# RESEARCH METHODS 13RM - Writing Research Reports

Author:   Ed Nelson
Department of Sociology M/S SS97
California State University, Fresno
Fresno, CA 93740
Email:  ednelson@csufresno.edu

**Note to the Instructor:** This is the last in a series of 13 exercises that were written for an introductory research methods class.  The first exercise focuses on the research design which is your plan of action that explains how you will try to answer your research questions.  Exercises two through four focus on sampling, measurement, and data collection.  The fifth exercise discusses hypotheses and hypothesis testing.  The last eight exercises focus on data analysis.  In these exercises we analyzed data from one of the [Monitoring the Future Surveys](http://monitoringthefuture.org/) (i.e., the 2017 survey of high school seniors in the United States).  This data set is part of the collection at the Inter-university Consortium for Political and Social Research at the University of Michigan.  This data set is freely available to the public and you do not have to be a member of the Consortium to use it.  We used SDA (Survey Documentation and Analysis) to analyze the data which is an online statistical package written by the Survey Methods Program at UC Berkeley and is available without cost wherever one has an internet connection.  A weight variable is automatically applied to the data set so it better represents the population from which the sample was selected.  You have permission to use this exercise and to revise it to fit your needs.  Please send a copy of any revision to the author so I can see how people are using the exercises. Included with this exercise (as separate files) are more detailed notes to the instructors and the exercise itself.  Please contact the author for additional information.

[This page](http://ssric.org/files/Research_Methods_13RM.docx) in MS Word (.docx) format is attached.

**Goal of Exercise**

The goal of this exercise is to discuss how we write research reports.  A research report describes what you discovered during your analysis of the data.

**Part I – An Outline of the Research Report**

We used the Monitoring the Future (MTF) Survey of high school seniors for this series of exercises.  The MTF survey is a multistage cluster sample of all high school seniors in the United States.  The survey of seniors started in 1975 and has been done annually ever since.

MTF is an example of a social survey.  The investigators selected a sample from the population of all high school seniors in the United States.  This particular survey was conducted in 2017 and is a relatively large sample of a little more than 12,000 seniors.  In a survey we ask respondents questions and use their answers as data for our analysis.  The answers to these questions are used as measures of various concepts.  In the language of survey research these measures are typically referred to as variables.

In previous exercises we started by looking at variables one at a time (i.e., univariate analysis) and then at the relationship between two variables (i.e., bivariate analysis).  Eventually we added a third variable into the analysis (i.e., multivariate analysis) and considered the possibility that our two-variable relationship might be spurious due to this third variable.

Now we need to think about how to write a research report so that others may read it and learn from our analysis.  This report might be for a class you are taking, or it might be a report that you are submitting to a research conference.  If you are going to submit your report to a journal for possible publication, you need to look carefully at the instructions that all journals provide on preparing a manuscript for publication.

Here's an outline for your report.  Don't think that this is the only way you can organize your report, but this is one way to do it.

* Title page including your name, the date, and the class it is for.
* Abstract – An abstract is a short summary of what you did in the paper and the major findings of your analysis.  Abstracts are really short, so you need to be succinct. It should be less than 200 words or even shorter depending on the requirements of your professor or the research conference to which you are submitting your paper.
* Table of contents (optional).
* Body of the paper.
	+ An introduction to the paper which explains why you wrote the report and provides an introduction to the topic of the paper.
	+ Your review of the literature that summarizes what others discovered about this topic.  Virtually everything you might do has been written about by others.  You should review the relevant literature and summarize what others have found.  You don't want to simply list the relevant literature and consider the articles and books one by one.  Rather you want to summarize what others have done and look for themes around which you can organize your literature review.  If you are having trouble finding relevant literature, go to the library at your university or a nearby university and talk with a reference librarian.  They are trained in searching for relevant literature and will be able to help you.
	+ The methodology of your study.
		- If you collected your own data, discuss how you chose your sample, how you measured the concepts, and how you collected your data.
		- If you used an existing data set, discuss the sampling, measurement, and data collection used in that study.  Studies that are part of data archives such as the Inter-university for Political and Social Research at the University of Michigan and the Roper Center for Public Opinion Research at Cornell University provide good summaries for all data sets that are housed at their archive.
	+ Theory and Hypotheses – If you are using a theoretical perspective and/or testing hypotheses, describe the theory and state the hypotheses you plan to test.  Be sure to cite supporting literature that forms the basis for your theory and hypotheses.
	+ Empirical findings and interpretation – What are the empirical findings that came out of your data analysis and what did they tell you?  If you are testing hypotheses, did your analysis support your hypotheses?  Remember that you are telling a story.  Start simple and build up.  That means starting with univariate analysis, then proceeding to bivariate analysis, and then looking at sets of three or more variables (i.e., multivariate analysis) to consider such things as spuriousness.
	+ Conclusions and summary. This is a little like your abstract but not as short.  What did you do, what did you find in your study and what did it mean?
* Tables.  You may choose to put your tables in the body of your paper, or you may decide to put them all at the end of your paper.
* References.  For every article or book that you cite, you need to provide a full bibliographic reference at the end of the report.

**Part II—Tables**

There are advantages and disadvantages to putting your tables in the body of the report or at the end of the report.  Putting them in the body of the report keeps them front and center for the reader but they often are bulky and get in the way of reading your report.  Putting them at the end of the report gets them out of the way and allows the reader to spread them out and look at them as he or she is reading the paper.  Your instructor or the research conference will usually tell you where to put your tables.

If they are placed at the end of the paper, put a note in the body of the report that says something like "Table 1 about here."  That will let the reader know where the table fits into your report.

Constructing a good table is important.  Sometimes your instructor will tell you to copy tables from the program you are using for statistical analysis (e.g., SDA, SPSS, PSPP, and others) into your paper.  Other times you will construct the tables yourself.  A good reference on creating tables is *The Chicago Guide to Writing About Numbers* by Jane E. Miller.[[1]](%22%20%5Cl%20%22_ftn1%22%20%5Co%20%22)  Your word processing program (e.g., Word in Microsoft Office) will provide you with templates that you can choose for your tables.

**Part III – Footnotes or Endnotes?**

Often you want the reader to be aware of something but you don't want to put it in the body of the paper.  It may be a technical issue such as how you recoded a variable or why you chose a particular statistic.  Or you may want to tell the reader that you will discuss something later in the paper.  You can put comments like these in either a footnote or an endnote.  A footnote goes at the bottom of the page and an endnote goes at the end of the paper.  Your word processing program will allow you to enter either footnotes or endnotes in your paper.  Which you use is up to you unless your instructor or the research conference tells you that one or the other is required.

**Part IV – Citing Articles, Papers, and Other Materials**

There are many styles (e.g., American Psychological Association (APA) or Modern Language Association (MLA)) that you could use to cite materials that you refer to in your paper.  Remember that anytime you refer to someone else's work, you must acknowledge the source.  Your instructor or research conference will often specify which style you should use.

**Part V – Plagiarism**

Plagiarism is using someone else's words or ideas without acknowledging the source.  If you are quoting from a document, you must cite the source.  Even if you are paraphrasing, you must acknowledge the source.  If you are using someone else's ideas, you must acknowledge the source.  There is a good review of plagiarism written by Earl Babbie that can be found on the Internet by clicking [here](http://www1.chapman.edu/~babbie/plag00.html).  Click on the red arrow at the top to go forward or backward in this review of plagiarism.

**Part VI– Proofreading**

Be sure to proofread your paper several times before turning it in.  Use the spell and grammar checker in your word processor.  Another possibility is asking a friend to read it and tell you about errors or parts that are confusing.

**Part VII – Other Guides to Writing**

There are many other guides to writing research reports.  One that is commonly used in Sociology is the Guide to Writing Sociology Papers.[[2]](%22%20%5Cl%20%22_ftn2%22%20%5Co%20%22)  You can find others on the internet by entering "writing research reports" in the search box.

[[1]](%22%20%5Cl%20%22_ftnref1%22%20%5Co%20%22) Jane E. Miller. 2015.  The Chicago Guide to Writing About Numbers.  Chicago: University of Chicago Press.

[[2]](%22%20%5Cl%20%22_ftnref2%22%20%5Co%20%22) Sociology Writing Group.  A Guide to Writing Sociology Papers. 2013 (7th edition). Worth Publishers.