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CO 725 Research Seminar: Theory and Design

K. Paul Nesselroade

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CO 725: Research Seminar: Theory and Design Spring 2008

Wednesday, 6:15 – 9:00

Room TBD

3 credits

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Course Objectives:

The purpose of this course is to introduce students to basic research methods, research ethics, simple statistics and their interpretation, and the communication of research results.

Course Goals:

Goals: Upon completion of this course, you will be able to:

1. Define research vocabulary.
2. Describe various types of research.
3. Write using APA format.
4. Compute simple descriptive statistics.
5. Interpret descriptive and inferential statistics based on research data.
6. Understand the difference between qualitative and quantitative research.
7. Find, read, comprehend, and apply published articles.
8. Understand ways in which research can be used within a Christian framework.

Required Texts:

- Stangor, C. (2006). *Research methods for the behavioral sciences* (3rd ed.). Boston: Houghton Mifflin Company. ISBN: 0618705910
- Locke, L. F., Silverman, S. J., & Spirduso, W. W. (2004). *Reading and understanding research* (2nd ed.). Thousand Oaks, CA: Sage.
- Publication Manual of the American Psychological Association (5th ed.).
- Course articles, available through library.

Prerequisite / Enrollment Limits: CO 601 and **recommend** completion of CO 720 (or previous experience with research and statistics from undergraduate psychology program) / No more than 25 students

Course Requirements:

1. **Regular attendance** and active participation are very important to mastery of course material. Therefore, if you miss 3 or more class sessions, you will not receive a passing grade. You are responsible for making sure I check your name as “present” during each class section.
2. **Participation – 100 points**
You are expected to participate in class discussion and activities.
3. **Objective examinations – 200 points each (40% total)**

You will take one mid-term and one final exam on specified testing date to document your understanding of course content.

4. Research paper – 300 points (30%)

Develop a research paper. Your paper must include the following elements:

Step 1 – Clear statement of your research question and the importance of that question.

Step 2 – Brief annotated bibliography of possible resources you will use for you paper.

Step 3 – Develop an outline of your paper which evidences the logical development of your hypothesis and conclusions. A first draft of a hypothesis paragraph needs to be included in this outline.

Step 4 – Review of the literature as it relates to your question. Your review must include a minimum of 10 references, 7 of which are journal articles (1986-2008). Of the 10 references, 5 must be a descriptive summary of empirical research. Format for these summaries will be discussed in class. The remaining 5 can be theoretical pieces.

The paper should have an introductory paragraph, good logical development, and a strong conclusion paragraph. Also, you must include title page and references per APA style.

The introductory paragraph and/or section should address the following question: why is your review of the literature needed (i.e., there is a lack of information in this area as demonstrated by XYZ); What do you hope to add to the “knowledge of the field” from your study?

The main body should include thorough summaries and critiques of the articles reviewed along with clear evidence of your own thinking about the issues.

The conclusion should address the following questions: What difference will your results make? How do you hope to apply the results?

Step 5 – Methodology section. This will be submitted as part of your final exam. It will be an overview of a study that you might run to find support for your hypothesis and literature review. It should include a description of your participants and your procedures [protocol and materials]. This finally includes a clear statement of your variables (dependent and independent), your hypotheses, and your research design (including statistics). **(This section is graded as part of the final exam, not as part of the paper.)**

You will develop your paper throughout the semester and you will submit it for review section by section on specified due dates. I will critique your work, focusing my attention on the section under review. I will not grade your paper at these points, but will give you ample feedback to help you develop a strong paper. I will not give you feedback on sections I have already reviewed unless you ask very specific questions. However, should you not turn in your “in process” paper for review on the specified dates, your final paper grade will be lowered (see below).

5. Homework – 200 points (20%)

Throughout the semester there will be various homework assignments. Points will be associated with completion of this assigned work. The total number of points will be 200.

Course Evaluation:

The grading guidelines found in the 2005-2006 catalog will be used for grade assignment.

A	930 - 1000	B	830 - 869	C	730 - 769	D	630 - 669
A-	900 - 929	B-	800 - 829	C-	700 - 729	D-	600 - 629
B+	870 - 899	C+	770 - 799	D+	670 - 699	F	below 600

Course Policies

- *Attendance.* Attendance is essential for understanding and processing the material. You should only be absent in emergencies—illness, family death, or similar unavoidable situations. Emergencies DO NOT include attending to church work or other employment. Therefore, if you miss 3 or more class sessions, you will not receive a passing grade. Poor participation will hurt your grade. And, *you are responsible for verifying that your attendance has been registered (when you arrive late to class)*. If you fail to sign, it will count as an absence. Also note that arriving significantly late to class or leaving significantly early (more than 20 minutes) will count as an absence ... even if you sign the attendance sheet.
- *Submitted Written Papers.*
 - *APA Format.* All written material should conform to style and form set forth in the Publication Manual for the American Psychological Association, 5th ed. Also, all written material should be produced with a standard 12-point font, typed, double-spaced with a one-inch margin.
 - *Writing Quality.* Grades for written material will be partially based on quality of writing, clarity of thought, and logical development.
 - *Form.* Drafts should be submitted in hard copy format by the due date. The final version should be submitted in electronic format by the due date. Electronic submissions should be Word documents or text documents attached to an email.
 - *Timeliness.* Students should submit written material on time; late papers will receive no written comments and the grade will be reduced.
- *Self-Disclosure.* In class interactions, some self-disclosure and personal examination may occur; this should be kept appropriate to the classroom situation. These interactions fall under the umbrella of confidentiality and members will be expected to abide by this ethical standard.
- *Incompletes.* Thinking about incompletes? Seminary guidelines indicate that "A grade of 'I' denotes that the work of a course has not been completed due to an unavoidable emergency, which does not include delinquency or attending to church work or other employment" (*Catalog*, 29). Incompletes will only be granted in extreme situations, so be sure to plan for ordinary emergencies and busyness.
- *Withdrawals.* If you decide to withdraw from the course, you should file forms in the Registrar's Office according to seminary deadlines.
- *Academic Integrity.* Students are expected to follow seminary policy with regard to issues of academic dishonesty (e.g. cheating, plagiarism) and proper conduct in the classroom are required. Any confirmed incident of cheating is grounds for failure in this course. Cheating includes passing off someone else's written work as one's own as well as looking at someone else's test answers to formulate one's own test answer(s).
- *Problems.* If you are having difficulty in this course for ANY reason, please speak to me as soon as possible.
- *Special Needs.* All materials can be made available in alternate formats. Please inform me of any special needs you may have.
- *Scheduling.* The instructor reserves the right to make modifications to the course schedule as necessary.

Date	Reading	Focus	Goals	Announcements & Assignment Due
Feb. 13 Session I		Personal Introduction Syllabus review Purpose of the class	Understand basic goals of the class as well as the nature of the assignments	
Feb. 13 Session II	Stangor Chapter 1 Locke Chapter 1, 6	Epistemology What is "Science"? The scientific method The purpose of a literature review Using electronic search engines	Understand 1) the role of science in the realm of knowledge acquisition; 2) the steps of doing empirical research; and 3) how to conduct a literature review	DUE FEB 20: Identify a broad topic of research interest – stated in sentence form – not longer than one paragraph; Generate a list of at least 20 possible research articles related to the topic of interest; Read Rowatt et. al (handout) and Taylor and Brown 1988 (handout)
Feb. 20 Session I	Locke Ch 3, 4, & 5 Locke pp. 242-245	Making sense of journal articles; basic parts, empirical vs. theoretical	Understand the structure of articles. Be able to write a coherent review of an article	
Feb 20 Session II		Research Question – Group Discussion		DUE NEXT Feb 27: Gather relevant full-text articles; Analyze at least 2 relevant articles using guide in Locke pg 242.
Feb 27 Session I	Stangor Ch 2	Generating research hypotheses Writing in APA style	Understand how to construct research hypothesis and become familiar with APA writing style	
Feb 27 Session II	Stangor Ch 3 "Taking Sides" Handout	Ethics in research	Understanding the types of threats to the participant; the role of deception and debriefing; informed consent; and institutional review boards	DUE Mar. 5: Step 1 of Paper; Complete APA Research Report Quiz; Analyze at least 2 relevant articles using guide in Locke pg 242
Mar. 5 Session I	Stanger Ch 4	Research Measures and basic terms	Understand the various ways to gather information and the basic terminology regarding design, measurement scales, and participant involvement	
Mar. 5 Session II		Hypothesis statement – Group Discussion	Improve quality of research hypotheses	DUE March 12: Step 2 of Paper; APA Term Paper Quiz; Analyze at least 2 relevant articles using guide in Locke pg 242
Mar. 12 Session I	Stangor Ch 9, 10, 14	Basic Research Designs Correlational vs. experimental; quasi, longitudinal, N=1, qualitative, etc.	Understand basic design terminology ; strengths, weaknesses, appropriate uses, etc.	
Mar. 12 Session II	Stanger 11, Controlling Experimental Variables (Handout)	Continue Basic Research Designs; Hypothesis statement – group discussion continued		Due March 19: Step 3 of paper; Analyze at least 2 relevant articles using guide in Locke pg 242
Mar. 19 Session I	Stangor Ch 5	Reliability and Validity	Understand reliability and internal, external, and construct validity	
Mar. 19 Session II		Developing research methodology – group discussion		DUE April 9: First draft of Step 4 of paper; Finish analyzing relevant articles for paper
Mar. 26 Session I		Test #1		
Mar. 26 Session II		Developing research methodology – group discussion continued		
Apr. 2		READING WEEK		
Apr. 9 Session I	Stangor Ch 6	Sampling and Surveys;	Understand the importance of proper sampling and the strengths and weaknesses of using survey information	
Apr. 9 Session II		Developing sampling procedure – group discussion		

Apr. 16 Session I	Stanger App. B	Descriptive Statistics	Understand basic measures of distributions and basic features of normal distributions	
Apr. 16 Session II		Descriptive statistics (Cont.)		Due Apr. 23: Second draft of Step 4 of paper
Apr. 23 Session I	Stanger Ch 8	Hypothesis Testing	Understand the basic logic of inferential statistics	
Apr. 23 Session II		Type I and Type II errors; Power	Understand the limitations of inferential tests	Due April 30 th : First draft of Step 5 of paper (minus proposed analysis section)
Apr. 30 Session I		Inferential Statistics: t-Tests and ANOVA's – the search for primary variance	Understand the basic logic of "t" and "F" tests	
Apr. 30 Session II		Inferential Stats (cont.)		
May 7 Session I	Stanger App. C.	Inferential Statistics II: Correlation, regression, and Chi-Square	Understand the basic logic of Pearson's "r", a regression analysis, and Chi-square	
May 7 Session II		Selecting the right analysis tools – group discussion		Due May 14 th : Final paper (introduction – including hypothesis statement; proposed methodology and analysis)
May 14 Session I		Presentations of proposed research to class	Acquire ability to orally communicate the basic features of a research project – background, variables, hypothesis, sampling procedure, design, proposed analysis	
May 14 Session II		Presentations of proposed research to class (cont.)		
May 16 TBA	Stangor Ch 7 Lewis	Final Exam		

Student:

2006 Spring Evaluation Form for Research Proposal

(Each component is worth 5 points, except where noted.)

Section 1 – Literature Review

1. Introductory paragraph
2. Use of transitions. Do you provide transitional links between sections and within sections?
3. Quality of your review of the literature. Do maintain a high quality of writing?
4. Organization of literature review. Did you use APA heading format?
5. Relevance of your literature review to the research question. Have you addressed the key variables?
6. Review of empirical research studies & theoretical articles. How well have you unpacked the studies? Are there at least five empirical studies? Seven from journals? (10 points each)
a. Article 1 - empirical or theoretical -
a. Article 2 - empirical or theoretical -
a. Article 3 - empirical or theoretical -
a. Article 4 - empirical or theoretical -
a. Article 5 - empirical or theoretical -
a. Article 6 - empirical or theoretical -
a. Article 7 - empirical or theoretical -
a. Article 8 - empirical or theoretical -
a. Article 9 - empirical or theoretical -
a. Article 10 - empirical or theoretical -
7. Subsequent paragraphs to build your argument for where the “hole” is in the knowledge base, and therefore, the need for your study (10 points).
8. State research question.
9. State hypotheses.
10. Identify Independent variable(s) and Dependent variable(s).
11. Briefly discuss how variables will be operationalized.
12. Concluding paragraph

Section 2

13. Paragraph describing your participants. Do you include salient factors about the participants?
14. Tell how participants were recruited and name the kind of sampling procedures you used.
15. Selection of appropriate measures.
16. Description of measures used.
17. Tell what you had the participants do. How thorough is your description of what you have your participants do?
18. Name your research design accurately.
19. Correct re-statement of research question and hypotheses.
20. Describe statistics to be used in analysis, including test and probability level.
21. Restate dependent and independent variables, including levels of each as needed.

General

24. Accuracy of manuscript preparation (APA)
25. APA format for citations
26. APA format for references
27. APA format for headings, subheadings, title page, etc.
28. Overall apparent effort
29. Overall quality of work

Comments:

Grade for Final Paper: _____

Overall Grade: .1(draft section1a) + .1 (draft section1b) + .1 (draft section 2) + .7 (final paper)