

**EDRS 810:002 Problems and Methods in Educational Research
(3 credits)**

**Spring 2016 Wednesdays 4:30- 7:10 PM
Robinson A 249**



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

Catalog 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 objectives: Upon successful completion of the course, student should:

- Be able to understand what research is, and how it differs from other intellectual and practical activities in education;
- 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;
- Be able to find, understand, evaluate, and apply published research that is relevant to their field;
- Be able to design the basic components of small-scale research studies, both quantitative and qualitative, including:
 - Identifying a research problem to study
 - Formulating the purposes of the study
 - Developing a conceptual framework for the study
 - Generating appropriate research questions
 - Planning relevant and feasible methods of sampling, data collection, and analysis
 - Anticipating plausible validity threats, and thinking of ways to deal with theses
 - Dealing appropriately with ethical issues in the research.
- Be able to write coherently and clearly about the conceptual framework, questions, and methods used in a research study;
- 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;
- Be able to reflect on their actions and choices and use that reflection to inform practice;
- Be able to present written research results clearly and coherently.

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

Required Materials:

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.

Class Preparation: Information on course assignments, weekly quizzes, and notes for class lectures are available on the course blackboard site.

Class Attendance & Participation: Students are expected to come to class on time, complete assignments, and participate in class discussions.

ASSESSMENT:**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 Wednesday before class.

Homework Assignments (20%): Specific guidelines for each assignment will be provided.

- **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 only (this will be returned to you for your records). 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/>

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

Students will write a research proposal (introduction, literature review, and method 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:

- **Introduction** (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.
- **Statement of Purpose and Research questions**
- **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**

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).
- **Method**
- **Research design**
 - **Participants** (should include sampling procedures)
 - **Data Sources** (when applicable, should include instrumentation)
 - **Procedures** (proposed data collection process—this heading is sometimes combined with Data Sources in qualitative research)
- **Ethical Considerations**
- **Proposed Preliminary Data Analyses**
- **References**

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.

GRADING SCALE:

Grades will be assigned based on the following:

A+	98-100%	B+	88-89%	C	70-79%
A	93-100%	B	83-87%	F	below 70%
A-	90-92%	B-	80-82%		

Final grades are based in the assessments described above. “Extra credit” is not available.

Late Assignments: *As a general rule, late assignments will not be accepted.* If you believe you have EXCEPTIONAL circumstances and wish to negotiate to have extra time to complete course work, you must discuss this with me before the day the assignment is due. (Negotiating means that you will be sacrificing a portion, perhaps substantial, of your grade for extra time).

**COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT
STATEMENT OF EXPECTATIONS:**

Student Expectations:

- Students must adhere to the guidelines of the George Mason University 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 with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester [See <http://ods.gmu.edu/>].
- Students are responsible for the content of university communications sent to their George Mason University 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 must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.
- Students are expected to exhibit professional behaviors and dispositions at all times.

Campus Resources

- The George Mason University 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 co workshops and outreach programs) to enhance students' personal experience and academic performance [See <http://caps.gmu.edu/>].
- The George Mason University Writing Center staff 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/>].
- For additional information on the College of Education and Human Development, Graduate School of Education, please visit our website [See <http://gse.gmu.edu/>].

Academic Integrity and Honor Code

- GMU is an Honor Code university and students are expected to abide by the honor code on all exams and assignments. [See <http://oai.gmu.edu/honor-code/>].

Core Values Commitment

The College of Education & 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/>.

Tentative Course Schedule

	Class	Topic	Reading	Due
1/20	1	Intro: What is Research? Type of Research	Chap 1 & 2	Quiz 1
1/27	2	Literature Review Library Resources	Chap. 4	<i>Examine Assn. #1</i> Quiz 2
2/3	3	Research Questions, Variables, and Hypothesis	Chap. 4 (cont.) Chap. 5	Quiz 3
2/10	4	Ethics	Chap. 6	<i>Examine CITI training info</i> <i>(due Week 8 – Assn. #2)</i> Quiz 4
2/17	5	Sampling	Chap. 10	Assn. #1 Presentations of Assn. #1 Quiz 5
2/24	6	Measures	Chap. 7 & 9	Presentations of Assn. #1 Quiz 6
3/2	7	Reliability & Validity	Chap. 11	Presentations of Assn. #1 Quiz 7
3/9	No class – SPRING BREAK			
3/16	8	EXAM		Assn #2
3/23	9	Quantitative Design	Chap. 12 & 13 Chap. 22	Quiz 8
3/30	No Class – Scholarship of Teaching and Learning Conference			
4/6	10	Quantitative Design & Data Analysis	Chap. 14, (19) 20 Chap. 8	Quiz 9
4/13	11	Qualitative Design	Chap. 15 & 16	Quantitative Proposal Due
4/20	12	Qualitative Design & Data Analysis	Chap. 17 & 21	Quiz 10
4/27	13	Mixed Methods Guest Speaker: Dr. Joseph Maxwell (4:30-5:30)	Chap. 18	Quiz 11
5/4	14	Presentations		Qualitative Presentation Due