Ready, Aim—Write!

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Abstract—This paper details a methodical approach called a ‘pre-write,’ which greatly reduces the need for rewriting a document. To pre-write, the writer must state the purpose of the document and a statement identifying both the intended audience and the implications of writing to that audience. New questions the writer must answer about the audience are given, and information on audience identification and the needs of particular audiences is included.

(Reader’s note: To educators, pre-writing is the first of the six steps used in the writing process and includes group discussions, reading of models, and practice in research and organizational methods. To technical communication, the phase known as pre-writing encompasses all activities that occur before the first draft is begun—like, for example, performing research, taking notes, and preparing outlines. The pre-write method I present in this paper, which focuses on writing about technical subjects, may be applied by anyone preparing to write. This pre-write method involves identifying the document’s purpose and intended audience.)

When we write, we want to feel confident that our readers understand—perhaps even enjoy—what we have written for them.

If we know our readers, we may interview them to discover what they want in a document. When we cannot communicate directly with our audience, or when our audience is not clearly defined, we can use other methods.

Many test the readability of their writing by applying a formula such as Gunning’s Fog Index. A technical writer or editor or a colleague may be asked to review a document for accuracy and clarity; this is also a readability analysis. A nontechnical person also will provide valuable feedback as to whether the material is understandable. Instructional or procedural materials can be tested for usability by a representative sample of the intended audience.

However, since these methods are applied after writing, considerable rewriting may be necessary. It is obviously preferable to do the best possible work the first time.

Pre-write versus Rewrite

Complex technical writing is likely to be very difficult to read. Readability further decreases when the writer does not define major ideas for the reader and when the written document is not relevant to the reader’s experiences and interests. These two impediments can be eliminated if you clearly define your purpose and your audience; this definition is what I call a pre-write.

You can dramatically increase the clarity and luster of your writing, and reduce the need for tedious rewriting, by following this simple pre-writing approach.

WRITE YOUR PURPOSE

Whether you write a memo or a book, always consider your reasons for writing before you begin:

- What is the subject of your document? Will you introduce a theory, propose an improvement, explain a technique, describe a process, or report the results of your research?
- Where will your document appear? You may be writing a report that will be circulated within your company, an article that will appear in a commercial publication, a research paper that will be published in a professional journal, or a procedure that will be used in training.
- Why are you writing? Is your purpose to instruct, inform, persuade, or inspire?

The subject and purpose of your document must be clear to you if you hope to make it clear to your audience. As to the subject, think about the breadth (which topics) and the depth (how much detail) of coverage needed. Doubtless you will slant the material in one way if your purpose is informative, in quite another if your purpose is persuasive. You must also consider your goals and aims in writing the document.

With your goals and aims in mind, write your purpose clearly in a statement of a few short sentences. Keep this statement nearby and refer to it often as you write. This reference ensures that you communicate the document’s purpose to your reader and that you maintain your focus on the purpose of your writing.

IDENTIFY YOUR AUDIENCE

When you write to a friend, the letter is easy to write because you know the person you’re addressing. Also, you usually write the way you speak. Writing or speaking to someone you don’t know isn’t as easy, and you can’t al-
ways be sure that you’re communicating clearly. If your audience does not understand what they have read, or becomes so lost or bored that they don’t finish reading what you have written, it may be that you did not truly write it to and for them. To write to and for your audience, you must get to know them.

To identify your audience, there are five questions you must answer:

- Who will be reading your document?
- What prior knowledge do these readers have about the subject?
- What do these readers need to know?
- Why will these readers read your document?
- How will these readers use the information you provide?

Who the Readers Are
Your readers may be administrators and executives, or your supervisors and colleagues. They may be professionals from various fields of science and engineering, or professionals from a single field of science or engineering. They may be nontechnically trained individuals, or the general public (a mixture of these categories of readers).

You may have direct access to your audience. Or you may have access to audience profiles maintained by your company’s market research or personnel departments, or your professional society. If not, consult library sources to learn some things about the profession(s) and to become familiar with the educational level of your readership.

If most of your readers are in a specific profession, you can consult the Occupational Outlook Handbook published by the U.S. Department of Labor’s Bureau of Labor Statistics to become acquainted with the profession. This handbook describes the nature of the work, the working conditions, training and other qualifications, opportunities for professional advancement, average earnings in the profession, and related occupations. If, for example, you are writing about an automotive electronic modification to an audience of automobile mechanics, this handbook reveals that although knowledge of electronics was quite a narrow specialization in the past, today’s mechanics must be familiar with basic electronic principles.

Another helpful source is the Statistical Abstract of the United States, published annually by the Bureau of the Census of the U.S. Department of Commerce. Among the many subjects about which this book provides data is educational attainment by profession. Continuing our study of automobile mechanics, we learn that more than half (52 percent) graduated from high school and that 24 percent attended college.

The average educational level is an important factor both in the choice of vocabulary and the sentence structure, and in the psychological approach of your writing. Knowing the educational level will help you answer the questions pertaining to what readers already know and what they need to know.

What the Readers Know
Note the educational level of your anticipated readers and the specific educational background required in the profession. (Amount of experience also affects the readers’ knowledge; however, such data may not be available to you.) Compare this information with the subject and purpose of your document to determine the relationship between the two. For example, the subject may be of a general nature given the readers’ background or it may concern a highly advanced topic within a narrow, specialized branch of the profession.

This comparison will also help you to assume a specific level of experience at which to aim your document: you must decide if you will write to the beginner, the reader with intermediate-level experience, or the expert.

Let’s assume you are introducing a new plating process. The new process is similar to a plating process that has been used by your company’s production technicians for several years. Your technicians’ familiarity with the existing process eliminates the need to explain steps common to both processes; instead, your document can refer to these similarities and focus on the differences.

What the Readers Need to Know
Now that you have an idea of who your readers are and what they know, you can decide how much background information to include. You can also determine what level of detail is necessary to ensure that your readers will understand your document.

If you are preparing a report for administrators and executives, you should condense the subject into an exact statement of the purpose and the outcome; they want the gist of the subject, not the minute details. Be logical, assume an appropriate tone and attitude, avoid overly technical language, and omit opinion. In writing for your supervisors and colleagues you should also remain factual and brief, but for this audience jargon and implication are usually acceptable.

Professionals from different fields of science and engineering want precise details; they want to know about procedures and measurements used, applications of results, and any sources of error. Though a high-level vocabulary can be used, field-specific terminology should be avoided. With readers from one profession of science or engineering, field-specific vocabulary is appropriate. These readers are interested in precise details; however, they also want you to locate the problem and indicate its importance in the field.

Readers in the nontechnical audience will require full
background information and explanation of any uncommon terms and concepts. Be diplomatic, clarify goals, and motivate your audience.

When writing for a general audience, you should decide what your readers need to know based on the level of experience at which you are aiming. Beginners require extensive coverage of topics and a great amount of detail; assume no prior knowledge on the part of these readers, and introduce all basic concepts and terminology to them. Those on the intermediate level also need detail, but they want to know about the unique aspects of the subject and also want a good reference section. Experts require detail only on the extremely technical aspects of the subject and prefer an extensive reference section. No matter which audience you are addressing, all readers want and need a carefully organized document. Give them concrete information and clear examples. Vary your vocabulary, sentence length, and sentence structure to maintain their interest.

Why the Readers Are Reading

Two people may read the same document for entirely different reasons: an engineering technician may read about computer architecture to gain an understanding of it; an engineer may read about it to find ways to improve its efficiency.

How people read technical documents for pleasure or relaxation. More commonly, they read such documents to learn. They may be reading to increase their knowledge of the subject or to improve their job performance. Some are motivated to read by financial reasons, such as those seeking promotion within their occupation or seeking to change occupations. Many simply need to learn how to operate a new piece of equipment.

Motivating psychological needs and desires may also differ. Some readers may be motivated by the need for personal fulfillment or discovery, or by the desire for achievement or prestige. Others may be motivated by the need for security or preservation, or by the desire for status or freedom from pressure. Considering the likely or possible motivating factors may cause you to alter your writing approach.

The subject and purpose of your document, and your knowledge of your intended audience, will all help you decide why readers are reading and how they will be using the information you present.

How the Readers Will Use the Information

When readers are seeking to increase their knowledge (whether in an effort to gain a promotion, to change occupations, or to learn for the pleasure of learning), be sure to show how your document fits into the literature in that field. If a reader is reading to improve job performance, examine the information and omit anything that is irrelevant.

When you are writing instructions for operating a piece of equipment or for performing a task, remember that your reader will want these instructions logically grouped and presented in ‘bite-size’ chunks (procedure steps). Decisions for grouping and presenting such instructions must also include environmental considerations, that is, the work area in which the document will be used.

WRITE ABOUT YOUR AUDIENCE

The last step in pre-writing is to write about your readers. It is important to actually write down your answers to the five questions above, on paper. The result will be a fairly clear picture of your audience. As you answer the questions about your readers, you should also write about the implications those answers will have for your writing approach; write about how you will focus or slant the material to meet your readers’ needs.

USE YOUR ‘PRE-WRITE’

Your pre-written statements of purpose and audience identification will help keep you ‘on target’ as you write, and help your readers understand—perhaps even enjoy—what you have written.

So, ready, aim—write!

SUGGESTED ADDITIONAL READING