

Writing an Undergrad Research Paper

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Here are some guidelines for writing a research paper at the undergraduate level in college. While not exhaustive, I've attempted to cover the most common problems which impair clean and intelligent communication of your thoughts and discoveries. What good is it to have the best ideas in the world without the ability to communicate them to others? Your writing is the result of your effort, your imagination, your diligence and discipline, as well as your education. People judge it and you accordingly.

These rules are not my invention, but are common traits of good writing. Several of the points I've adopted from others who identified basic rules which apply primarily to formal writing. These rules will also be of aid in public speaking, though the rules may be somewhat relaxed in order to further a more casual environment and intimacy with the audience. Don Chance (<http://www.bus.lsu.edu/academics/finance/faculty/dchance/Instructional/TenMistakes.htm>) suggested as his first and most important piece of advice, "get a copy of *The Elements of Style* by W. E. Strunk and E. B. White. This very short book covers most of the common writing mistakes and provides excellent suggestions for improving one's writing. It is highly readable, which is saying a lot for a grammar book. Another interesting book is *Eats, Shoots & Leaves* by Lynne Truss. This is a humorous book on punctuation, which sounds boring but it was a best seller in 2004."

That is simply the best single advice you can follow.

Now, rules for the paper:

- This paper is to contain some original thought. Don't insult me and risk your academic career or reputation with cut and paste from the internet then try to pass that off as your work. Some cites/quotes are permissible but should be no more than 10% of the paper.
- The paper is due on the last day of class – by the end of class. No exceptions, ifs ands or buts. If you wait till the last minute and then have a problem, well.... Learn from it.
- Must be at least 5 complete pages typewritten (not 4.25, 4.5, 4.75 pages), Times Roman font, size 11. 1 inch margins and 1.5 lines spaced.
- Must use appropriate footnotes – on each page.
If you don't know how to footnote, google is your friend or come see me.

- Topics must be approved by me in writing.
- Paper is to be printed off and turned into my office or in class. Email submissions are not accepted.
- On your first draft, attempt to write as well and proper of a paper as you can. This kind of effort (versus just throwing down thoughts) helps you better discipline your writing and develop cogent and consistent arguments. Before the final submission put the paper down and don't view it for a day or two and then proof it one final time carefully. Don't rely on a spell checker – "an" is a correctly spelled word, but it's no substitute for "and."

Some other brief suggestions (Rules 1 thru 9 are adapted from Don Chance's 10 Most Common Mistakes, with modest changes):

1. **Which/that.** Example: "Investment managers are constantly looking for new ideas which can increase their portfolios' returns." This is wrong. "Which" is a non-restrictive pronoun. This means that its use is not critical and would not change the meaning of the sentence if it were omitted. "That" is a restrictive pronoun. It changes or modifies the meaning of the sentence. The use of "which" nearly always requires a comma, implying that the information is not totally necessary for the sentence to be correct. Consider the following two sentences:
2. "The sales divisions, which the manager was responsible for, were not performing up to par."
"The sales divisions that the manager was responsible for were not performing up to par."
The first sentence implies that the manager is responsible for all sales divisions. The second sentence makes it clear that only those divisions that the manager was responsible for were not performing up to par.

Franklin D. Roosevelt, for all of his Harvard and Columbia education, was a frequent violator of this rule. Speaking about social security in 1934, he proclaimed that it was "a right *which* belongs to every individual." Seven years later he referred to December 7, 1941 as "a day *which* will live in infamy." So it wasn't just a one-time thing: he was a repeat offender.

Let me hasten to add that this mistake is commonly made in academic journals and in professional writing, or in other words, by some extremely intelligent persons who were educated at America's greatest universities. As Strunk and White recommend, good writers often go "which" hunting and eliminate the incorrect use of this word.

{CMM note}: *In addition, the word "that" is probably the most overused word in the English language. Even the above sentence, the usage is unnecessary:
"The sales divisions the manager was responsible for were not performing up to par."*

3. **Alternative/alternate.** "Alternative" implies a choice. "Alternate" implies a switching back and forth, such as every other item in a series. Consider the following sentence:

"In preparing for battle, the general developed an alternate plan."

This is wrong. The general almost surely does not expect to switch back and forth between different plans during the battle. What he devised was an alternative plan. The use of "alternative" instead of "alternate" is the more common mistake, perhaps because the word is slightly shorter and economy is nearly always recommended in writing.

4. **Overuse of parenthetical expressions.** Although there are legitimate uses at times, in general parentheses should be avoided. Consider the following sentence: "The focus of this paper is on the use of quantitative techniques (such as statistics, mathematics) to solve business problems." Parentheses often imply that the writer is turning aside to the reader the way a speaker might do an aside to an audience. A more appropriate sentence here is "The focus ... quantitative techniques, such as statistics and mathematics, to solve ..."

There is little room for parentheses in formal writing. On occasion some are necessary such as "Sales are expected to increase (decrease) if we lower (raise) prices." Though some people do not like this usage, it is a convenient way to use parentheses to reduce the number of words and it is perfectly clear to any marginally literate reader what it means.

Another acceptable use is for example, "The net present value (NPV) is the best measure of the attractiveness of a capital investment project." Such usage gives the writer the freedom to use the letters "NPV" later in the document instead of "Net Present Value."

5. **The improper use of "only".** For example, "We only have room for four people in this taxi" seems rather harmless and is probably acceptable in speaking but not in writing. Consider the following two sentences:

"I eat only in the kitchen."

"I only eat in the kitchen."

The first implies that I never eat anywhere else such as the dining room, patio, etc. The second implies that I do nothing but eat in the kitchen. I never prepare food, wash dishes

or do anything else in the kitchen.

This is easy to remember but I have also heard it expressed by changing the words "eat" to "have sex" and "kitchen" to "bedroom," which you may even find easier and more interesting to remember.

6. **Incorrect use of "it's" and "its".** This one is incredibly simple. "It's" is short for "it is." "Its" is a possessive pronoun. Whenever you use the word "it's" read it out as "it is" and see if it makes sense. This leads us to the next item.
7. **Use of contractions.** Contractions such as "it's" should be avoided in formal writing. Write out the whole words "it is". In informal writing, however, contractions are not only preferred, they are pretty much mandatory. In fact, I would say contractions are almost the primary difference between formal and informal writing. There is a time and a place for both.
8. **Active/passive sentences.** Excuse me, Mr. or Ms. Grammar but I beg to differ on this one. One of the most common recommendations for good writing is to use active instead of passive sentences. For example, "The surgeon removed the tumor" is an active sentence. "The tumor was removed by the surgeon" is a passive sentence. This is fine in many cases but when describing what you are doing or have done, the passive voice usually sounds better. There is nothing worse than having to write repeatedly that "I" or "we" are doing something or did something. This directs the focus of the writing toward the writer and you will be criticized for having done that. When describing what you have done or are doing, use the passive voice. The surgeon writing an article for a medical journal would, therefore, say "The tumor was removed," which is a passive sentence, rather than "I removed the tumor," which is active.

Naturally in some forms of writing the active voice is better. If you are writing an autobiography or describing something you have done in informal writing, the active voice is usually preferred. This is not usually the case in formal writing such as a report or research paper.

9. **Underlining.** Underlining is a throwback to the days when typewriters were used. The standard typewriter could not do italics. With the advent of typewriters with interchangeable fonts and, of course, word processors, the underline has fortunately gone by the wayside. Titles of books, periodicals, movies, etc. that were formerly underlined should be put in italics.
10. **But.** This word is often used in a manner represented by the following context: "He could not help but do worse." The correct usage is "He could not help doing worse."

11. **Nouns Ending in y.** Writers often confuse nouns ending in y with regard to possession. If you are writing about something belonging to a *country*, use the form *country's*, not *countries*. If you are talking about a number - use countries.
12. **Effect and Affect.** Writers often confuse these words. A common mistake is to use *effect* when you should use *affect*, when using effect as a verb. Effect is a noun that means a result. Affect is the verb that means to influence. If you affect something, you can cause an effect.
13. **Principal/principle.** The old grammar school adage: "The *principal* is your pal" is of little use because that's not the usage that confuses authors. The main problem arises in understanding *principal* is an adjective meaning "foremost" or "most important," while *principle* is a noun meaning "fundamental law" or "guiding idea."
14. **Their vs. There vs Their.** Their is a possessive pronoun meaning "belonging to them" or "of them." They're is a contraction for they are. There is the partner of here (which is neither here nor there).
15. **Digital Shorthand.** Never use text/aol shorthand/symbols in any written correspondence. It is a sure sign of a perverse and degenerate mental state. :-)