

Some Points of Advice on Student Report Writing (12/06)

1. DO NOT write in passive voice. Take responsibility for what you are saying! Do not write "It is believed." Instead write "We believe."
2. Be consistent with singulars and plurals, especially with possessives. Do not write "The company contacted their customers" or "The customer first checks their order." Write "The company contacted its customers" or "The customer first checks his or her order." (Yes, I know that "his or her" is clumsy. If you don't like it, avoid the possessive construction completely, but DO NOT use the plural possessive "their" when you are speaking of an individual.)
3. Pick a tense and stick with it unless you really do need to contrast something that was done in the past with something in the present or the future. Don't jump back and forth between tenses without reason.
4. Be consistent in font, style, spelling, abbreviation, format, etc. There is nothing less professional/more juvenile than a document that jumps around in any of these regards.
5. Do NOT use the preposition "within" in place of "in." "Within" is commonly much over-used and is both pretentious and inaccurate when used in place of the simpler "in." "Within" is a more restrictive word than "in." It means "in the inner parts of; inside; inside the limits or extent of in time or distance; inside the fixed limits of; not beyond; in the scope or sphere of; inside a specified amount or degree." Students almost always do NOT mean "within" when they use it in place of the much simpler "in."
6. If you use a comparative like "sooner" you are obliged to make it clear to what you are comparing. That is, you must explicitly answer the question "Sooner than what?"
7. Don't speak/write in "code"/language special to your client or group. Verbal shorthand is fine for informal internal communications. It is NOT acceptable for a formal document that is to be read by someone external to the project or group. Do NOT assume that your reader will know specialized jargon and just use it without explanation.
8. Related to the previous point, you may NOT assume that your reader will be familiar with company software output. You must tell the reader exactly what has been computed and displayed by any software package you use. (See the requirement that output must be annotated in the project statement.) And, if there is a "class work" alternative to the company calculations, you must provide that alternative and discuss any difference in interpretation that arises from the use of the two tools. "This is what the company does" is not an adequate "explanation" of someone else's calculations. A very common instance of this is in R&R studies. Companies often have their own spreadsheets for doing R&R calculations. You must provide both the company version and the "class version" and reconcile any differences in ultimate inferences.
9. Read every one of your sentences aloud and by itself. Ask (for each single sentence):

- "Does this make sense?"
- "Does this move the discussion forward?" ("Is it redundant or without real content?")
- "Can I rewrite this sentence in half as many words? Are there simpler words I could use?"

Much student report writing is flabby (and even confusing), and takes far too long to get any point across.

10. Be very careful to respect the technical meaning that special words have in the context of IE 361 (and engineering and statistics more generally). DO NOT say "accurate" when you mean "precise" or vice versa. DO NOT say "bias" when you mean "imprecision" or vice versa. There are "specification limits," "control limits," "confidence limits" (for all sorts of quantities), "prediction limits," and "tolerance limits" met in the course, and they are all different. DO NOT Call one by the name of another. And so on.

11. The words "chart" and "graph" are not really interchangeable. I prefer that you avoid the word "chart" altogether and use instead "table" for display that is primarily a listing of numbers and "graph" for a display that is primarily a plot of numerical information.

12. Every word, every figure, every appendix, every equation, etc. that appears in your report should have a real purpose for being there. If it is not really part of your story, it doesn't belong in the write-up. Similarly, everything that appears should be logically related to what went before. Final recommendations that have nothing to do with anything that has been said before have no reason to be in the report.

13. Be precise/clear about to what you refer. If you have been writing about both measurement and production, writing "the process" is probably ambiguous. Is the measurement process or the production process meant?

14. Proof read and then proof read again! Have your roommate proof read for you. Make sure that every one of your cross references is correct. Referring to a non-existent figure or equation hurts your credibility substantially.