College of Education and Human Development
PhD in Education Program

Summer 2022
EDRS 810 A1: Problems and Methods in Educational Research
CRN: 43618, 3 Credits A01
Meeting Dates: 8/23/2021 – 12/15/2021

Hybrid: Fairfax Campus
Tuesdays from 5:00-9:30 / Thompson Hall L103
Thursdays from 5:00-9:30 / Synchronous Online (zoom: https://gmu.zoom.us/j/92350013827)

Instructor:	Dr. Sheri Berkeley, https://cehd.gmu.edu/people/faculty/sberkele/
Office Hours:	By appointment
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Office Phone:	email is best contact
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Prerequisites/Corequisites
Admission to the Ph.D. program or permission of instructor.

University Catalog Course Description
Advanced course in interpreting and applying education research methods. Emphasizes comparison of alternative philosophies of research, ways of formulating questions and hypotheses, research plans, and analysis procedures. Students evaluate existing studies, and investigate a range of research approaches.

Course Delivery Method
This course consists of lectures, large group and online formats, in class and individual or group activities, and individual assignments.

Learner Outcomes
Upon successful completion of the course, students 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 of the differences between these 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

- 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 clearly and coherently 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.

Professional Standards

This course is intended to help students meet a portion of Standard 2 of the Ph.D. in Education Program: Candidates will demonstrate the ability to understand, utilize and interpret basic principles and methodologies of educational research design and data analysis. This standard is evaluated in Portfolio 1.

Required Texts

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

Dei, G. (2005). Chapter One: Critical Issues in Anti-racist Research Methodologies: AN INTRODUCTION. *Counterpoints*, 252, 1-27.

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: http://www.sagepub.com/bjohnson5e/main.htm with study materials, practice quizzes, and other resources.

Recommended Texts

Goodson, P. (2017). *Becoming an academic writer: 50 exercises for paced, productive and powerful writing.* Sage.

Silvia, P. J. (2007). *How to write a lot: A practical guide to productive academic writing.* American Psychological Association.

Zuberi, T., & Bonilla-Silva, E. (2008). *White logic, White methods: Racism and methodology.* Rowman and Littlefield.

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. In addition, you will need to login to Blackboard to upload assignments for the course.

Access Blackboard through **myMason**: https://mymasonportal.gmu.edu/ultra/institution-page

Writing Support

1. Library Resources: Mason Libraries' Liaison Librarians provide George Mason University students, faculty, and staff specialized assistance in their areas of expertise, supporting the academic programs on Mason's Fairfax, Arlington and Prince William campuses (http://library.gmu.edu/research/liais.html). Among other services, Liaison Librarians
   - provide research assistance in person, by phone, e-mail and IM
   - offer scheduled, subject-focused research consultations for students and faculty

2. Writing Center Resources: GMU has a free Writing Center available to students that provides one-to-one assistance in writing development (http://writingcenter.gmu.edu). (This is NOT an editing service). According to their mission statement:

> *The George Mason University Writing Center is committed to supporting writers in the Mason community as they work to construct and share knowledge through writing. We aim to achieve this through providing writers with the opportunity to test out ideas with a tutorial staff comprised of trustworthy and attentive readers and listeners. We believe that the best writing support is achieved with tutors who listen and ask questions in order to foster a writer's own curiosity. We believe that achieving a strong piece of writing takes time, and therefore requires multiple drafts. As such, we aim to support writers from the beginning exploratory stages of the writing process up through a final, well-presented idea in a final version.*

Expectations
- Participation: Students are expected to actively engage in all course activities throughout the semester, which includes viewing all course materials, completing course activities and assignments, and participating in course discussions and group interactions.
- Technical Competence: Students are expected to demonstrate competence in the use of all course technology. Students who are struggling with technical components of the course are expected to seek assistance from the instructor and/or College or University technical services.
- Technical Issues: Students should anticipate some technical difficulties during the semester and should, therefore, budget their time accordingly. Late work will not be accepted based on individual technical issues.
- Workload: Please be aware that this course is not self-paced. Students are expected to meet *specific deadlines* and *due dates* listed in the Class Schedule section of this syllabus. It is the student's responsibility to keep track of the weekly course schedule of topics, readings, activities and assignments due.
- Instructor Support: Students may schedule a one-on-one meeting to discuss course requirements, content or other course-related issues. Those unable to come to a Mason campus can meet with the instructor via telephone or web conference. Students should email the instructor to schedule a one-on-one session, including their preferred meeting method and suggested dates/times.
- Netiquette: Because discussions are a critical aspect of this course, it is important that you plan to log on in a space free from distractions and are able to turn on audio as required during conversations. The expectation is that cameras will be on for the duration of the class.
- Accommodations: Online learners who require effective accommodations to insure accessibility must be registered with George Mason University Disability Services.

ASSIGNMENTS

Participation & Homework
Students are asked to attend all classes on time, be prepared, and actively participate and support the members of the class learning community. This includes being prepared for and actively participating in discussions and class activities, and submitting homework (HW) that is complete and on-time. *Specific guidance for the content of HW will be provided by the instructor.*

Note: In some instances, a class absence is unavoidable. However, course activities are

group based and are dependent upon your presence to be meaningful to both you and your classmates. Therefore, a HW submission without your presence will only be allowed on one occasion in the course.

Rubric for Participation & Blackboard Posts
- **Exemplary (A):** The student attends all or almost classes (student may miss one class with notice to instructor), is always on time, and is prepared (including posting in time to Blackboard); the student completes field-based activity; and the student actively participates and supports the members of the learning group and the class.
- **Marginal (C):** The student is usually on time, usually prepared for class, and participates in group and class discussions, but may be miss participation points due to absence (two absences), failure to prepare for a class activity (such as posting for one Blackboard activity), or failure to complete the field-based activity.
- **Inadequate (0 points):** The student is frequently late for class. Student misses numerous participation opportunities due to absence (3 or more) or failure to prepare for class activities (such as posting for two or more Blackboard activities). Instructor is not notified of absences. The student does not actively participate in discussions. The student may fail to exhibit professional behavior and dispositions. **Excessive absences can result in additional penalties and potential withdrawal from class.**

Online Chapter Quizzes
Students are asked to complete and submit 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: http://www.sagepub.com/bjohnson5e/main.htm Save a pdf of the first page of each quiz (this contains your name, score, and date you took the quiz) and submit it to Blackboard by the due date.

Evaluation of Online Chapter Quizzes
Online Quizzes are expected to be submitted on time with a score of 80% or greater. Points will be deducted in the following manner for tests that received a score lower than 80%, are late, or are not submitted.
- **Pass:** All assigned chapter quizzes submitted on time with a score of 80% or greater.
- **Fail:** Three or more assigned chapter quizzes missing or with a score <80%.

Quantitative & Qualitative Structured Abstracts
Students will complete two structured abstracts based on empirical studies in the student's area of interest. One structured abstract will be based on a quantitative study and one structured abstract will be based on a qualitative study.

Abstract Requirements
- **Research Design**
  - Provide a brief description of the major features of the selected research design.
- **Setting**
  - Provide a descript of the setting where data collection will occur and why this setting is appropriate for the selected design.
- **Participants**
  - Provide a description of target participants. Include relevant information about sampling and assignment to condition when applicable. Also describe personally identifiable information that will be obtained about participants.

- **Measures/Data Sources**
  - List and provide a brief description of the measures or data sources that will be used in the research, including what constructs are assessed.
- **Procedures**
  - Describe study procedures that will address threats to the validity of study findings. Procedures will vary based on your research design.
- **Data Analytic Strategy**
  - Provide a brief description of the data analytic strategies that will be used to answer each research questions.

Evaluation of Structured Abstract
- **Pass**: Successful completion of all required components of the structured abstract.
- **Fail:** Unsuccessful completion of all required components of the structured abstract.

HSRB CITI Training Module Completion
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://oria.gmu.edu/topics/human-subjects/training/

Save a pdf of your completion certificate and upload to Blackboard.

Evaluation of CITI Training Module
- **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.

Quantitative or Qualitative Research Proposal
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. Turn in a hard copy and place an electronic version on the relevant assignment box Blackboard site.

Proposal Requirements:
- **Introduction & Literature Review** (5-6 pages)
  - 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.
- **Methods** (5-6 pages)

- o **Research Design**
- o **Participants** (when applicable, should include setting, subjects, interventionists)
- o **Measures**
- o **Intervention** (when applicable, should include control/alternate treatment)
- o **Procedures** (when applicable, should include study procedures, data collection procedures, scoring procedures, fidelity of treatment procedures, etc.)
- o **Proposed Preliminary Data Analyses**
- **References**
  - o Must follow APA formatting

Rubric for Research Proposal
- **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.

GRADING

1.	Participation & Homework	10 points
2.	Chapter Quizzes	25 points
3.	Quantitative Structured Abstract	10 points
4.	Qualitative Structured Abstract	10 points
5.	Research Proposal Paper	35 points
6.	CITI Training	10 points
	TOTAL	**100 POINTS**

Grading Scale:
A = 90-100%
B = 80-89%
C = 70-79%
F = <79%

Last revised July 2017

*Note: The George Mason University Honor Code will be strictly enforced. See [Academic Integrity Site](https://oai.gmu.edu/) (https://oai.gmu.edu/) and [Honor Code and System](https://catalog.gmu.edu/policies/honor-code-system/) (https://catalog.gmu.edu/policies/honor-code-system/). Students are responsible for reading and understanding the Code. "To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the George Mason University community and with the desire for greater academic and personal achievement, we, the student members of the university community, have set forth this honor code: Student members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work." Work submitted must be your own new, original work for this course or with proper citations.

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

Class Schedule

Week	Class Topic & Reading Assignments	Date	Assignments Due
1 Introduction	*Required* • Chapter 1: Introduction to Educational Research • **Chapter 2:** Quantitative, Qualitative, and Mixed Research • **Chapter 4:** How to Critically Review the Literature and Develop Good Research Questions *Recommended* • Chapter 3: Action Research for Lifelong Learning • Chapter 5: How to Write a Research Proposal	5/24 5/26	
2 Foundations of Research	*Required* • **Chapter 8:** Methods of Data Collection in Quantitative, Qualitative, and Mixed Research • **Chapter 9:** How to Construct a Questionnaire • Chapter 10: Sampling in Quantitative, Qualitative, and Mixed Research • Chapter 11: Validity of Research Results in Quantitative, Qualitative, and Mixed Research *Recommended* • Chapter 7: Standardized Measurement and Assessment	5/31 6/2	• Post proposal topic update to Blackboard discussion board • Submit QUIZES (Chapter 2 & 4) to Blackboard

3 Quantitative Research	*Required* • **Chapter 12:** Experimental Research: Weak and Strong Designs • **Chapter 18:** Descriptive Statistics • **Chapter 19:** Inferential Statistics *Recommended* • Chapter 13: Experimental Research: Quasi and Single-Case Designs • Chapter 14: Non-Experimental Quantitative Research	6/7	• Submit QUIZES (Chapters 8 & 9) to Blackboard
		6/9	• Post quantitative research study to OneDrive
4 Qualitative Research	*Required* • **Chapter 16:** Phenomenology, Ethnography, and Grounded Theory • **Chapter 20:** Data Analysis in Qualitative and Mixed Research *Recommended* • Chapter 15: Narrative Inquiry and Case Study Research • Chapter 17: Mixed Research	6/14	• Post experimental structured abstract to Blackboard • Submit QUIZES (Chapters 12, 18 & 19) to Blackboard
		6/16	• Post qualitative research study to OneDrive
5 Research Ethics	*Required* • Chapter 6: Research Ethics • Dei (2005) *Recommended* • Chapter 21: How to Prepare a Research Report and Use APA Style Guidelines • Zuberi & Bonilla-Silva (2008) • Peer Review	6/21	• Submit QUIZES (Chapters 16 & 20) to Blackboard • Submit Research Proposal DRAFT to OneDrive
	ONLINE: ASYNCHRONOUS • CITI Module Training: https://oria.gmu.edu/topics/human-subjects/training/ **ONLINE SYNCHRONOUS** • Individual Conferences (optional)	6/23	• Submit FINAL Research Proposal to Blackboard • Submit QUIZ (Chapter 6) to Blackboard • Post CITI Completion Certificates to Blackboard

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: See Core Values (http://cehd.gmu.edu/values/).

GMU Policies and Resources for Students
Policies
- Students must adhere to the guidelines of the Mason Honor Code. See Honor Code and System (https://catalog.gmu.edu/policies/honor-code-system/).
- Students must follow the university policy for Responsible Use of Computing. See Responsible Use of Computing (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 Disability Services (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 VIA Help support@watermarkinsights.com. Questions or concerns regarding use of Blackboard should be directed to Blackboard Instructional Technology Support for Students (https://its.gmu.edu/knowledge-base/blackboard-instructional-technology-support-for-students/).

Notice of mandatory reporting of sexual assault, interpersonal violence, and stalking:
- As a faculty member, I am designated as a "Responsible Employee," and must report all disclosures of sexual assault, 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 from Mason's Title IX Coordinator by calling 703-993-8730, or emailing the Title IX Coordinator (titleix@gmu.edu).

Other Supports
- For information on student support resources on campus, see Student Support Resources on Campus (https://ctfe.gmu.edu/teaching/student-support-resources-on-campus).
- For additional information on the College of Education and Human Development, please visit our website College of Education and Human Development (http://cehd.gmu.edu/).