

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

Fall 2020 CRN 84148 Section 003 and CRN 85285 Section DL4



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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.

Course Delivery Method

This course will be delivered online (76% or more) using both an asynchronous and synchronous format via Blackboard Learning Management system (LMS) housed in the MyMason portal. You will log in to the Blackboard (Bb) course site using your Mason email name (everything before @masonlive.gmu.edu) and email password.

Under no circumstances, may candidates/students participate in online class sessions (either by phone or Internet) while operating motor vehicles. Further, as expected in a face-to-face class meeting, such online participation requires undivided attention to course content and communication.

Technical Requirements

To participate in this course, students will need to satisfy the following technical requirements:

- High-speed Internet access with standard up-to-date browsers. To get a list of Blackboard's supported browsers see:
https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support#supported-browsers

To get a list of supported operation systems on different devices see:

https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support#tested-devices-and-operating-systems

- Students must maintain consistent and reliable access to their GMU email and Blackboard, as these are the official methods of communication for this course.
- Students may be asked to create logins and passwords on supplemental websites and/or to download trial software to their computer or tablet as part of course requirements.
- The following software plug-ins for PCs and Macs, respectively, are available for free download:
 - Adobe Acrobat Reader: <https://get.adobe.com/reader/>
 - Windows Media Player:
<https://support.microsoft.com/en-us/help/14209/get-windows-media-player>
 - Apple Quick Time Player: www.apple.com/quicktime/download/

Expectations

- Course Week: Our week will start on Monday and finish on Sunday. Synchronous meetings will take place on Thursday at 4:30.
- Log-in Frequency:
Students must actively check the course Blackboard site and their GMU email for communications from the instructor, class discussions, and/or access to course materials at least 2 times per week.
- 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 (and updated online in Bb). 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. These meetings will take place 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:**

The course environment is a collaborative space. Experience shows that even an innocent remark typed in the online environment can be misconstrued. Students must always re-read their responses carefully before posting them, so as others do not consider them as personal offenses. *Be positive in your approach with others and diplomatic in selecting your words.* Remember that you are not competing with classmates, but sharing information and learning from others. All faculty are similarly expected to be respectful in all communications.

- **Accommodations:**

Online learners who require effective accommodations to insure accessibility must be registered with George Mason University Disability Services.

Required Materials:

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.

ASSESSMENT:

Homework Assignments (30 points): Specific guidelines for each assignment will be provided.

Homework Assn #1 Current Practices in Research (20 points)

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

Homework Assn #2 HSRB CITI Training Module Completion (10 points)

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 external project management site, IRBnet.org: <http://oria.gmu.edu/irbnet/>

APA formatting assignments (10-20 points each X 4)

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.

APA Assignment 1: 20 points

APA Assignment 2: 20 points

APA Assignment 3: 20 points

APA Assignment 4: 10 points

Quantitative Research Proposal (*paper*) (100 points)

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. 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

- Brief introduction to the topic. (If you are replicating and extending a previous study, you should be sure to describe the original work).
- Rationale for your study

Literature Review

- Summary and synthesis of at least 5 empirical research articles.
- Statement of purpose and research questions(s).

Method (5-6 pages)

- **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

References**Qualitative Research Proposal (*Presentation*) (100 points)**

Your qualitative proposal will be offered in a presentation format using ppt. Further directions will be provided in class.

*Qualitative Proposal Requirements:***Introduction**

- Brief introduction to the topic
- Rationale

Literature Review

- Summary and synthesis of key findings from the research (include citations).
- Statement of purpose and research questions(s).

Method

- **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 sometimes combined with Data Sources in qualitative research)
- **Ethical Considerations**
- **Proposed Preliminary Data Analyses**

- Trustworthiness

References

Exam (100 points): One exam will cover the material from the class and textbook and include multiple choice as well as short answer questions.

Class Participation (50 points): Students are 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. There will also be weekly participation activities during class meetings.

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/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: Students are expected to exhibit professional behaviors and dispositions at all times. See <https://cehd.gmu.edu/students/polices-procedures/>

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 <https://catalog.gmu.edu/policies/honor-code-system/>).
- 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 silence all sound emitting devices during class unless otherwise authorized by the instructor.

Campus Resources

- Support for submission of assignments to Tk20 should be directed to tk20help@gmu.edu or <https://cehd.gmu.edu/aero/tk20>. Questions or concerns regarding use of Blackboard should be directed to <http://coursesupport.gmu.edu/>.
- 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, 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 titleix@gmu.edu.

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

Tentative Schedule

Dates	Week	Topic	Reading	Due
1/28	1	Intro: What is Research? Type of Research	Chap 1 & 5	Participation Activity
2/4	2	Research Questions, Variables, and Hypothesis	Chap. 2	Participation Activity APA Assignment 1
2/11	3	Literature Review Library Searches <i>Guest Speaker: Anne Melville</i>	Chap. 4	Participation Activity
2/18	4	ASYNCHRONOUS CLASS MEETING/NO LIVE MEETING Ethics	Chap. 6	APA Assignment 2
2/25	5	Sampling	Chap. 10	Participation Activity Homework Assn. #1
3/4	6	Measurement: Validity & Reliability <i>Guest Speaker Zotero Training— Maoria Kirker</i>	Chap. 7	Participation Activity APA Assignment 3 Sign up for data collection topic in week 7 materials
3/11	7	Group Meeting for Data Collection Activity (NO CLASS MEETING) Data Collection	Chap. 8 & 9	Homework Assn #2
3/18	8	Validity of Research Results	Chapter 11	Participation Activity APA Assignment 4 Post data collection presentations and responses to peers
3/25	9	EXAM		

4/1	10	Quantitative Design	Chap. 12, 13 & 14	Participation Activity
4/8	11	Quantitative Design & Data Analysis <i>Guest Speaker: Dr. Nagro</i>	Chap. 18 & 19	Participation Activity Optional: Quantitative Proposal Draft Due
4/15	12	Qualitative Design <i>Guest Speaker: Dr. Regan</i>	Chap. 15 & 16	Participation Activity
4/22	13	Qualitative Design & Data Analysis <i>Guest Speaker: Dr. Vesely</i>	Chap. 20	Participation Activity Optional: Qualitative Draft Presentation Due
4/29	14	Mixed Methods <i>Student Panel</i>	Chap. 17	Participation Activity Qualitative Presentation Due
5/6 Final Exam Period	15			Quantitative Proposal Due