

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

Summer 2017 Mon. & Wed 4:30- 7:10 PM
Thompson Hall Room L013



Instructor: Angela Miller, Ph.D.
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Office Hours: by appointment (please email).
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Prerequisite: Admission to the Ph.D. program or permission of the instructor.

Catalog Description: Advanced course 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 (qualitative, quantitative, and mixed methods) and the implications for doing and evaluating research;
- Be able to identify different types of research designs;
- Be able to distinguish research design from methodological approach;
- 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 these
 - 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 clear and coherent written summary of research results from scholarship.

Format: The class sessions will include both lecture and discussion as well as group work.

Required Materials:

Johnson, R. B., & Christensen, L. (2017). *Educational Research: Quantitative, Qualitative, & Mixed Approaches* (6th ed.). Los Angeles, CA: Sage.

Note: This text has a Companion Website <https://edge.sagepub.com/rbjohnson6e> 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:

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

Assn #1 Current Practices in Research (10%)

Action research which requires investigating current issues and practices in research in a professional area.

Assn #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://oria.gmu.edu/research-with-humans-or-animals/institutional-review-board/human-subjects-training/>
Turn in a hard copy only (this will be returned to you for your records).

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/>

APA formatting assignments (10%)

Various activities and assignments will be completed in class and as homework in order to learn APA style. This includes proper citation, research paper structure, constructing reference lists, and using a writing style appropriate for the social sciences.

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.

Quantitative Proposal Requirements:

- **Introduction & Literature Review**
 - Brief introduction to the topic & literature review. (If you are replicating and extending a previous study, you should be sure to describe the original work).
 - Statement of purpose and research questions.
- **Method** (5-6 pages)
 - **Research Design**
 - **Participants** (when applicable, should include setting, subjects, interventionists)
 - **Measures**
 - **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 offered in a presentation format. You should provide a handout (overview) for everyone in the class. Further directions will be provided in class.

Qualitative Proposal Requirements:

- **Introduction & Literature Review**
 - Brief introduction to the topic & literature review.
 - 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.

Recommended: Online Chapter Quizzes

You should complete the online quizzes on each week's assigned readings from the course textbook. (Be sure to complete all sections of weekly quizzes, possibly including multiple choice, true-false, and/or matching.) Quizzes for each week can be found at the textbook's Companion Website: <https://edge.sagepub.com/rbjohnson6e>

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).

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

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/>.

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.
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Campus Resources

- Support for submission of assignments to Tk20 should be directed to tk20help@gmu.edu or <https://cehd.gmu.edu/api/tk20>. Questions or concerns regarding use of Blackboard should be directed to <http://coursessupport.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/>).
- 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 counseling, workshops and outreach programs) to enhance students' personal experience and academic performance (see <http://caps.gmu.edu/>).
- The George Mason University Office of Student Support staff helps students negotiate life situations by connecting them with appropriate campus and off-campus resources. Students in need of these services may contact the office by phone (703-993-5376). 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://studentsupport.gmu.edu/>, and the OSS staff will follow up with the student.

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

Tentative Schedule

| | Class | Topic | Reading | Due |
|------|--------------|--|-----------------------------------|--|
| 6/5 | 1 | Intro: What is Research? Type of Research | Chap 1 & 2 | |
| 6/7 | 2 | Research Questions, Variables, and Hypothesis Guest Speaker: Anne Melville, Education Librarian | Chap. 4 | <i>Examine Assn. #1</i> |
| 6/12 | 3 | Literature Review | Chap. 4 (cont.) Chap. 5 & (21) | |
| 6/14 | 4 | Ethics | Chap. 6 | <i>Examine CITI training info (due Week 7 –Assn. #2)</i> |
| 6/19 | 5 | Sampling | Chap. 10 | Assn. #1 |
| 6/21 | 6 | Measures | Chap. 8 & 9 | |
| 6/26 | 7 | Reliability & Validity | Chap. 7 | Assn #2 |
| 6/28 | 8 | EXAM | | |
| 7/3 | | NO CLASS -Holiday | | |
| 7/5 | 9 | Quantitative Design | Chap. 12, 13 & 14 | |
| 7/10 | 10 | Quantitative Design & Data Analysis | Chap. 11, (18 & 19) | |
| 7/12 | 11 | Qualitative Design | Chap. 15 & 16 | Quantitative Proposal Draft Due |
| 7/17 | 12 | Qualitative Design & Data Analysis | Chap. 11 & (20) | |
| 7/19 | 13 | Mixed Methods | Chap. 17 & Posted Readings | |
| 7/24 | 14 | Wrap-up Presentations | | Qualitative Presentation Due |
| 7/26 | 15 | Presentations | | Quantitative Proposal Due |