

FCHD 6031: Research Methodology  
Utah State University  
Department of Family, Consumer, and Human Development  
Spring, 2017

**WHEN:** Thursdays 3:00 - 5:30

**WHERE:** FL-206

**Instructor:** R. M. Jones (797-1553)

**Office:** FL-221

**Hours:** M & W (6:00 to 9:00 am, or by appointment)

**Texts:** D. Dooley (2001). *Social Research Methods (any edition)*. Upper Saddle River, NJ: Prentice-Hall, Inc. Office of the Thesis Coordinator (**most recent version**). *Utah State University Publication Guide for Graduate Students*, [http://www.usu.edu/graduateschool/student\\_resources/thesis.cfm](http://www.usu.edu/graduateschool/student_resources/thesis.cfm)

American Psychological Association (**most recent version**). *Publication Manual of the American Psychological Association* (5th ed.). Washington, D.C., American Psychological Association.

**Objectives:** Participation in this course will provide you with greater understanding of the research process, beginning with problem selection, and proceeding with formulation of research questions, conceptual and operational definitions, sample selection, research design, measurement, data collection, data analysis, and interpretation. After completing this course you will be able to conceptualize a research problem and construct an appropriate methodology for investigation. Additionally, students who complete this course will:

1. Understand basic concepts of social-behavioral research methodology;
2. Understand special issues and problems of studying children and families;
3. Evaluate research proposed or conducted by others;
4. Develop a research prospectus;
5. Present a concise research prospectus.

**Grading:** Your grade for the course is a composite of your performance on the Summary and Critique activities, Article Presentations, Research Prospectus, and Presentation of the Research Prospectus. There are 175 points available:

Summary & Critique Papers (S&C; 5 papers)	90
Article Presentations (AP)	10
CITI Training	10
Research Prospectus	25
Presentation of Research Prospectus	20

Final grades for the course will be assigned accordingly:

A = 94 - 100%   A- = 90 - 93%   B+ = 88 - 89%   B = 84 - 87%   B- = 80 - 83%   C+ = 78 - 79%   C = 74 - 77%;  
C- = 70 - 73%   D+ = 68 - 69%   D = 64 - 67%;   D- = 60 - 63%;   F = 0 - 59%

Physical Impairments: If a student has any physical disabilities or any problem that will likely require some accommodation by the instructor, these must be made known to the instructor during the first week of the course. Any requests for special considerations relating to attendance, pedagogy, taking of examinations, etc. must be discussed with and approved by the instructor prior to completion of the fifth day of the course. In cooperation with the Disability Resource Center, course materials can be provided in alternative formats -- large print, audio, and braille.

**SUMMARY & CRITIQUE (S&C)**: To complete these activities, you will need to obtain a thesis (or, for doctoral students, a dissertation) that you will summarize and critique throughout the semester. Ideally, you will obtain a thesis that was written by a recent graduate from our program who had the SAME MAJOR ADVISOR AS YOU. If you do not have a Major Advisor, please request a thesis or dissertation from your faculty Sponsor.

Throughout the semester you will summarize and critique sections of the thesis (or dissertation) in a series of five short papers. Each of your papers will contain three sections. The first section of your report will provide a **Summary** of the relevant portion of the thesis, addressing both content and format. The second section of your report will provide a **Critique** of the relevant portion of the thesis (what is adequate? what is not adequate? what could be improved? what information appears to be missing from the document? etc.). The third and final section of your report, **Application**, will describe how your summary and critique of the thesis will be (OR HAS BEEN) used to improve relevant sections of your own research prospectus (see RESEARCH PROSPECTUS below). For all three sections of each report (viz., Summary, Critique, and Application), you are encouraged to use information from "Writing a Research Report" (WRR), located at the end of this syllabus (pp. 5 - 10). The five S&C papers are due throughout the semester (see SCHEDULE, pp. 3 - 4), and should reflect your own work.

**S&C PAPER**

		<b>Suggested length</b>	<b>8</b>	<b>WWR</b>	<b>Points</b>
1.	S&C Chapter I	(1-3 pp)	1-	27	15
2.	S&C Chapter III (Measurement)	(2-3 pp)	61-	85	20
3.	S&C CHAPTER III (Sample and Procedures for data collection)	(1-2 pp)	28-	60	10
4.	S&C CHAPTER III (Research Design, threats to internal validity)	(1-3 pp)	86-	110	20
5.	S&C CHAPTER IV (Results and discussion)	(3-5 pp)	111 -	168	25

**Each S&C report is 1) typed, 2) contains sufficient documentation with a reference list, 3) conforms to APA publication guidelines, and contains citations and references.** Note that these papers are due throughout the semester, following presentation and discussion of relevant material. Also note that S&C papers will be accepted for credit on or before the due date. Papers that are submitted late (after the due date) will be evaluated for the sole purpose of providing you with feedback and, **NO POINTS will be awarded!**

**RESEARCH PROSPECTUS**: A research prospectus is a brief (3 to 4 pp, single spaced) overview of planned research that includes: a) a brief overview of the study; b) research question(s); c) methods (i.e., sample, measures, procedures, research design, and statistical analyses) that will be used to answer the research question(s); d) a time-line and, e) a summary statement describing how the research fits into the bigger picture. Your prospectus should include the following sections and headings:

1. Introduction: (a brief outline of the research focus, major, seminal citations only);
2. Research Questions: (2-3 research questions that you might actually investigate in a thesis or dissertation)
3. Methods: (likely population, sample, measures, procedures, and research design that you might use);
4. Time line: (A schedule showing when you "realistically" intend to complete each phase of the research);
5. Summary Statement: (Likely contributions of the research). **A favorable or unfavorable evaluation of the Prospectus by me, for this class, may or may not reflect the opinion of your Major Advisor and Members of your Committee.**

**ARTICLE PRESENTATIONS:** In addition to required readings from the Dooley text, there are three articles listed on the class schedule. All students are expected to read all three articles. Students will be assigned one of these articles to present to the class. Presenters are encouraged to create overheads, handouts, and activities that facilitate class participation.

**PRESENTATION OF THE RESEARCH PROPOSAL:** You will give a brief (10-15 minutes) oral presentation of your research proposal to the class during one of the later class sessions.

FCHD-6031 Research Methods (3:00 – 5:30)

R.M. Jones

Date	Reading	Topics	Assignments Due
01/12		Course Overview Completing Your Graduate Degree at Utah State University	
01/19		Research - Why Bother? Introduction to the Scientific Approach Conceptualizing the Research Project and Report Selecting a Research Question/Topic	
	AP	Meehl, P.E. (1991). Why summaries of research on psychological theories are often uninterpretable. In R.E. Snow & D.E. Wiley (Eds.). <i>Improving Inquiry in Social Science: A Volume in Honor of Lee J. Cronbach</i> , Hillsdale, NJ: Lawrence Erlbaum Associates.	<b>AP (students)</b>
01/26	Dooley # 1, 3, & 4	The Role of Theory in Social Science Where to Begin? What Next? The Research Report	
02/02	Dooley # 5	Measuring Variability Reliability Validity	<b>S&amp;C section 1</b>
02/09	Dooley # 6	Methods of Measurement Obtrusive vs. Unobtrusive Quantitative vs. Qualitative	
	AP	Gynther, M.D., & Green, S.B. (1982). Methodological Problems in Research with Self-Report Inventories. In P.C. Kendall & J.N. Butcher (Eds.). <i>Handbook of Research Methods in Clinical Psychology</i> , New York, NY: John Wiley & Sons.	<b>AP (students)</b> <b>S&amp;C section 2</b>
02/16	Dooley #6 & 7	Measurement (continued) The Logic of Sampling Methods of Sampling External Validity	
02/23	Dooley # 9	Research Designs Experimental Designs Quasi-Experimental Designs Threats to Internal Validity Diagraming Research Designs	<b>S&amp;C section 3</b>

Date	Reading/DooleyTopics	Assignments Due
03/02	Dooley #10&11 Research Designs (continued) Enhancing Validity Single Subject Designs	
03/09	NO CLASS – SPRING BREAK	<b>S&amp;C section 4</b>
03/16	Dooley #12&14 Correlational Methods Cause & Effect Correlational Analyses Interpreting Research	
03/23	Data Management and Analysis Codebooks, data entry, SPSS basics	
03/30	Data Analyses Descriptive and inferential statistics Univariate, Bivariate, and Multivariate statistics Statistical and Practical significance	
AP	Shaver, J.P. (1993). What Statistical Significance testing is, and what it is not. <i>Journal of Experimental Education</i> , 61, 4, 293-316.	
		<b>Prospectu s</b>
04/06	Dooley # 2 Ethics (NO FORMAL CLASS) Research integrity Human Subjects IRB procedures <b>COMPLETE &amp; PASS IRB CITI TRAINING</b> ( <a href="https://rgs.usu.edu/irb/training/">https://rgs.usu.edu/irb/training/</a> )	<b>S&amp;C section 5</b>
04/20	STUDENT PRESENTATIONS (PROSPECTUS)	
04/27	STUDENT PRESENTATIONS (PROSPECTUS)	
05/03 TUESDAY	FINAL EXAM 1:30 (STUDENT PRESENTATIONS (PROSPECTUS) IF NEEDED)	

## I. Introduction

A properly conceptualized and well-written introduction allows the reader:

- (1) to understand what the study is about (information about the problem, the variables under study, and the research strategy); and
- (2) to understand why the study was undertaken (explanation and justification in terms of social and/or scientific significance and some information as to how the study relates to previous work).

Thus, the introduction:

1. Identifies the research area to which the study is relevant.
2. Describes the theoretical significance of the research when applicable.
3. Describes the practical (applied) significance of the research.
4. Describes the social significance of the research.
5. States the general findings of research regarding this topic.
6. States those aspects or extensions of the general findings which are examined by this study.
7. Cites the major methodological strengths of related studies.
8. Cites the major methodological weaknesses of related studies.
9. Cites the major inferential weaknesses of related studies, such as misconstructions of data, faulty conclusions, alternative implications.
10. Treats controversial issues fairly by offering available data on all sides of the issue.
11. Shows how the research design is related to these issues.
12. Clearly states the research questions or hypotheses.
13. Shows the linkages between the research questions or hypotheses of the study and research cited in this area.
14. Shows how the research design answers the research questions or tests the hypotheses.
15. Demonstrates how the study would extend the research area.
16. Defines variables with enough detail to understand how they will help answer the research questions.
17. Justifies selection of these variables.
18. Provides a general rationale for the procedure in terms of how it answers questions, relates to issues, provides generality or specificity, etc.

### Beyond this, the introduction might also:

19. Integrate the research into a theoretical framework.
20. Clearly state theoretical propositions tested and how they were derived.
21. Avoid inconclusive discussions.
22. State expectations for results.
23. Acknowledge exceptions to general findings.
24. Identify limitations of the study.
25. Describe criteria that will be used to determine the theoretical significance of the study.
26. Identify particular strengths of the study.
27. Describe criteria that will be used to determine the practical and/or social significance of the study.

## II. Method

A well-written Methods section allows the reader to understand exactly how the study was conducted. This description requires adequate treatment of the subject population, personnel, apparatus, materials, procedures, and design. The description should be given in sufficient detail so that a reader might not only replicate the methods but also might judge their appropriateness and the probable reliability of the results. To accomplish these things, the Methods section addresses the following in each category:

### Subjects:

28. States the number of subjects.
29. States their age or distribution of ages.
30. States their sex or the proportion of each sex.

31. Describes other demographic factors that might be relevant to the uniqueness of the subjects as a group.
32. Explains why subjects were selected (refers to subject availability, motivation to participate, etc.).
33. Describes the method of subject selection if sampled from a larger population.
34. Describes the relationship between the dependent variables and the selection process.
35. Identifies the population from which sampling is measured.
36. Describes previous history with treatment variables.
37. Details subject factors that confound the design, such as potential maturational factors, handicaps, nonexperimental conditions to which subjects were exposed, etc.
38. Cites subject mortality rates, if any.
39. Explains subject mortality.
40. If ethically sensitive, specifies conformance with APA ethical guidelines on safeguards for human subjects.

#### Experimenter/Personnel:

41. Specifies sex, age, and other relevant demographic information.
42. Describes their experience with the research area.
43. Describes the extent of their knowledge about the study.
44. Specifies their experience with the subject(s).
45. Specifies the instructions given to them.
46. Describes the conditions under which they learned the procedures.
47. Specifies their role in any contingency system connecting them with the authors or each other.
48. Specifies their expectations concerning the outcome of the study.

#### Setting:

49. Gives a rationale for the choice of the specific setting, especially if treatment and observation settings differ.
50. Specifies the location where the research was conducted.
51. Describes physical aspects of the environment that might affect results.
52. Specifies how the environment was altered for the study.
53. Describes any unusual environmental events.
54. Specifies the days and times when settings were employed.

#### Apparatus/Materials:

55. Describes specific apparatus or materials used.
56. Details their construction or provides references.
57. Provides illustrations of specially constructed equipment if necessary for understanding the study.
58. Explain why apparatus and/or materials were used.
59. Demonstrates the validity of the apparatus, materials, or test instruments.
60. Demonstrates the reliability of the apparatus, materials, or test instruments.

#### Variables Measured:

61. Defines in operational terms.
62. Defines in complete detail.
63. Specifies the conditions under which they are to occur.
64. Specifies standards of performance, e.g., the criteria according to which observers label a particular response.
65. References definitions used in related research.
66. Discusses relationship to definitions of similar variables in related research.
67. Defines in relation to the research question.
68. Ranks in terms of importance to the research questions.
69. Gives examples of unusual or complicated responses or when necessary for clarification.

#### Observation Procedures:

70. Presents rationale for selection of observation procedures.

71. Provides description of procedural sequence followed in observing.
72. Details the coding format.
73. Explains, provides illustrative sample, and/or reference observation systems used, especially if not standard or clear.
74. Details the frequency of observation sessions.
75. Details the duration of observation sessions.
76. Details the schedule of observation sessions.
77. Describes the training of observers.
78. Specifies the number of reliability checks.
79. Specifies the distribution of reliability checks.
80. Explains in detail the method of computing reliability.
81. Specifies the conditions under which observations were made.
82. Assesses reliability for all dependent variables, or explains why reliability was not assessed.
83. Provides an independent assessment of the degree to which the stated procedures were actually implemented.
84. Specifies controls for observer expectancies.
85. Insures that observations were independently recorded.

#### Design:

86. Identifies and describes design.
87. Further justifies selection of the design if not fully explained in the introduction.
88. Identifies major potentially confounding variables
89. Specifies the number of subjects assigned to groups.
90. Specifies the distribution of subject characteristics, such as age and sex, among groups.
91. Specifies the method of assigning subjects to groups.
92. Specifies the method of assigning experimenters to groups.
93. Describes each phase (condition) of the study.
94. Identifies the sequence of conditions.
95. Identifies the duration of each condition.
96. Specifies the criteria used for moving from one condition to another.
97. Describes how any extraneous variables were controlled.
98. Provides illustrations to clarify any obscure or complicated design features, such as sequence of conditions, inter-subject or inter-response comparisons, etc.

#### Procedures:

99. Describes treatments or independent variables in detailed operational terms.
100. Describes any experimenter reactions to subjects' responses.
101. Describes interactions among subjects.
102. Details any decision-making criteria used by experimenters.
103. Lists specific procedures in chronological order.
104. Specifies length of sessions.
105. Describes instructions to the subjects.
106. Gives examples of procedures where clarification is necessary.
107. Gives references if the procedures are used in other research.
108. Relates procedures to those used in related research.
109. Defines all specialized terms.
110. If sensitive, justifies the ethics of the intervention procedures.

### III. Results

A well-prepared Results section allows the reader to inspect the collected data, evaluate the analysis of the data, and judge whether the conclusions reached by the authors are justified. In order to accomplish this the Results section:

111. Reports data on all variables specified in the Methods section.

112. Reports data that are observable, and preferably publicly observable.
113. Reports data on each condition of the design that is specified in the Methods section.
114. Reports on the reliability of the data.
115. Reports on the extent to which the procedures described were actually implemented.
116. Presents data that are quantified and replicable.
117. Reports data with sufficient detail to justify later conclusions.
118. Describes relations among individual data.
119. Describes relations between group data.
120. Identifies analyses used.
121. Explains or references analyses not commonly used in similar research.
122. Describes how unusual measures were computed.
123. Restricts reporting to a description of the data collected.
124. Provides graphic representation of major measures.
125. Visual representations of the data (graphs, tables, charts, etc.) conform to APA standards.
126. Includes supportive data if generalizability is limited or validity is suspect.
127. Reports data in descending priority order.
128. Selects medium for data presentation which optimize clarity (e.g., charts, graphs, tables, etc.).
129. Prepares captions and labels so that graphs and tables are self-explanatory.
130. Matches verbal descriptions in the text to visual representations if the latter are included.
131. Uses tables when figures are unclear or otherwise unnecessary.
132. Uses labels that are consistent with those specific in the Methods section.
133. Presents functions on separate axes if each is not easily trackable when presented together.
134. Includes a rationale for decisions on the significance of non-statistical analyses.
135. Reports any appropriate descriptive statistics.
136. Uses and reports any appropriate inferential statistical analyses.
137. Reports relevant information about statistical tests that are used (e.g., name of test, test variable value, significance level, degrees of freedom, trends but not inferences, etc.).
138. Includes post hoc testing information where F is used and is significant.

#### IV. Discussion

A well-prepared Discussion section allows the reader to evaluate the implications drawn by the experimenters from their interpretation of the data and data analyses. This section also should allow for some judgment as to how the results integrate with the research literature cited in the introduction. To accomplish this, the Discussion section:

139. States the results in terms of answering the experimental question OR in terms of accepting or rejecting the hypotheses tested.
140. Uses data-based explanations where possible.
141. Labels as such explanations that go beyond the data.
142. Explains the match between the problem and the design.
143. Explains the match between the stated and implemented procedures.
144. Explains the match between the problem and the procedures.
145. Compares or contrasts results with previous research cited in the introduction.
146. Cites alternative explanations where relevant.
147. Shows advantages of favored interpretations of the data.
148. Shows disadvantages of favored interpretations.
149. Trends in the data are differentiated from significant results.
150. Describes limitations on internal validity.
151. Describes limitations on external validity.
152. Makes clear distinctions between social and statistical significance.
153. Explains social significance to relevant populations.
154. Specifies the generality of behavior change across time.

- 155. Specifies the generality of behavior change across settings.
- 156. Specifies the generality of behavior changes across related behaviors.
- 157. Specifies the generality of behavior change across populations.
- 158. Discusses the significance of the data for future research.
- 159. Proposes questions for future research.
- 160. Relates the results to one or more conceptual systems.
- 161. If relevant, discusses the ethical subtleties of the study in line with APA Code of Ethics.

Beyond this, the discussion section might also:

- 162. Discuss the significance of the design for future research.
- 163. Discuss the significance of the procedure for future research.
- 164. Explain ambiguities in the data.
- 165. Include a cost-benefit analysis.
- 166. Avoid repetition of the Results section.
- 167. Be qualitatively presented but data-based.
- 168. Present a refinement of the question or hypotheses investigated.

V. Abstract

By reading the Abstract, along with the graphs and tables, one should be able to understand the purpose, methodology, and results of the study. In order to accomplish this the Abstract briefly:

- 169. Clearly states the purpose or major research question.
- 170. Identifies the independent variables.
- 171. Identifies the dependent variables.
- 172. Contains no information or conclusions that do not appear in the body of the manuscript.
- 173. Identifies the subject population.
- 174. Specifies the research design.
- 175. States test instruments, apparatus, and/or data-gathering procedure.
- 176. Describes experimental conditions so that their major characteristics are clearly differentiated.
- 177. Summarizes the data.
- 178. Summarizes conclusions.
- 179. Identifies the setting.
- 180. Names Assessment instruments used.
- 181. Names intervention/treatment used.
- 182. Includes statistical significance levels when applicable.
- 183. Defines highly specialized terms.
- 184. Emphasizes differences between this study and other studies.
- 185. Mentions any novel aspects of the study.
- 186. States the results in terms of differences between various treatment and control conditions.
- 187. Reports inferences made or comparisons drawn from the results.
- 188. States the purpose or experimental question in one sentence.
- 189. Is written in a style similar to that of the main paper.
- 190. Is organized in parallel with the body of the paper (problem, method, results, conclusions).
- 191. Mention the topic area or interest group for which the implications of the findings are relevant.
- 192. Provide interest in reading the paper.

VI. Title

The Title should be a concise statement of the main theme of the study. It is explanatory when alone and emphasizes any special characteristics of the study. The Title:

- 193. States the topic of the manuscript.
- 194. Stimulates interest in the topic.
- 195. Refers to the variables of major interest

196. Contains enough information to be useful to indexers as a statement of content.

VII. General Criteria

The primary general criteria by which a research manuscript should be judged are THE DEGREE TO WHICH:

- 197. Data are replicable, which assumes that variables have been operationally defined and that the data are reliable.
- 198. The study is socially significant, which assumes judgment using consumer standards for clients, the research community, program developers, etc.
- 199. The experimental design is adequate, which assumes that all confounding variables have been controlled or explained.
- 200. The procedures are replicable, which assumes that all procedures have been thoroughly described, that all contingencies have been identified, and that the described procedures were actually implemented.
- 201. The results are generalizable, which assumes that subjects, personnel, setting and materials have been adequately described.
- 202. Data are clearly reduced and analyzed without distortion.
- 203. Conclusions are data-based and relevant to specified research questions.
- 204. The study is theoretically and scientifically significant, which assumes that the study is integrated with previous research both in the introduction and discussion, and that it represents a contribution to the field.
- 205. The manuscript is well-written, which assumes that it is interesting to read, concise and non-repetitive, grammatically correct, and free of excessive jargon.
- 206. The manuscript is consistent with APA guidelines in terms of style and ethics.
- 207. The manuscript is likely to interest readers.