

Dave Patterson's Writing Advice

My first advice is to read aloud what you have written. Generally your ear is better than your eyes, and if you read it aloud you are much more likely to find awkward sentences, bad tenses, and other errors.

I find many people are good at sentences, but less good at forming paragraphs. Ousterhout has a solid rule, which led me to write shorter paragraphs. A paragraph is about a single idea, with a single key topic sentence. This sentence is almost always the first, but sometimes the last sentence of the paragraph, and the rest of the sentences somehow support that topic sentence. If it works, you can get a quick summary of a section just by reading the topic sentences.

I get most of my specific advice from Strunk and White, "Elements of Style", which I call "S&W," I try to read it every few years to learn things. I'll quote from it here on common errors I find in grad student writing. (The proper citation is "The elements of style," by William Strunk, Jr. ; with revisions, an introduction, and a chapter on writing by E.B. White ; [foreword by Roger Angell]. 4th ed. Boston : Allyn and Bacon, c1999. xviii, 105 p.) My most recent incite is to use the Grammar Checking in M/S Word 98. I did this in my chapters for the 3/e of CA:AQA, which consisted of copying and pasting the text from Framemaker into Word. To turn on the tool, check the "Check grammar" box and then click on options. I selected "Technical" for Writing style (which was at the bottom of the menu, with the default being casual); I think this was important, as it was much more helpful after I selected this option. (I turned off the spelling checking since it was spell checked in Frame.) I then selected "Settings" to see what I wanted it to check. It found passive voice problems, too long setences, and verb-noun tense problems among other problems. Many of the issues listed below are checked in Word. It really helped.

- Active voice: (S&W rule 14) For example, use "Figure X shows ..." rather than "... as shown in Figure X."

Also, it is much better to mention a Figure that summarizes a lot of information early in a paragraph rather than go into details and mention the figure at the end, as early mention gives the reader a framework to refer to while reading the text.

- Ambiguous use of pronoun "This" to summarize sense of previous sentence. (S&W page 16)
The writing is virtually always clearer if you sane for every occurrence of "This" (case sensitive) or "This is" and put a noun after "This" to make it clear what you are referring to. I'll find sentences where I'm not really sure what I meant, which must make it harder for the reader! So search for "This " in your text to see if a noun follows.

- "While" instead of "and", "but", "although". (S&W pages 63-64)

In general while should be used only in the strict sense of "during the time time"; S&W give several better ways to convey the same message. So search for "While " in your text to see if the sentence is about time, or could be replaced with "Although".

- A single numbered subsection

Its strange to have a single subsection (e.g., 5.2.1 in section 5.2). Why do you need to number it if there is only one? Either eliminate the single subsection, or change the part that precedes the subsection into a second subsection

- Referring to Chapters, Figures, Tables.

Its not a easy to understand rule, but normally these names are capitalized when used to refer to a specific number. So its Chapter 1, Table 3.1, Figure 1.2. I have seen some people not capitalize section 1, but I don't understand the logic behind it, so I'd capitalize it also.

- Little things: label percentages in tables with %, dollars in tables with \$

Its much easier to look at a list of numbers that are percetages and immediately realize that its a column of percetages if every number has a % after it, vs. just labeling the column as Percent. No one will be confused that this is percent of a percent of if you do both. Similar arguments for prices and \$.

- Numbers spelled out vs. numerical.

The general rule of thumb is to spell out one to ten and use numbers for numbers for 11 and up. However, I find its much better to consistently use numbers when the reader might naturally compare or do arithmetic with the numbers with a sentence or a paragraph. For example, " The 8-processor case (model 370) needs only 4 computers to hold 32 processors. " Blindly following the rule of thumb would change the sentence to " The eight-processor case (model 370) needs only four computers to hold 32 processors. " Its easier to read and understand we use numbers ($8*4=32$) instead of words (eight*four=32).

- In case you are not familiar, learn about INSPEC from MELVYL so as to make it MUCH easier to get proper citations. I would adopt its citation style to reduce the amount of typing.

If you would like more writing advice, other books are:

- Frederick Crews and Sandra Schor, "The Borzoi Handbook for Writers (2nd edition)", Alfred A. Knopf Inc., 1989.
- Linda Flower, "Problem Solving Strategies for Writing (3rd edition)", Harcourt Brace Jovanovich, 1989.
There are probably newer editions of these books.