Strategies in Writing: Informative Captions for Graphics

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Informative captions are an essential feature of today's scientific and technical publications. An informative caption guides readers to see what the author intends for them to see in a graphic. So a good informative caption ensures that the writer's message is 100 percent clear.

Informative captions are an essential tool in most of today's popular publications--for example *Scientific American.* Despite being a highly readable and popular publication, *Scientific American* often includes graphics that are complex and technical. But for many years, *Scientific American* has been known for its effective, innovative, and readable graphics. Every issue contains well-designed, complex illustrations and photographs, as well as more traditional technical graphs and charts. *Scientific American* pioneered the use of explanatory stand-alone captions, often using a caption with one or more short paragraphs of informative explanations.

The following newsletter focuses on tips for preparing readable, effective captions. It does not address design issues related to the choice of appropriate graphics, nor the software techniques required for the creation of graphics.

Even traditional technical reports, while not as innovative and readable as *Scientific American*, have been moving away from opaque, unfriendly titles/captions like these:

Figure 3-7. Test Results

Figure 1-3. Vicinity map for the project

Table 3-4. **Data from Test Cycles**

Even a few words would improve these three weak titles/captions—for example:

Figure 3-7. Test Results. Compound 32A dries about 30 percent slower than either 34C or 36D.

Figure 1-3. Vicinity map for the proposed Comax facility. The closest developed properties are at least a mile away.

Table 3-4. Test Cycle Data. Test 1 cycle times met FDA minimums. Tests 2 and 3 failed before valid results were available.

All three of the original weak titles/captions require readers to sift through the text for the point or purpose behind each graphic. Anyone with science and technology training can recall the frustration of having to search through a complex report for the meaning behind a technical graphic.

Traditional old-school scientific writers (and their editors) seemed to write with these misconceptions in mind:

> **Misconception 1:** All readers have the technical expertise to interpret complex graphics, so informative titles/captions are unnecessary.
>
> **Misconception 2:** Readers will take the necessary time to search for interpretations buried in text.
>
> **Misconception 3:** The text and graphics are fully interdependent. One without the other does not have a stand-alone message, so informative captions are unnecessary repetition.
>
> **Misconception 4:** Most readers will read the text and graphics in the order the information is presented, stopping to review graphics as they are cited and interpreted in the text.

Here are five suggestions for creating graphics and their associated captions that avoid the preceding misconceptions:

1. **Plan both text and graphics assuming that the majority of your readers are likely to be skip-and-scan readers.**
2. **Plan for your chosen graphics to convey a stand-alone story.**
3. **Sketch all graphics and potential captions before working on the text.**
4. **Verify that your proposed captions reflect major conclusions (that is, the key information that you want your readers to do or to know).**
5. **Follow a consistent format for captions.**

The following text expands on the preceding five suggestions. Other Shipley Group newsletters address many similar writing tips.

1. Plan both text and graphics assuming that the majority of your readers are likely to be skip-and-scan readers.

Skip-and-scan readers are a clear majority among today's professional adults. I have surveyed dozens of Shipley training sessions, and most participants confirm that they rarely read documents from start to finish. Most of the time, they scan a document or computer file while turning pages or shifting screens. They quickly decide how important the content is going to be. This process is how I usually read *Scientific American* articles; the result is that I read no more than 20 percent of the articles. For a good many of the remaining articles, I read only the graphics and their captions.

Here are some tips for writing that will help a skip-and-scan reader:

- Highlight major points by using initial previews and content-rich headings.
- Use and open, readable format, with many graphics and callout boxes (with key definitions and highlighted conclusions).
- Avoid heavy text—that is a sequence of long, involved paragraphs, with major points buried at the end of paragraphs or individual sentences. Remember: Key content belongs **up and left**!

One of the best tools for following these tips is for you (and your collaborators) to prepare an initial storyboard for the entire document. See Shipley Group newsletters 56 and 61 for information about how to prepare a storyboard. The archive of newsletters is at:
http://www.shipleygroup.com/environmental/index.html?pg=news

2. Plan for your chosen graphics to convey a stand-alone story.

Plan to include more graphics than you would ordinarily use. Many documents, especially technical or complex ones, would profit from more graphics, especially ones with useful captions.

And then for the graphics you plan to use, check to see if they tell a stand-alone story. That is, will readers get the gist of your content by looking at only the graphics and their captions?

Usability Test: Print a copy of only the graphics and their captions. Then ask one or two colleagues what message or messages they take away from only the graphics. If they repeat your major points, then you have a good set of stand-alone graphics. See Shipley Group newsletter 52 for more information about usability tests.

3. Sketch all graphics and potential captions before working on the text.

Work up your graphics and your intended captions before you devote much time writing supporting text. If you do this, you will find that a well-chosen graphic often replaces a block of text.

The reverse process—text, then graphics—usually means that you will decide to omit a graphic as unnecessary because the text already has the key information. Writers often find themselves unwilling to cut key text even if they find that its content repeats the point of a possible graphic.

4. Verify that your proposed captions reflect major conclusions (that is, the key information that you want your readers to do or to know).

Check one more time to see if your captions and their graphics are highlighting the major points of your document (or website). As suggested above under point 2, conduct an actual usability test to see if your graphics and their captions do highlight major points.

Note that a usability test is much more of an active content check than the usual routine editing/proofreading step. By the time a writer gets around to a final editing/proofreading loop, the text is firmly in place. What writers want at this late stage is a final check for misspellings or a misplaced comma. They don't want comments about missing content or last minute suggestions for major revisions!

5. Follow a consistent format for captions.

Traditional editing principles list all graphics, except for tables, as figures. In technical publications, figures are usually assigned a reference number (often the section/chapter number, followed by a hyphen and the sequential number of the figure in that chapter/section):

> Figure 7-6. [This would be figure 6 in Chapter/Section 7.]

Next would come a brief title or a combined title and caption:

> **Figure 7-6. Conceptual Design C** [Bolding or italics is optional for the title, depending on a particular editor's style preferences.]

Or optionally a combined title and caption:

> Figure 7-6. Conceptual Design C and its relation to Back Bay Harbor. The shallow waters to the north of the harbor entrance decrease the usable docking area in Design C.

Consistency within the same publication is the usual practice. So some publications ask for a separate title and then a caption; others combine the title and the caption, as in the preceding example.

Remember: Provide informative captions for <u>all</u> figures and tables. Even most maps would profit from good captions. See suggestions 1 through 4 in this newsletter.

Tables are kept separate from figures. So a List of Tables usually follows the List of Figures in the front pages of a published document. If a publication has extensive maps, then maps are not listed as figures but have their own separate list.

Titles are often capitalized as in publication titles: Test Run 7. [So, all words are capitalized, including the initial word, except for prepositions, articles, and conjunctions.]

Captions that include or become one or more sentences are not capitalized as titles:

> Figure 8-11**.** Mice from Test 7 were treated with the experimental antibiotic for seven days. On day 8 all Test 7 mice tested negative for respiratory infection.

A Final Word for Writers

Today's writers increasingly accept the responsibility for guiding readers to see what a document's key messages are. All parts of a document—both text and graphics—should guide their readers' eyes and minds. A writer's goal should be 100 percent clarity. Anything less is a flawed and misleading document.

Informative and specific captions are one of the best strategies for making your technical documents and their graphics 100 percent clear.