

The Effects of the Independent Variable

On the Dependent Variable

Your O. Name

Wayne State University

Abstract

The abstract is a very brief summary of the research report. For the purposes of this project, place it on a page by itself. Abstracts should be concise and not include much on the details of the procedure. Rather, the aim of the research, the essentials of the subject pool, the gist of the findings, and a glimpse of the discussion occupy this space. Abstracts should not exceed 120 words.

Introduction

The purpose of the introduction is to show how the experimenter arrived at the specific problem being considered in the present experiment. Set forth the problem in its broadest context first and follow with more specific information relevant to the issues to be considered. For example, if you are planning on increasing the frequency of exercise behavior for an individual subject, first begin by stating in general, why exercise is beneficial in general. Then develop the specifics about the individual subject, e.g. he is overweight, has health concerns, etc. The main purpose of the introduction is to explain why the research was conducted. Because you were assigned this project is not the reason to be given here. Since this project is for most students usually a single-subject design, it is acceptable to have some specifics about the subject appear in this section as well as a more detailed description later in the subject subsection of the Methods section. The introduction should answer these following questions in a paragraph or two: why is this problem important, how do the hypothesis and experimental design relate to the problem, what are the theoretical implications of the study, how does the study relate to previous work in the area, what theoretical propositions are tested and how were they derived?

To support the reasoning used in the introduction, specific works by prior investigators should be cited when appropriate. Every time a work is brought to the attention of the reader, it must be referenced, even if the study was referenced earlier in the text (Martin & Pear, 2003; Lefrancois, 2000). For the purpose of this project, about a half-dozen references should be cited in the

formulation of your problem and your intervention. Don't forget to cite your textbooks as references if appropriate. Please refrain from relying on Internet resources unless you are referencing an actual on-line journal. All electronically-retrieved resources also need to be referenced in appropriate APA style.

Once you have built an adequately strong argument for why your topic is a problem and warrants this intervention, you end the introduction by stating the hypothesis, i.e. what is expected to happen. For example, it is hypothesized that the subject will show an increase in such-and-such behavior following such-and-such intervention.

Method

The Method section describes in detail how the study was conducted. The description should be thorough and specific enough so that the reader can evaluate the appropriateness of your methods and the reliability and validity of the results and replicate the study if they so desire. It is conventional to divide this section into subsections.

Subjects. Describe the subject(s) used in the study including any relevant characteristics. The method of selecting the subjects should be included if applicable. With human subjects, all relevant agreements should be mentioned including subject's consent / assent and whether the subject was paid or was a volunteer. All relevant demographic information should be described.

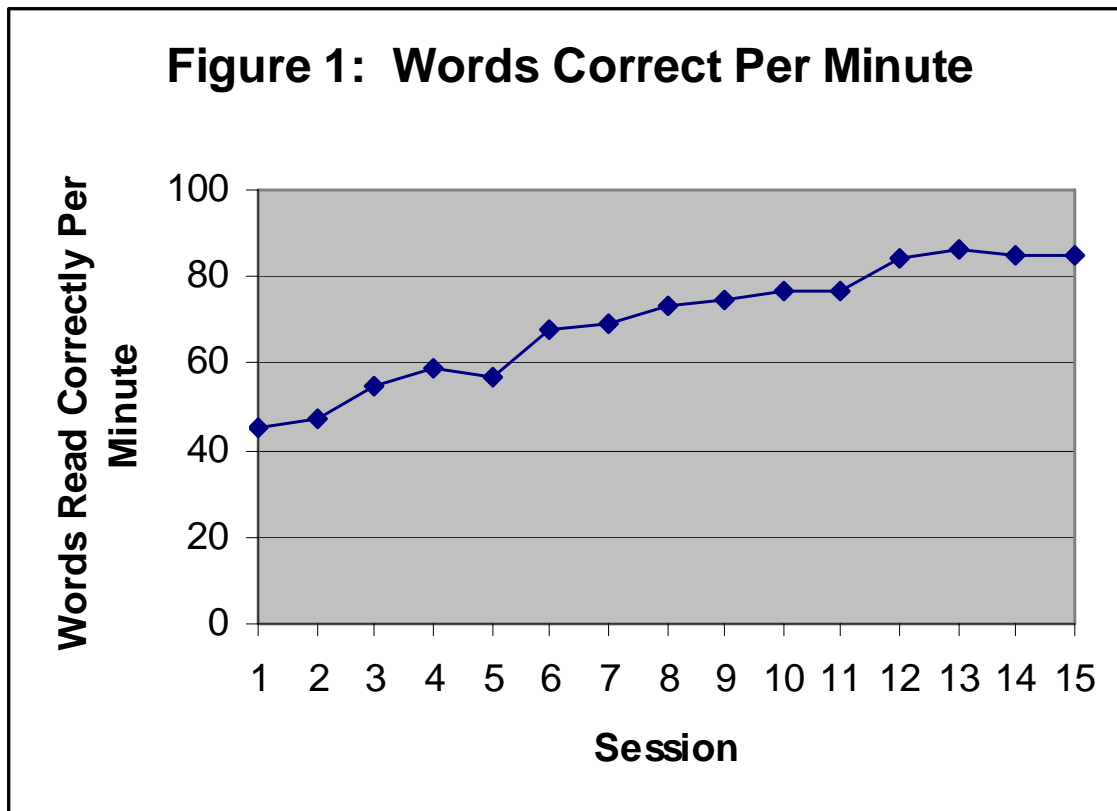
Apparatus. This subsection briefly describes the apparatus or materials used and their function in the experiment. Standard laboratory equipment can be mentioned without detail. Special-made or special equipment should be identified

along with supplier, model, supplier's location etc. Materials used to observe, measure and record progress should also be reported (e.g. record-keeping logs, timers, graphs etc.). Any specific record-keeping instruments you may develop should be placed in the Appendix.

Procedure. This subsection summarizes each step in the execution of the research. Include instructions given to participants and specific experimental manipulations. This should tell exactly what you did and how you did it so that a reader could replicate it.

Results

The Results section summarizes the data collected and the statistical or data analytic treatment used. No interpretation is given of the data at this time. This is the section for graphs of trends and tables of means or statistical values. It is important to state baseline and post-treatment values and make comparisons. For the purpose of this project, it is not necessary to do any statistical tests, unless you are knowledgeable of the appropriate tests and are comfortable doing so. A comparison of mean baseline and post-treatment occurrences of behaviors will suffice. For example, you could simply state that the mean occurrence of a behavior prior to intervention was x , while after your intervention, it was y resulting in a $z\%$ increase / decrease. Also, for the purpose of this project, you may include tables and graphs right here in this section rather than referring to an appendix. All graphs and tables must be numbered and titled according to the rules in the APA Publication Manual.



Discussion

After presenting the results, you now evaluate and interpret their implications, particularly in regards to how they support or fail to support your hypothesis. Therefore, the discussion section should begin with a restatement of the hypothesis, and then describe how the results either support or fail to support your hypothesis. If the results came out as expected, there is little else to do except to point out that they support the hypothesis and upholds the work of any previous Researcher (2000) you may have cited in the introduction. There is more to be done if the results did not come out as expected. You may have to cite other studies that support your current results. The discussion should also address issues such as: why this problem is important, what larger issues may be affected by these findings, what propositions are confirmed or disconfirmed by

the extrapolation of your findings, and what real life psychological phenomena might be explained by your results. This is the section where some speculation and self-evaluation are allowed. You should emphasize how this study contributed to your field, how others might benefit from what you did, and why readers should attend to what you have done. The discussion usually ends on a note suggesting further related topics for study or how this current research could be improved upon in future replications.

References

References cited in the text of a research paper must appear in a Reference List or bibliography. This list provides the information necessary to identify and retrieve each source.

- Entries should be arranged in alphabetical order by authors' last names. Sources without authors are arranged alphabetically by title within the same list.
- Write out the last name and initials for all authors of a particular work.
- Capitalize only the first word of a title or subtitle, and any proper names that are part of a title.
- Use an ampersand (&) instead of the word "and" when listing multiple authors of a single work.
- Use the abbreviation **p.** or **pp.** to designate page numbers of articles from periodicals that do not use volume numbers, especially newspapers. These abbreviations are also used to designate pages in encyclopedia articles and chapters from edited books.
- **Indentation** *: The first line of the entry is flush with the left margin, and all subsequent lines are indented (5 to 7 spaces) to form a "hanging indent."
- **Underlining vs. Italics**: It is appropriate to use italics instead of underlining for titles of books and journals.

Examples:

Books

References to an entire book must include the following elements: author(s) or editor(s), date of publication, title, place of publication, and the name of the publisher.

No Author or Editor

Merriam-Webster's collegiate dictionary (10th ed.). (1993).
Springfield, MA: Merriam Webster.

One Author

Baddeley, A. D. (1999). *Essentials of human memory*. Hove, England: Psychology Press.

Two Authors

Beck, C. A. J., & Sales, B. D. (2001). *Family mediation: Facts, myths, and future prospects*. Washington, DC: American Psychological Association.

Corporate Author, Author as Publisher

Australian Bureau of Statistics. (1991). *Estimated resident population by age and sex in statistical local areas, New South Wales, June 1990* (no. 3209.1). Canberra, Australian Capital Territory: Author.

Edited book

Gibbs, J. T., & Huang, L. N. (Eds.). (1991). *Children of color: Psychological interventions with minority youth*. San Francisco: Jossey-Bass.

Essays or Chapters in Edited Books

References to an essay or chapter in an edited book must include the following elements: essay or chapter authors, date of publication, essay or chapter title, book editor(s), book title, essay or chapter page numbers, place of publication, and the name of the publisher.

One Author

Massaro, D. (1992). Broadening the domain of the fuzzy logical model of perception. In H. L. Pick Jr., P. van den Broek, D. C. Knill (Eds.), *Cognition: Conceptual and methodological issues* (pp. 51-84). Washington, DC: American Psychological Association.

Two Editors

Bjork, R. A. (1989). Retrieval inhibition as an adaptive mechanism in human memory. In H. L. Roediger III & F. I. M. Craik (Eds.), *Varieties of memory & consciousness* (pp. 309-330). Hillsdale, NJ: Erlbaum.

Encyclopedias or Dictionaries and Entries in an Encyclopedia

References for encyclopedias must include the following elements: author(s) or editor(s), date of publication, title, place of publication, and the name of the publisher.

Encyclopedia set or dictionary

Sadie, S. (Ed.). (1980). *The new Grove dictionary of music and musicians* (6th ed., Vols. 1-20). London: Macmillan.

Encyclopedia article

Bergman, P. G. (1993). Relativity. In *The new encyclopedia Britannica* (Vol. 26, pp. 501- 508). Chicago: Encyclopedia Britannica.

Journals, Magazines, and Newspapers

References to periodical articles must include the following elements: author(s), date of publication, article title, journal title, volume number, issue number (if applicable), and page numbers.

Journal Article, one author

Mellers, B. A. (2000). Choice and the relative pleasure of consequences. *Psychological Bulletin*, 126, 910-924.

Journal Article, two authors

Klimoski, R., & Palmer, S. (1993). The ADA and the hiring process in organizations. *Consulting Psychology Journal: Practice and Research*, 45(2), 10-36.

Journal Article, more than two authors

Saywitz, K. J., Mannarion, A. P., Berliner, L., & Cohen, J. A. (2000). Treatment for sexually abused children and adolescents. *American Psychologist*, 55, 1040-1049.

Magazine article

Kandel, E. R., & Squire, L. R. (2000, November 10). Neuroscience: Breaking down scientific barriers to the study of brain and mind. *Science*, 290, 1113-1120.

Newspaper article, no author

New drug appears to sharply cut risk of death from heart failure. (1993, July 15). *The Washington Post*, p. A12.

Newspaper article, one author, discontinuous pages

Schwartz, J. (1993, September 30). Obesity affects economic, social status. *The Washington Post*, pp. A1, A4.

Technical and Research Reports

References to a report must include the following elements: author(s), date of publication, title, place of publication, and name of publisher. If the issuing organization assigned a number (e.g., report number, contract number, or monograph number) to the report, give that number in parentheses immediately after the title. Additional information is included when a report is published by the Government Printing Office (GPO) or when it is available from a document deposit service such as NTIS or ERIC.

Government report

U.S. Department of Health and Human Services. (1992). *Pressure ulcers in adults: Prediction and prevention* (AHCPR Publication No. 92-0047). Rockville, MD: Author.

Government report, GPO Publisher

National Institute of Mental Health. (1990). *Clinical training in serious mental illness* (DHHS Publication No. ADM 90-1679). Washington, DC: U.S. Government Printing Office.

Report available from document deposit service

Osgood, D. W., & Wilson, J. K. (1990). *Covariation of adolescent health problems*. Lincoln: University of Nebraska. (NTIS No. PB 91-154 377/AS)

Audio-Visual Media

References to audio-visual media must include the following elements: name and function of the primary contributors (e.g., producer, director), date, title, the medium in brackets, location or place of production, and name of the distributor. If the medium is indicated as part of the retrieval ID, brackets are not needed (see example for Audio Recording).

Videocassette

Garmon, L. (Producer and Director), & Apsell, P. (Executive Producer). (1994). *Secret of the wild child* [Videocassette]. Boston, MA: WGBH Educational Foundation.

Audio Recording

Costa, P. T., Jr. (Speaker). (1988). *Personality, continuity, and changes of adult life* (Cassette Recording No. 207-433-88A-B). Washington, DC: American Psychological Association.

Motion Picture

Scorsese, M. (Producer), & Lonergan, K. (Writer/Director). (2000). *You can count on me* [Motion Picture]. United States: Paramount Pictures.

Television Broadcast

Crystal, L. (Executive Producer). (1993, October 11). *The MacNeil/Lehrer news hour* [Television broadcast]. New York and Washington, DC: Public Broadcasting Service.

Television Series

Miller, R. (Producer). (1989). *The mind* [Television series]. New York: WNET.

Music Recording

Shocked, M. (1992). Over the waterfall. On *Arkansas traveler* [CD].
New York: PolyGram Music.

Electronic Media and Online Sources

APA's recommendations for citing electronic media call for consistent observation of at least two important guidelines: 1) Direct readers as closely as possible to the information being cited -- whenever possible, reference specific documents rather than home or menu pages; 2) Provide addresses that work. At a minimum, a reference of an Internet source should provide a document or title description, a "date" (either the date of publication, update, or date of retrieval), and an address (in Internet terms, a URL). Whenever possible, identify the authors of the document as well.

Listed below are examples of citation styles for several types of electronic sources.

Internet articles based on a print source (exists in print and online)

VandenBos, G., Knapp, S., & Doe, J. (2001). Role of reference elements in the selection of resources by psychology undergraduates [Electronic version]. *Journal of Bibliographic Research*, 5, 117-123.

Article in an Internet-only journal

Fredrickson, B. L. (2000, March 7). Cultivating positive emotions to optimize health and well-being. *Prevention & Treatment*, 3, Article 0001a. Retrieved November 20, 2000, from <http://journals.apa.org/prevention/volume3/pre0030001a.html>

Article from an online encyclopedia

Bergman, P. G. & Editors of Encyclopedia Britannica Online. (1994-1999). Relativity. *Encyclopedia Britannica Online*. Retrieved August 4, 1999, from Encyclopedia Britannica Online on the World Wide Web: <http://search.eb.com/bol/topic?eu=117376&sctn=1>

Professional web site

American Psychological Association. (1999, June 1). Electronic preference formats recommended by the American Psychological Association. Retrieved July 18, 1999, from the World Wide Web: <http://www.apa.org/journals/webref.html>

Document available on university program or department site

Chou, L., McClintock, R., Moretti, F., & Nix, D. H. (1993). *Technology and education: New wine in new bottles: Choosing pasts and imagining*

educational futures. Retrieved August 24, 2000, from Columbia University, Institute for Learning Technologies Web site:
<http://www.ilt.columbia.edu/publications/papers/newwine1.html>

When citing an entire web site (and not a specific document on that site), no Reference List entry is required if the address for the site is cited in the text of your paper.

Witchcraft In Europe and America is a site that presents the full text of many essential works in the literature of witchcraft and demonology (<http://www.witchcraft.psmmedia.com/>).