimotor Stage

The first stage, from birth to two years of age, is called the sensorimotor stage. Etc.

In the foregoing example, the narratives under the first A-head and the first two B-heads are too brief, consisting of single sentences. The length of copy under the third B-head suggests that its topic is more important than the others. The second A-head, meanwhile, is used purely structurally with no copy at all. The example also reveals a serious lack of explanation below the level of highest abstraction—that is, sections lack the specific examples and concrete applications that readers need to make meaningful sense of the information. Without concrete examples, your subject, however worthy, cannot come alive for readers.

### ***Concrete Examples Support Topical Development***

Editors of college textbooks often are amazed to find manuscripts with page after page of unrelentingly abstract prose, paragraph after paragraph on constructs with no hint that empirical analogs exist in the real world. What are these authors thinking? Why should readers care to learn anything about stratigraphy, for instance, even when defined, if they cannot imagine what it might look like or where in the world they might see it? How much better it would be to read about archaeological excavations at Ceren, El Salvador, or Harappa, Pakistan, and how the stratigraphy at those sites revealed interesting facts from successive cultural depositions. Or to read about geological surveys in which stratigraphy revealed the history of vulcanism in the Pacific Rim or iridium in Italy or pollen in Greenland ice cores or drought in Yucatán or, frankly, anything empirical. Readers then might be motivated to wade through a closely reasoned, technical, and conceptual argument about stratigraphy as a research tool.

Concrete examples help readers to operationalize concepts—make them into something they can use. They can imagine, visualize, or identify with representations or exemplars of the concept. Vicariously experiencing an exemplar, in turn, engenders self-confidence in the reader, who then becomes more motivated to tackle the difficult or complex idea in aid of which you advanced a concrete example. Offering concrete examples is more than a courtesy to the reader; it is essential to learning.

When asked to provide an example, lazy authors often write abstract examples rather than concrete ones. The following “example,” for instance, actually is little help. Why should we, the readers, care about A, B, or C?

#### **Example: Concrete Example Gone Abstract**

For example, imagine stratigraphy in which layer A is overlain by layer B, which was laid down on top of layer A at a later time. Then, layer C was deposited on top of layer B, and, assuming the depositions were not disturbed, layer C is the most recent or represents the present-day surface.

#### **Example: Improved Version of Concrete Example Gone Abstract**

At Harappa, the living floors and material culture of the earliest Stone Age inhabitants were overlain by the cultural remains of early farmers of the Indus Valley. On top of those deposits, later farmers built a small walled city with a sophisticated sanitation system. Still later Harappans expanded the amount of land under cultivation and built extensive irrigation networks, which remain visible at the present-day surface. As you can imagine,

excavating down through Harappa's stratigraphy is a way of going back through time.

"Inhabitants," "farmers," and "Harappans" are inherently more interesting to readers than "A," "B," and "C." Notice that concrete examples typically take up more space on the page, however. Choose them carefully to support topical development and the most important constructs you are trying to teach.

Another refuge of the lazy or unmindful author is hypothetical examples, which in most contexts are not as good as real ones. Readers are keen judges of credibility and tend to put less confidence in invented examples. Readers also often have unpleasant memories of hypothetical examples from earlier schooling. (Mary has two oranges and Jim has three apples. How can they share the fruit equally with Larry and Sandra?)

When they directly involve the reader, fictions also can backfire and convey wrong messages that thwart learning, as in the following example.

**Example: Hypothetical Example Gone Wrong**

As an example of crime profiling, imagine you are a serial killer. You choose your victim, say a grocery clerk, and assemble your weapons of choice—a cord for strangling, perhaps, and a switchblade for carving your initials in the corpse. You plan the time and place of your attack (behind the grocery store after closing) and also the details of your escape (on foot). You don't bother to disguise your appearance because you will be killing your victim and making sure there are no witnesses.

Whatever is happening here, the reader certainly is not thinking about the concept of crime profiling.

Some authors find developing text sections easier if they go about it in a systematic way. One such way is shown on the next page in a planning grid for topical development for one main section of a chapter. A blank planning grid is provided in the appendix.

## Role of Headings in Marketing and Sales

Frontmatter TOCs may not contain all levels of heading, so you would be wise to ensure that the hot topics and buzz words your customers will regard as most important all appear in A-heads and B-heads. For the publisher, the TOC is an important sales tool. It will be published in the sales manual and used to instruct the sales force on how to sell your book. It will be published in the company's catalogue and will appear on the company's website. It may be compared to the TOCs of competing

<b>Chapter 2: Understanding Chronologies of the Past</b>		
<b>Learning Objective:</b> Students will explain stratigraphy and seriation as forms of relative dating.		
<b>A-Head:</b> Relative Dating: Stratigraphy and Seriation		
<i>Writing Outline</i>	<i>B-heads and C-heads</i>	<i>Concepts and Examples</i>
I. Relative dating	<B> Why Relative Dating?	Vs. Absolute dating;
II. Stratigraphy	<B> What Is Stratigraphy?	Dendrochronology
A. Superposition	<C> The Law of Superposition	Strata; sedimentary rock
B. Deposition	<C> Cultural Depositions	Superposition; index fossils
III. Seriation	<B> What Is Seriation?	Hohokam, Harappa, Banpo
A. Cross-dating	<C> Cross-dating	Series; lithic tools
B. Sequence Dating	<C> Sequence Dating	New England gravestones
	<B> What Can We Infer from Relative Dating?	Greek ceramics; coins
		Zimbabwe, Cahokia, Ceren

texts to highlight your book's superior organization and content. It may be printed in full on direct mail advertising brochures sent to faculty members nationwide. Your TOC may be printed in both long and short forms on the endpapers and in the frontmatter of your book. Portions of the TOC might be reproduced on acetate transparencies or electronic slides as lecture aids for adopters.

The TOC also is the key to correlating any supplements planned to accompany your text, such as an instructor's manual, test bank, and study guide. Your supplements authors must use your heading system to organize their content. The test bank author, for example, constructs a certain number of test items for each level of heading, assessing students' mastery at each level of conceptual organization and detail that you have laid out. In an Annotated Instructor's Edition, margin annotations next to each heading might indicate by number which test items cover the information in that section of text. Your study guide author likewise relies on your system of headings to guide the students through your material and to structure their opportunities for self-assessment. In your instructor's manual, lecture notes or instructional strategies may be keyed to specific sections of text. Your headings, in other words, are the scaffolding for your whole textbook package.

As mentioned at the beginning of this chapter, inexperienced authors sometimes wait until they have finished a chapter and then go back to outline the contents according to whatever headings they can stick in or seem to fit. This strategy often leads to extra time and effort, however, for this is when they discover that they have only one A-head for the whole chapter or that they have singleton B-heads and C-heads, or that they have over-differentiated or under-differentiated in topical development. It bears repeating, therefore, that the time you spend retrofitting your chapter to make the headings work is better spent in figuring out your headings in the first place.

Experienced authors and those who grasp the functionality and importance of the TOC often skip the writing outline and go straight to developing a system of headings. As mentioned in Chapter 3, submitting a real working table of contents with your curriculum vitae, prospectus, and sample chapters will win the respect and confidence of your editors. In drafting, exposition flows naturally from your heading structure. Heading structure also provides a convenient mechanism for staying in control of length and schedule, as you assign value, space, and time to each portion of your TOC. With your working heading structure in place and drafting underway, you can turn your attention to the apparatus and pedagogy of your chapters, the subjects of the next three chapters of this book.

**APPENDIX**  
***Developing Your Text Sections***

<b>Chapter:</b>		
Learning Objective:		
<b>A-Head:</b>		
Writing Outline	B-heads and C-heads	Concepts and Examples
<b>Learning Objective:</b>		
<b>A-Head:</b>		
Writing Outline	B-heads and C-heads	Concepts and Examples