George Mason University
College of Education and Human Development
PhD Program

EDRS 810.002 – Problems and Methods in Educational Research
3 Credits, Fall 2023
Thursdays 4:30-7:10pm Thompson Hall L003

Faculty

Name:	Jered Borup
Office Hours:	By Appointment (Zoom)
Office Location:	Thompson Hall 1400, Fairfax Campus
Office Phone:	703-993-3137
Email Address:	jborup@gmu.edu

Prerequisites/Corequisites

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

University Catalog Course 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 Overview

Not Applicable

Course Delivery Method

This course will be delivered primarily using an in-person format with some online activities.

Learner Outcomes or 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

- o Developing a conceptual framework for the study
- o Generating appropriate research questions
- o Planning relevant and feasible methods of sampling, data collection, and analysis
- o Anticipating plausible validity threats, and thinking of ways to deal with these
- o 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.

Professional Standards

Not applicable

Required Texts

Johnson, R. B., & Christensen, L. (2020). *Educational Research: Quantitative, Qualitative, & Mixed Approaches* (7th ed.)*.* Los Angeles, CA: Sage.
   Note: This text has a Companion Website https://edge.sagepub.com/rbjohnson7e with study materials, practice quizzes, and other resources.
American Psychological Association. (2019). *Publication manual of the American Psychological Association* (7th ed.). Washington, DC: Author.

Course Performance Evaluation

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

- **Class Preparation and Participation (20%):** Each week there will be an assigned reading. *The day before class*, you will need to post a comment to a class Padlet with a:
    - o *Quote* from the reading that resonated with you.
    - o *Question* that you still had following the reading.
    - o *Comment* with your primary takeaway(s) from the reading.
  Students are also expected to actively participate in all aspects of class: attending synchronous class meetings, respectfully contributing to class discussions in live meetings and online asynchronous activities, carefully completing all course readings and course tasks.
- **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.**
    - o 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/

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/

- **Annotated Bibliography (5%):** Throughout the semester you will identify relevant research publications on your selected topic. You will use five of those articles to create an annotated bibliography using a template that will be provided in class.
- **APA Presentation and Practice (5%):** At the start of the semester, you will sign up for an APA guideline. Using that topic, you will prepare a short presentation (3 minutes or less) that introduces and models the APA guideline. Following, you will facilitate a practice activity (3-5 minutes) that engages students in the application of the guideline.
- **Exam (20%):** One exam will cover the material from the class and textbook and include multiple choice as well as short answer questions.
- **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, preferably someone at Mason. You will summarize your findings in a narrative report that you will discuss in class. [Common questions will be provided, and further developed as a collective, focusing on approach, philosophical roots, theoretical orientation, positionality of researcher, methodology, analytical and interpretation considerations, and ethical dilemmas. Funding, grants management, structural barriers, and opportunities may also be considered. TBD!]
- **Research Proposal Paper (20%) and Presentation (10%)**: Students will write a research proposal paper (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. 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.

Your research proposal paper can be qualitative or quantitative but you will need to also create a proposal presentation using the other. For instance, if your proposal paper is qualitative then your proposal presentation will need to be quantitative. Alternatively, if your proposal paper is quantitative then your proposal presentation will need to be qualitative. The introduction and literature review sections will be similar for both the paper and presentation but the methods section will be different. Below is a brief outline for the proposal requirements for both the paper and presentation. Additional information will be provided later in the course.
  - *Proposal Requirements:*
    - **Introduction**
      - Brief introduction to the topic. (If you are replicating or extending a previous study, you should be sure to describe the original work).
      - Rationale for your study

- Literature Review
  - Summary and synthesis of research articles.
  - Statement of purpose and research questions(s).
- **Methods (Quantitative)**
  - **Research Design**
    - Identify the design and explain why it is logical for your RQ.
  - **Participants**
    - Include sampling method and expected demographics
  - **Measures**
    - Description of each measure, validity and reliability information
  - **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**
  - **Limitations**
    - Threats to validity
    - External validity

  OR

- **Methods (Qualitative)**
  - **Research design**
    - Identify the design and explain why it is logical for your RQ.
  - **Setting**
  - **Participants** (should include sampling procedures)
  - **Data Sources**
  - **Procedures** (proposed data collection process—this heading is sometimescombined with Data Sources in qualitative research)
  - **Ethical Considerations**
  - **Proposed Preliminary Data Analyses**
  - **Trustworthiness**

- **References**

- **Recommended: Online Chapter Quizzes:** It is strongly recommended that you complete the online quizzes on each week's assigned readings from the course textbook. Quizzes for each week can be found at the textbook's Companion Website: https://edge.sagepub.com/rbjohnson7e

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

 See https://cehd.gmu.edu/students/polices-procedures/

Tentative Class Schedule (subject to change)

Week	Class Date	Topics and Guiding Questions	Student Tasks Due Before Class
Week 1	Aug 24	• How is this course structured and what are the primary assessments? • What is research? • What are the different types of research? • What topic are you interested in researching?	Read Ch 1 & 5
Week 2	Aug 31 (virtual)	• How do we conduct research ethically? • How do we identify relevant research articles? • How do academics read research? • What is an annotated bibliography? Guest Speaker: Christopher Lowder, Education Librarian	Read Ch 6 and post a QQC comment to Padlet
Week 3	Sept 7	• How do you join the academic conversation? • What makes a good research question? • What are the different types of variables used in research?	Read Ch 2 and post a QQC comment to Padlet Complete CITI Training
Week 4	Sept 14	• How do you form an argument that establishes a need for your research? • How are literature reviews structured and how are they different from an annotated bibliography?	Read Ch 4 and post a QQC comment to Padlet Create a research question

		• What are the ethical considerations of using generative AI such as ChatGPT to write research manuscripts?	
Week 5	Sept 21	• What are the different types of sampling?	Read Ch 10 and post a QQC comment to Padlet Argumentation Outline
Week 6	Sept 28	• What are the definitions of measurement, validity, and reliability?	Read Ch 7 and post a QQC comment to Padlet 5-article Annotated Bibliography
Week 7	Oct 5	• What are the methods of data collection in quantitative and qualitative research? • What did you learn from your researcher interview?	Read Ch 8 & 9 and post a QQC comment to Padlet Current Practices in Research Reflection
Week 8	Oct 12	• What are the different types of validity and how are they established/threatened? • What is positionality and why is it important? • How can critical theories disrupt the traditional ways of thinking and provide new insights? Guest Speaker: Dr. Bethany L. Letiecq	Read Ch 11 and post a QQC comment to Padlet Full Proposal Outline
Week 9	Oct 19	Exam	Full Proposal Outline Peer Review Schedule an individual meeting with the instructor
Week 10	Oct 26	Quantitative Design	Read Ch 12, 13, & 14 and post a QQC comment to Padlet
Week 11	Nov 2	Quantitative Design & Data Analysis	Read Ch 18 & 19 and post a QQC comment to Padlet
Week 12	Nov 9	Qualitative Design	Read Ch 15 & 16 and post a QQC comment to Padlet Proposal Draft

| Week 13 | Nov 16 | Qualitative Design & Data Analysis | Read Ch 20 and post a QQC comment to Padlet

Alternate Proposal Presentation |
| --- | --- | --- | --- |
| | | Thanksgiving | |
| Week 14 | Nov 30 | Mixed Methods | Read Ch 17 and post a QQC comment to Padlet |
| Week 15 | Final Proposal Due Dec 7th | | |

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 https://catalog.gmu.edu/policies/honor-code-system/).

- Students must follow the university policy for Responsible Use of Computing (see https://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 https://ds.gmu.edu/).

- Students must silence all sound emitting devices during class unless otherwise authorized by the instructor.

Campus Resources

- Support for submission of assignments to VIA should be directed to viahelp@gmu.edu or https://cehd.gmu.edu/aero/assessments . Questions or concerns regarding use of Blackboard should be directed to https://its.gmu.edu/knowledge-base/blackboard-instructional-technology-support-for-students/.

- For information on student support resources on campus, see https://ctfe.gmu.edu/teaching/student-support-resources-on-campus

Notice of mandatory reporting of sexual assault, sexual harassment, interpersonal violence, and stalking:

As a faculty member, I am designated as a "Non-Confidential Employee," and must report all disclosures of sexual assault, sexual harassment, interpersonal violence, and stalking to Mason's Title IX Coordinator per University Policy 1202. If you wish to speak with someone confidentially, please contact one of Mason's confidential resources, such as Student Support and Advocacy Center (SSAC) at 703-380-1434 or Counseling and Psychological Services (CAPS) at 703-993-2380. You may also seek assistance or support measures from Mason's Title IX Coordinator by calling 703-993-8730, or emailing titleix@gmu.edu.

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