

Developing a sound understanding of research methods is useful if we want to do research to answer our own questions. Understanding research methods also enables us to think carefully about the merits of scientific evidence in providing answers to research questions. Developing an independent project will allow you to use the research tools you learn about in the lecture and laboratory to answer a question that interests you. In the process, you will gain an understanding of and appreciation for the conduct of research in psychology. You will also learn to evaluate the credibility of evidence generated by other researchers.

Work on the research project should begin immediately. You should begin thinking about research topics, select a research problem, and begin to review the relevant research literature. We will discuss hypothesis formation, development of operational definitions, and so forth in the lecture. Keep your research project in mind and incorporate these principles in your experimental design.

Requirements for Individual Research Projects

Introduction. The literature review should provide background information about your research topic and should develop a logical rationale for the research question you propose to answer with your research. The articles that you cite in your introduction should help you support why you selected a particular variable to manipulate or they should suggest the expected effect of your manipulation.

The design must pose an interesting, *meaningful*, question. A research question that is meaningfully connected to the research literature must drive selection of independent and dependent variables. Do not manipulate a variable just because you can or because you need a second variable. The logic of the research question should motivate choice of independent variables. You will be expected to demonstrate the meaningful connection between your manipulations and your research question in the Introduction and Discussion sections of your final paper.

Method. All projects must be experimental in methodology. When designing your project, do not simply replicate an experiment as reported in a research article. Your project should extend the findings in some new and interesting way.

- a. Projects must include at least 2 independent variables. Designs that use more than 3 independent variables are discouraged.
- b. At least 1 independent variable *must* be a true experimental variable. That is, you must directly manipulate the variable with random assignment of subjects to conditions
- c. The second independent variable may be either a quasi-experimental manipulation or a true experimental manipulation.
- d. The dependent variable must provide *measurement data*. These are data that measure the dependent variable on either an interval or ratio scale.

Results. The statistical analysis must be appropriate for the research design and the type of data generated. The method section of your paper should include descriptive statistics, a figure or

table depicting your findings, and inferential statistics.

- a. Descriptive statistics should be described verbally and presented in an appropriate Figure or Table. The verbal description should include a description of patterns of observations present in the data.
- b. The report of inferential statistics should include a clear identification of the test performed. The results of these tests should be reported using correct APA format. Describe the direction of any statistically significant differences obtained.

Discussion. In the Discussion section, you should relate that statistical findings to your original research question(s) and draw appropriate conclusions.

- a. Were your hypotheses supported? If so, describe why the findings should be interpreted as support for your hypothesis. If not, explain why the findings do not support your hypothesis and describe what reasonable hypothesis these findings might support.
- b. Connect your findings and conclusions to the research literature discussed in the Introduction. How do your findings fit into the picture created by other findings reported in the literature? Are they consistent or inconsistent with these findings? What are the implications of this consistency or inconsistency?
- c. Describe any unexpected findings and/or unanticipated problems encountered during data collection. What impact might these findings or problems have for future research? What recommendation would you make for a “next experiment?”

References. At least *five references* relevant to the experiment should be cited and listed in the Reference section. Do not list a source in the Reference section if you did not cite it in the text of your paper. All sources cited in your paper should be included in the Reference section of the paper.

Content of Final Paper. Final papers for the research project should include *all* parts of an APA-style paper:

- Title Page
- Abstract
- Introduction
- Method (with appropriate subheadings)
- Results (with a Figure or Table)
- Discussion
- References
- Appendix

You should include the following items in the Appendix material:

- IRB form for class with approval signatures
 - Any specialized materials used for data collection (tests, lists of stimulus materials, etc.)
- Appendix material need not conform to APA editorial style.

Information regarding plagiarism and the appropriate citation of sources. If you use an author’s exact words, you *must* indicate that you have done so by enclosing these words in

quotations and providing a citation (include the page number(s) for the quoted material). If you use an author's *ideas*, you must indicate the source of these ideas by citing the author appropriately. Direct quotations of sources are almost never appropriate for writing in psychology. Sources are typically cited for the ideas they introduce, not the exact words used to state these ideas. However, you must take care when paraphrasing sources to avoid plagiarism. If you merely rearrange the author's words (altering the sentence structure) and/or substitute synonyms for a few words in the original text, the result will be considered inadequate as a paraphrase and will be considered plagiarism. Scott, Koch, Scott, and Garrison (2002) discuss the problems of plagiarism and lazy writing. The University of West Florida's plagiarism policy can be found at the following URL: <http://uwf.edu/cas/aasr/Plagiarism.pdf>. This site also provides information on the degree to which text must be altered to be considered an acceptable paraphrase. A list of similar web sites follows the reference list in this handout. If you cannot restate an author's ideas in your own words and feel compelled to stay close to the original text to preserve its meaning, you probably do not have an adequate understanding of the original text. The solution to this problem is to gain a more thorough understanding of the material before you begin to write. Look up unfamiliar terms in a dictionary of psychology. Get additional background information on the topic from an encyclopedia of psychology or a text book. These sources are not adequate as primary sources for a paper but they will help you gain a better understanding of the material you find in primary sources. You can also discuss confusing material with me, your TA, or another faculty member.

Your writing is your intellectual property. Guard it carefully. Do not leave copies of your work on computers that are in common use. You could find yourself in the unpleasant position of trying to prove that you are the true author of this work. Save preliminary drafts of your work, reading notes, data collection sheets, and copies of library sources you make while researching your paper. You may be asked to produce these if questions of authorship arise. Make back-up copies to protect your work from computer failures.

Plagiarism is a serious violation of academic standards and will be punished severely. Students who plagiarize will fail the course and will be referred to the Dean for academic dishonesty. Some students are surprised to learn that they plagiarized themselves when they inappropriately used work produced for one course in another course. If you are unsure, ask your instructor for guidance. See the UWF Student Handbook for the University policy on academic conduct and plagiarism (p. 46) and the consequences for students who engage in academic misconduct (p. 48). The Student Handbook can be accessed on the web at <http://uwf.edu/cas/aasr/>

Manuscript preparation. Typed papers should be approximately 10 pages in length (not including the title page, abstract, figures, tables, or appendixes). The title page should list the title of the paper, the author, and the course number and title for which the paper is submitted. Running heads are not needed for a student paper, but page headers should be used. Page headers are useful should pages from your paper get separated during grading.

I find that figure graphics in word processors are frequently too small to be easily read and graded. Therefore, I ask that you place Figures and Tables on separate pages. These pages may

be placed in your paper near the point where the reader is asked to consult them. (See Appendix A in the *APA Publication Manual* for guidance on deviations from the publication style for student papers, theses, and dissertations.)

Use hanging indentations for references. Single space within a citation and double space between citations. (An example of this style can be found at the end of this handout.)

Papers should be stapled in the upper left corner. ***Do not submit papers in binders.***

Research Portfolio

You will be asked to maintain a Research Portfolio for your research project. The Research Portfolio will consist of the following materials:

- Preliminary bibliography assignment
- Journal summary assignment
- Proposal for the research project
- Informed Consent Form
- In-class IRB Approval Form
- Copies of **all** source material read and cited in your paper
- List of the names of participants
- Samples of data collection materials (data sheets, questionnaires, etc.)
- Copy of the output file from your statistical analysis

These materials should be organized in a 3-ring binder. The Research Portfolio must be turned in when you turn in your paper for your research project.

Evaluation

Your grade on this paper will depend on ***quality of writing*** (clarity of thought, grammar, correct spelling and punctuation) as well as ***quality of content***. Read the first two chapters of the *APA Publication Manual* for guidance on the orderly presentation of ideas and writing style. In addition, the lab papers serve as exercises in writing within the constraints of APA format and will help you understand expectations about the appropriate content of a research paper. The feedback you receive on these papers should help you improve your general writing skills as well as improve your understanding of this particular style of technical writing. Revision is the key to clear writing. Plan ahead so that you have enough time to write an initial draft and do some editing. You may make an appointment for a one-hour interactive reading session for as many as four papers per term at the UWF Writing Laboratory (Bldg 52, Room 157, 474-2029).

LATE PAPERS WILL BE PENALIZED 1/3 LETTER GRADE PER DAY LATE.

References

American Psychological Association. (2001). *Publication Manual of the American Psychological Association (5th ed.)*. Washington, D. C.: Author.

Scott, J. M., Koch, R., Scott, G. M., & Garrison, S. M. (2002). *The psychology student writer's manual* (2nd ed.). Upper Saddle River, NJ: Prentice Hall.

Web Sites with Information about Plagiarism and Paraphrasing

Web sites that address plagiarism and appropriate use of paraphrasing:

<http://www.dartmouth.edu/~sources/about/what.html>

<http://www.hamilton.edu/academics/resource/wc/usingsources.html>

<http://www.plagiarism.org>

<http://www.webster.edu/~woolfm/author1.htm>