

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



Fall 2019 Thursday 4:30- 7:10 PM
Robinson B204

Instructor: Kelley Regan, Ph.D.
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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 (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, and Mixed Approaches* (6th edition). 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.

Required Access to Course Blackboard Site

Blackboard will be used to post important information for this course. Announcements and resources are posted on the Blackboard site in between class sessions. You are responsible for accessing the materials (for printed copies, etc.) prior to class.

Access Blackboard through **My Mason:**

1. Go to the GMU homepage: <http://www.gmu.edu>
2. Click on MyMason on the top of the page.
3. Enter your user login and password (the same as your GMU email login and password).
4. Click the "Courses" tab at the top of the screen.
5. Select your course from the middle column.

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:

Assn #1 Current Practices in Research (10%)

Action research that 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: <https://rdia.gmu.edu/topics-of-interest/human-or-animal-subjects/human-subjects/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 GMU Office of Research Subject Protection website:

<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 the 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.

Grading

1. Current Practices in Research Assignment. 10 points
2. APA formatting assignment. 10 points
3. CITI Training module. 10 points
4. Quantitative Research Proposal Paper. 25 points
5. Exam. 20 points
6. Qualitative Research Proposal. 25 points

Total: 100 points

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 for Students

- 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 Disability Services 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 silenced during class unless otherwise authorized by the instructor.
- Students are expected to exhibit professional behaviors and dispositions at all times.

GMU Resources for Students

- 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/> .

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/](http://oai.gmu.edu/honor-code/)].

Tentative Schedule
***The schedule may be modified as needed**

	Class	Topic	Reading	Due
8/26	1	Intro: What is Research? Type of Research	Chap 1 & 2	
9/5	2	Literature Review Guest Speaker: Anne Driscoll, Education Librarian	Chap. 4 & 5	<i>Examine Assn. #1</i>
9/12	3	Research Questions, Variables, and Hypothesis	Chap. 4 (cont.) Chap. 5	APA Formatting #1 Due
9/19	4	Ethics	Chap. 6	APA Formatting #2 Due <i>Examine CITI training info (due Week –Assn. #2)</i>
9/26	5	Sampling	Chap. 10	Assn. #1
10/03	6	Measures	Chap. 7 & 9	APA Formatting #3 Due
10/10	7	Reliability & Validity	Chap. 11	APA Formatting #4 Due
10/17	8	Review and catch up		Assn #2
10/24	9	EXAM		Lit. Review Drafts for feedback
10/31	10	Quantitative Design	Chap. 12 & 13	
11/7	11	Quantitative Design & Data Analysis	Chap. 14, (19) Chap. 8	
11/14	12	Qualitative Design	Chap. 15 & 16	Quantitative Proposal Due
11/21	13	Qualitative Design & Data Analysis	Chap. 20	

11/25 – 11/29 Thanksgiving Recess *no class November 28th				
12/05	14	Mixed Methods & Summary	Chap. 17	
12/12	15	No meeting this day – Exam Period		Qualitative Presentation Due

Rubric for Quantitative Research Proposal (25%)

- Exemplary paper (A): Establishes an important educational problem that needs to be addressed, a logical presentation of information that leads to the purpose statement of the paper. Important concepts are defined in this section as well as any background information needed to support search procedures in the methodology. Appropriate topic, thorough and thoughtful review of appropriate studies (including a study that is appropriate for replication and extension if applicable), a clearly stated purpose statement, and appropriate research questions that are consistent with the quantitative research methodology. 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 (B): 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 (C): 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 (D): 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 HSRB CITI Training Module (10%)

- Pass: Successful completion of online BASIC and one supplemental module (related to conducting research in schools or your research interest area) on time.
- Fail: Unsuccessful completion of online BASIC or supplemental module or late in completing assignment.

Rubric for Qualitative Proposal Presentation (25%)

- Exemplary presentation (A): Appropriate topic, a clearly stated purpose statement, and appropriate research questions that are consistent with the qualitative research methodology. Appropriate and clearly described research design, participants, materials, data sources, implementation procedures, and careful brief description of data analyses. Reflects poise, clarity, knowledge and interest in the content being presented; reflects a high level of preparation; makes effective use of visuals, handouts, demonstrations; keeps the audience engaged; provides information of interest and value to audience.
- Adequate presentation (B): 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(s), or may fail to completely engage the audience.
- Marginal presentation (C): Presentation provides relevant information, but demonstrates only a limited understanding of the topic or project. Style, handouts, or visual aids may be less than adequate.
- Inadequate presentation (D): 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.