

Project Guidelines

Overview

This semester, you and a small group of your classmates will design, conduct, and report the results of a psychological study. The study may be on any psychological topic you wish and may use any of the following research strategies: laboratory experiment, questionnaire, field study, naturalistic observation (observing without interfering), or archival research (e.g., examining the relation between average city temperature and homicide rate). To make the project more manageable and give you feedback along the way, I have divided it into several pieces. Each piece is due on a particular day (check the course schedule) and will be graded. These pieces are described below.

Advice

The design of your project is a “constraint satisfaction” problem. You must create a project that simultaneously satisfies many constraints: your research question and interests, a one-hour limit for individual participants, low budget, previous research (which can suggest effective procedures and materials), and design pitfalls that we discuss in class. This means you must attack the problem from several fronts at the same time: keep reading the scientific literature while you fine-tune your design, and make modifications to your design as you learn of its shortcomings in class.

First Hypothesis

A hypothesis is a testable prediction – a statement of the specific pattern of results you expect. It is not a question but rather a statement. For example, “Extroverts can name more friends in a 5-minute interval than introverts can” is a hypothesis. “Do extroverts have more friends than introverts?” is a research question, not a hypothesis.

Structure your hypothesis 1 assignment in the following way: 1) Give the research question, 2) Describe your procedure, 3) Give your hypothesis, 4) Briefly justify your hypothesis: *Why* do you predict this?

Common error: Beginning researchers commonly neglect to specify both sides of a comparison, for example writing “Students with high self-esteem will perform better on exams.” Correct style would continue this sentence with “...than students with low self-esteem.”

Some tips on how to find a hypothesis: 1) pick something relevant to your life (e.g., factors contributing to life satisfaction among college students such as roommate match, social life, grades, sleep schedule, etc.), 2) look at possible legal/courtroom issues (e.g., effect of gruesome photo on verdict, eyewitness testimony, etc.), 3) browse through some of your psych textbooks, 4) pay attention to the people around you and look for “why do people act this way” possibilities.

In grading your hypothesis, I will be looking at 1) plausibility (does the hypothesis make sense), 2) specificity (the more specific and concrete the better), 3) clarity, and 4) originality and creativity.

Final Hypothesis

Re-write the first draft of your hypothesis based on the feedback you received and new ideas you’ve developed. You may completely abandon your original hypothesis.

Hypothesis and Seven References with Abstracts

Give your hypothesis at the top of your paper and then use PsycINFO (through EBSCOhost) to locate seven professional psychology journal articles or book chapters that you are likely to use in your paper. Submit the references and abstracts for these. The reference should include author(s), date, title of article or book chapter, journal or book name, volume number, and page numbers. Your grade on this assignment will depend in part on how well-chosen your references are. Pick articles that are as relevant to your topic as possible. Indicate which of these items are unavailable through Duggan Library and state that you have completed inter-library loan (ILL) request forms for them (assuming you have done so).

Human Subjects Application

Any study that will use humans as participants must submit a human subjects application and have it approved prior to data collection. Only one application should be submitted per group. The application form is available on the course homepage. The application requires a complete informed consent form, debriefing form, and description of your procedure. Your grade will be based on the thoroughness and clarity of the first draft of your application.

Pilot Study

After your human subjects application has been approved, schedule a pilot study in which two of your friends play the role of participants. Afterward, ask them about the study: was anything unclear? Did they figure out what your hypothesis was? Write up a 2-3 page report (double-spaced) describing what you learned from the pilot study and any changes you think will be necessary.

Annotated Bibliography of 7 sources with Abstracts

By this point you should have obtained at least seven journal article or book chapter (no website or textbook) references for your paper. This assignment asks you to write an annotated bibliography covering those references. Give the reference in APA style, then write a paragraph describing how the reference will contribute to your paper. Discuss how the study is both similar to and distinct from your study. Don't bother reporting the number of participants or any demographic information unless that's central to your study. Try to connect the findings in the article to your study by listing all the intermediate steps. Don't just say the study "supports your hypothesis" – explain *how*. Be as specific as possible. Do not use any part of the abstract in your writing. To make it easy for me to see if you've used the abstract in your annotated bibliography, please copy the abstract for each of your seven sources and paste them into your bibliography. Your grade on this assignment will depend in part on how well-chosen your references are. Pick articles that are as relevant to your topic as possible. Grade will be based in part on the clarity and insight of your paragraph descriptions.

Methods Section

This is the first section of your paper that you will submit for a grade. When writing scientific papers, it is often most efficient to begin with the Methods section because it tends to be the most straightforward and easiest to write. This section is divided into three subsections using headings (see *APA Publication Manual*, 5th ed., pp. 113-115): Participants, Materials, and Procedure.

Title Page

The title page is the first page of an APA-style manuscript. See pages 10-12, 296-298, and 306 of the *Publication Manual*. Under your name and affiliation, please also list the name of this course ("PSY 220: Research Design and Statistics") and the semester and year (e.g., "Fall 2003").

Reference List

The reference list is a list of all the sources that you cited in your paper. It should be on a separate page from the rest of the paper, and should come after the Discussion section but before any Figures or Tables. The word "References" should be at the top of the page, centered. The whole list should be double-spaced. References should be listed in alphabetical order by first author. You should have at least ten references. Each reference should be formatted using a hanging indent, with the first line flush left and subsequent lines indented 0.5 inches. See chapter 4 of the *Publication Manual* on reference formatting.

Results and Discussion

The Results section contains all of the results of your analysis, including means, *t*-tests, and correlations (see *Publication Manual* pp. 20-21). If you wish, you may put your figures or tables into the Results section rather than after the reference list, but be sure they are formatted correctly (*Publication Manual* pp. 147-205). The Results section is not just a robotic presentation of statistics; make sure that you use a running commentary so that your reader understands why you chose a particular test. Give thought to how to organize the Results section: present the most important analyses first, and group conceptually related analyses together. Whereas the Results section presents the results, the Discussion section interprets them (see *Publication Manual* pp. 26-27). You may do some interpretation of results in the

Results section (e.g., "...which supports our hypothesis") but most of the interpretation should come in the Discussion section. Below is a useful way to organize the discussion:

- Begin with clear statement of whether or not your hypothesis was supported.
- Interpret the results, offering alternative explanations if possible
- Explain any inconsistent or unpredicted results, if possible drawing on the results of previous researchers (e.g., results found for one gender but not the other)
- Acknowledge limitations (e.g., especially your materials and procedure)
- Discuss the importance of your findings, both practically and for theory in the field.

Introduction

The function of the introduction is to tell the reader why you're doing this study and to develop the rationale behind your hypothesis. This section begins broadly with familiar ideas and quickly narrows to focus on your specific research question. You should state your central research question within the first three paragraphs. The introduction also reviews previous research that has been done on this topic. Cite at least five sources that help to develop your hypothesis or that provide relevant theory. Your introduction should completely justify the hypothesis; readers should get to your hypothesis and think "of course, this is obviously the next step." Do not cite vaguely related articles and then spring the hypothesis on unprepared readers. After stating your hypothesis, provide a brief overview of your procedure. This overview should be no more than a single paragraph and should provide enough information so that a reader could skip over the methods and results sections and move directly to the discussion and still have an idea of what you did in the study.

Abstract

Best advice before writing your abstract: read a bunch of abstracts from published articles (e.g., read abstracts from the *Journal of Personality and Social Psychology* using PsycINFO) immediately before you write yours. The abstract should be comprehensive enough to capture the major content of the article, but is limited to 120 words or less. It should begin with your general topic, very briefly describe your procedure (preferably including the number of participants), cover the major results, and have a sentence or two about the implications of your findings. You are permitted to use numerals for numbers less than 10 (elsewhere in your paper, these should be spelled out: e.g., "two"), but all acronyms must be expanded: Subjective Well-Being Scale (not "SWB Scale"). Citations in the abstract should include the first initial of the author's first name: (L. Festinger, 1957). Assume the reader of your abstract will never read your paper – the abstract must be able to stand on its own. See the Publication Manual pp. 12-15 and page 298.

Draft of Poster

The poster draft is a diagram plus all the text you will include on your poster. The diagram is a sheet of paper on which you have drawn where you will put the title, author info, abstract, intro, methods, results, figures, discussion, and references. The text can be in normal 12-point font but should be double-spaced so I can make comments. See *Poster Guidelines* handout for more information.

Oral Presentation

Each group will present their project to the class during a lab session near the end of the semester. You may have as many presenters as you like (1, 2, or 3), but each group member will receive the same score for the presentation. You should use Microsoft PowerPoint or an equivalent electronic slideshow program (such as Google Presentation). Your presentation should last 10-15 minutes (but no more than 15 minutes; you will lose points for every minute beyond 15 minutes you take). After your talk, your classmates have an opportunity to ask questions. You can make your classmates happy by asking them questions after they present, because they will not be able to earn a "good" or "excellent" score on "responding to questions" unless they receive questions from the audience. Your goal is to effectively communicate the purpose of your study, its methods, its results, and the meaning of those results.

Final Draft of Paper**General paper specifications**

- Typed
- 12-point font
- Arial or Times font
- Double-spaced
- 1-inch margins
- 10+ references
- 10-15 pages
- Each page numbered

Formatting and style

The paper must conform to the 5th edition of the American Psychological Association's *Publication Manual*.

Citations

Any statement of fact that could be reasonably disputed must be backed up with a citation: "Overall, the psychological literature indicates that men tend to be more aggressive than women (Eagly & Steffen, 1986)." As this example illustrates, the general format of citations in APA style is parenthetical, with a comma separating author(s) and date of publication. If you use a direct quote, you must also give the page number. Do not cite "class notes" – find the original source. See the *APA Publication Manual* for how to format citations.

References

You must use at least 5 references in writing your Introduction section and at least 10 references total. Five of these references must be articles in peer-reviewed psychology journals (check with me). No more than one reference may be from *Psychological Reports*, *Psychology Today*, or *Perceptual and Motor Skills*. Internet and textbook sources may be used but do not count toward the 10 reference requirement.