

George Mason University
College of Education and Human Development
PhD in Education



EDRS 810.002 – Problems and Methods in Educational Research
3 Credits, Spring 2017
Wednesdays 4:30-7 pm - Blueridge Hall 127 – Fairfax Campus

Faculty

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Prerequisites/Corequisites

Admission to the Ph.D. program or permission of the instructor.

University Catalog Course Description

Advanced in interpreting and applying educational research methods. Emphasizes comparisons of alternative philosophies of research, ways of formulating questions and hypothesis, research plans, and analysis procedures. Students evaluate existing studies, and investigate a range of research approaches.

Course Overview

The purpose of this course is to introduce doctoral students to the vocabulary and processes used in the field of educational research. Students will participate by composing a literature review, a qualitative proposal, and a quantitative proposal exploring problems in a field of interest.

Course Delivery Method

The class sessions will include lecture, discussion, and group work. There will be formative assignments (quizzes and discussions) and summative assessments (exam and assignments).

Learner Outcomes or Objectives

This course is designed to enable students to do the following:

1. Be able to understand what research is, and how it differs from other intellectual and practical activities in education;
2. Be able to understand the major approaches to educational research, and the implications and of the implications between theses for doing and evaluating research in education;
3. Be able to find, understand, evaluate, and apply published research that is relevant to their field;
4. Be able to design the basic components of small-scale research studies, both quantitative and qualitative, including:
 - a. Identifying a research problem to study
 - b. Formulating the purposes of the study
 - c. Developing a conceptual framework for the study
 - d. Generating appropriate research questions
 - e. Planning relevant and feasible methods of sampling, data collection, and analysis
 - f. Anticipating plausible validity threats, and thinking of ways to deal with theses
 - g. Dealing appropriately with ethical issues in the research.
5. Be able to write coherently and clearly about the conceptual framework, questions, and methods used in a research study;
6. Be able to use the writing style described in the sixth edition of the Publication Manual of the American Psychological Association (APA) for writing term and research papers;
7. Be able to reflect on their actions and choices and use that reflection to inform practice;
8. Be able to present written research results clearly and coherently.

Required Texts

Johnson, R. B., & Christensen, L. (2014). *Educational Research: Quantitative, Qualitative, & Mixed Approaches* (5th ed.). Los Angeles, CA: Sage.

Note: This text has a Companion Website: <http://www.sagepub.com/bjohnson5e/main.htm> with study materials, practice quizzes, and other resources.

American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: Author.

Other Reading Suggestions:

Graff, G. & Birkenstein, C. (2010). *They say, I say: Moves that matter in academic writing*. New York: W. W. Norton.

Keller, D. K. & Casadevall-Keller, M. L. (2010). *The tao of research*. Los Angeles: Sage Publications.

Vickers, A. (2010). *What is a p-value anyway? 34 Stories to help you actually understand statistics*. Boston, MA: Addison-Wesley.

Course Performance Evaluation

Students are expected to submit all assignments on time in the manner outlined by the instructor (e.g., Blackboard, Tk20, hard copy).

Assignments are listed on the syllabus and are available on the Blackboard site. Submit all assignments through Blackboard unless otherwise instructed.

Assignments and/or Examinations

A. Online Chapter Quizzes (10%)

Students are asked to complete and submit online quizzes on each week's assigned readings from the course textbook. Quizzes for each week can be found on blackboard and will be open immediately after class on Wednesday and is due on the following Tuesday before class.

B. Homework Assignments (20%): We will discuss these assignments in class in more detail.

- **Assignment #1 Current Practices in Research (10%)**

This assignment focuses on understanding research in your professional area. For this assignment you will interview someone in your specialization or secondary area who is involved in research. You will summarize your findings in a narrative report and a brief presentation in class.

- **Assignment #2 HSRB CITI Training Module Completion (10%)**

GMU requires a Mandatory Training for Persons Conducting Research Using Human Subjects. Seven learner modules in the Basic Course are required prior to applying to conduct any research at Mason using human subjects. **For this course, you will be required to complete the Basic Course AND one additional 'optional' module related to your area of interest.**

- This online training module can be accessed at <http://www.citiprogram.org>. (You must complete the required basic course before the optional modules are available).
- Specific directions for how to log on can be found at the GMU Office of Research Subject Protection website: <http://research.gmu.edu/ORSP/HumanTraining.html>

Turn in a hard copy or email it to me at epeters1@gmu.edu. Be sure to keep a copy of your CITI training electronically. IRB will need it for approval of future projects such as your dissertation!

GMU also requires that all researchers (including student researchers) submit a research application to the office of Human Subject Protections PRIOR to conducting research. For this course, you should review the application form for class discussion.

- Application forms and guidelines can be found at the external project management site, IRBnet.org: <http://oria.gmu.edu/irbnet/>
- Information from the GMU Office of Research Subject Protection about IRBnet is found here: <http://oria.gmu.edu/research-with-humans-or-animals/institutional-review-board/>

C. Quantitative Research Proposal (*paper*) (25%)

Students will write a research proposal (introduction, literature review, and methods sections).

This proposal should build on existing research and may replicate and extend previous research studies. The proposal will contain relevant sections specific to the research design (see sample paper on Blackboard as well as pp. 41-59 of the APA manual). Organizational headings may vary depending on your research design and the specifics of your individual study. Be sure to refer to the APA manual as well as similar work in your field to help you determine what is critical to include in your own proposal. Also refer to the APA manual for how to format headings and citations appropriately. You should turn in an electronic version on the relevant assignment box Blackboard site.

Quantitative Proposal Requirements:

- **Problem Statement** (1-2 pages)
 - Succinctly introduce your topic and show why this study is will extend our knowledge. The introduction can be framed as a problem statement and rationale for the research you are proposing. If you are replicating and extending a previous study, you should be sure to describe the original work
- **Literature Review** (5-6 pages)
 - The literature review should show what is already known from prior studies and explain how this work has informed your proposal. This section should include approximately 10-15 citations, depending on the field of work. NOTE THAT THE DRAFT OF THE LITERATURE REVIEW IS DUE PRIOR TO THE DRAFT OF THE PROPOSAL. See class schedule at the end of the syllabus for due date.
- **Statement of Purpose and Research questions** (included in Literature Review page count)
- **Method** (5-6 pages)
 - **Research Design**
 - **Participants** (when applicable, should include setting, subjects, intervention facilitators)
 - **Measures** (when applicable, demonstrate from the literature how the measures have been used before and their reported validity and reliability)
 - **Intervention** (when applicable, should include control/alternate treatment)
 - **Procedures** (when applicable, should include study procedures, data collection procedures, scoring procedures, fidelity of treatment procedures)
 - **Ethical Considerations**
 - **Proposed Preliminary Data Analyses**
- **References**

D. Qualitative Research Proposal (*Presentation*) (25%)

Your qualitative proposal will be presented in a presentation format. In addition, a handout should be prepared for everyone in the class. Further directions will be provided in class.

Qualitative Proposal Requirements:

- **Purpose Statement** (Statement of purpose and research questions).
- **Research design**
 - **Participants** (should include sampling procedures)
 - **Data Sources** (when applicable, should include protocols)
 - **Procedures** (proposed data collection process—this heading is sometimes combined with Data Sources in qualitative research)
- **Ethical Considerations**
- **Proposed Preliminary Data Analyses** (coding schemes, how you will deal with the narrative data when you collect it)
- **References**

E. Exam (20%): One exam will cover the material from the class and textbook and include multiple choice as well as short answer questions. The exam will cover the key material from the first half of the course. The second half of the course will be assessed by the quizzes, quantitative research proposal paper, and the qualitative research presentation. Trust me, I know you don't want to take an exam, but everyone says that they are glad they did because they internalize the information once they take it for the second half of the class!!

- **Grading**

- A 93-100%
- A- 90-92%
- B+ 88-89%
- B 83-87%
- B- 80-82%
- C 70-79%
- F below 70%

Professional Dispositions

Students are expected to exhibit professional behaviors and dispositions at all times.

Class Schedule

	Class	Topic	Reading	Due
1/25	1	Intro: What is Research? Type of Research	Chap 1 & 2	
2/1	2	Literature Review Library Resources	Chap. 4	<i>Examine Assn. #1</i> Quiz 1 – Type of research
2/8	3	Research Questions, Variables, and Hypothesis	Chap. 4 (cont.) Chap. 5	Quiz 2 – Literature reviews
2/15	4	Ethics	Chap. 6	<i>Examine CITI training info</i> <i>(due Week 8 –Assn. #2)</i> Quiz 3 – Research questions, variables, and hypotheses
2/22 (online class) Purdue	5	Sampling (online class – video lecture and online group discussion/video upload)	Chap. 10	Assn. #1 Presentations of Assn. #1 Quiz 4 - Ethics
3/1	6	Measures	Chap. 7 & 9	Draft of Literature Review Presentations of Assn. #1 Quiz 5 - Sampling
3/8	7	Reliability & Validity	Chap. 11	Presentations of Assn. #1 Quiz 6 - Measures
3/15 Spring Break – No class				
3/22	8	EXAM		Assn #2
3/29 (online class) NSTA	9	Qualitative Design (online class – video lecture and online group discussion)	Chap. 15 & 16	Quiz 7 – reliability and validity
4/5	10	Qualitative Design & Data Analysis	Chap. 17 & 21	Quiz 8 – Qualitative design
4/12	11	Quantitative Design	Chap. 12 & 13 Chap. 22	Quiz 9 – Qualitative Design and Data Analysis
4/19	12	Quantitative Design & Data Analysis	Chap. 14, (19) 20 Chap. 8	Quiz 10 – Quantitative design Quantitative Proposal Draft
4/26 (meet with other EDRS 810 class –	13	Mixed Methods Possible Guest Speaker	Chap. 18	Quiz 11 – Quantitative analysis

Robinson B218) NARST and AERA				
5/3	14	Roundtable Presentations on Qualitative Proposal		Quiz 12 – Mixed methods
5/10	15	Oral Presentations Turn in Quantitative Proposal on blackboard		Qualitative Presentation Quantitative Proposal

Note: Faculty reserves the right to alter the schedule as necessary, with notification to students.

Core Values Commitment

The College of Education and Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles: <http://cehd.gmu.edu/values/>.

GMU Policies and Resources for Students

Policies

- Students must adhere to the guidelines of the Mason Honor Code (see <http://oai.gmu.edu/the-mason-honor-code/>).
- Students must follow the university policy for Responsible Use of Computing (see <http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/>).
- Students are responsible for the content of university communications sent to their Mason email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students **solely** through their Mason email account.
- Students with disabilities who seek accommodations in a course must be registered with George Mason University Disability Services. Approved accommodations will begin at the time the written letter from Disability Services is received by the instructor (see <http://ods.gmu.edu/>).
- Students must follow the university policy stating that all sound emitting devices shall be silenced during class unless otherwise authorized by the instructor.

Campus Resources

- Support for submission of assignments to Tk20 should be directed to tk20help@gmu.edu or <https://cehd.gmu.edu/aero/tk20>. Questions or concerns regarding use of Blackboard should be directed to <http://coursesupport.gmu.edu/>.
- The Writing Center provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing (see <http://writingcenter.gmu.edu/>).
- The Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance (see <http://caps.gmu.edu/>).
- The Student Support & Advocacy Center staff helps students develop and maintain healthy lifestyles through confidential one-on-one support as well as through interactive programs and resources. Some of the topics they address are healthy relationships, stress management, nutrition, sexual assault, drug and alcohol use, and sexual health (see <http://ssac.gmu.edu/>). Students in need of these services may contact the office by phone at 703-993-3686. Concerned students, faculty and staff may also make a referral to express concern for the safety or well-being of a Mason student or the community by going to <http://ssac.gmu.edu/make-a-referral/>.

For additional information on the College of Education and Human Development, please visit our website <https://cehd.gmu.edu/>.

Holistic Rubric for Research Proposal Paper

Exemplary paper (24-25 points): Appropriate topic, thorough and thoughtful purpose and research questions with appropriate study cited for replication and extension, appropriate and clearly described research design, participants, materials, data sources, implementation procedures, and careful brief description of data analyses. Good writing style, free of mechanical or stylistic errors, appropriate use of APA format.

Adequate paper (22-23 points): Good overall paper, lacking in one or two of the criteria for an exemplary paper. Not entirely reflective or thoughtful, or minor writing style or APA format errors may be present.

Marginal paper (20-21 points): Overall, acceptable but with one or more significant problems. Contains some useful information, but may have substantial problems with evaluation, writing style or APA format, or unclear or inappropriate description of implementation of project.

Inadequate paper (1-19 points): Paper with substantial problems in important areas such as writing, proposed implementation of intervention, procedures for evaluation of results, or overall thoughtfulness. Contains little or no information of value to field of education.

Unacceptable/no paper (0 points): Paper with no value whatsoever relative to the assignment, or no paper turned in at all. May describe a project of no value that was not approved for this assignment.

Rubric for Research Proposal Presentation

Exemplary presentation (24-25 points): Keeps within the time limits; reflects poise, clarity, knowledge and interest in the content being presented; reflects a high level of preparation; make effective use of overheads, handouts, demonstrations; describes very clearly the treatment(s) under consideration; keeps the audience engaged; provides information of interest and value to audience.

Adequate presentation (22-23 points): Good overall presentation, but may be lacking in one or two of the criteria specified in exemplary response. May seem a little less polished or prepared, may be vague in some place, or may fail to completely engage the audience.

Marginal presentation (20-21 points): Presentation provides relevant information, but demonstrates only a limited understanding of the topic or project. Style, handouts, or visual aids may be less than inadequate.

Inadequate presentation (1-19 points): Weak overall presentation that reflects very little knowledge of topic or project. May appear very poorly prepared, or may not have followed directions. Handouts or visual aids may be inadequate or lacking.

Unacceptable/no presentation (0 points): Completely unsatisfactory presentation, with no reasonable reference to topic or project; or no presentation made.