

**George Mason University**  
**College of Education and Human Development**  
**Educational Psychology**

EDRS 590.001/P01 – Educational Research  
3 Credits, Fall 2019

Wednesdays, 7:20 – 10pm, Thompson Hall L014, Fairfax Campus

**Faculty**

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**Prerequisites/Corequisites**

None.

**University Catalog Course Description**

Develops skills, insights, and understanding to perform research, with emphasis on interpreting and applying research results. Critiques, research, and uses findings in educational settings.

**Course Overview**

This introductory research course examines connections among theoretical frameworks, research questions, methods of data collection, analysis and reporting. The purpose of this course is to introduce an understanding of quantitative, qualitative, and mixed methods inquiry. This will involve reading about research. Students will be introduced to the basics of research design, including identifying a problem, conducting a brief literature search, describing data collection and analysis, writing, and ethics. A general intent of the course is to help learners to become better consumers of research, and to understand the ways education research relates to instructional practice and school improvement.

**Course Delivery Method**

This course will be delivered using a lectures, discussions, and small and large group activities format. This course is structured around readings, reflections on readings, class projects, technology activities, and writing assignments. The instructor will use Blackboard and other web tools to facilitate in class activities.

## Learner Outcomes or Objectives

This course is designed to enable students to do the following:

- Gain critical perspectives in order to understand the validity of education research;
- Use appropriate reference sources to locate publications relevant to a topic of their choice;
- Understand measures of central tendency and dispersion and their application to important education outcomes;
- Develop an informed perspective on issues in education that is grounded in contemporary research;
- Understand how teachers or administrators can use research to enhance instruction and inform practice;
- Use various social science perspectives as the foundation for advocacy and change; and
- Be able to apply technology to the task of conducting education research.

## Professional Standards

Across the many courses in the Educational Psychology, a number of standards are addressed. These standards are noted below. Those emphasized most strongly in this course are in bold text.

1. Candidates will demonstrate an understanding of principles and theories of learning, cognition, motivation, and development as they apply to a wide variety of contemporary learning contexts.

2. Candidates will use their knowledge, skills, and dispositions to apply principles and theories of learning, cognition, motivation, and development to analyze and develop instruction in applied settings.

**3. Candidates will demonstrate an understanding of the basic concepts, principles, techniques, approaches, and ethical issues involved in educational research.**

**4. Candidates will use their knowledge of quantitative and qualitative research methodology to critically read and evaluate quantitative and qualitative research articles.**

**5. Candidates will use their knowledge of quantitative and qualitative research methodology to develop a research proposal and conduct research.**

**6. Candidates will demonstrate critical thinking, oral presentation, technological, and writing skills as they are used in the profession. These include:**

- Knowledge and use of APA style
- Oral presentations
- Poster presentations
- Article abstracts
- Research proposals
- Literature reviews
- Technological skills (including library/reference skills, interactive displays skills, data analysis skills)

## Required Texts

McMillan, J. H. (2016). *Fundamentals of educational research (7th ed.)*. Boston, MA: Pearson.

## Strongly Recommended Text

American Psychological Association. (2009). *Publication manual of the American Psychological Association (6th ed.)*. Washington, DC.

## Course Performance Evaluation

Students are expected to submit all assignments on time in the manner outlined by the instructor (e.g., Blackboard, Tk20, hard copy).

It is expected that each student will:

1. Read all assigned course materials and come prepared to participate
2. Attend each class session
3. Participate in classroom activities that reflect critical reading of materials
4. Critique and/or discuss assigned readings in class
5. Submit all written assignments on time via Blackboard

When you are using cell phones, laptops, etc., please be respectful and do not engage in activities that are unrelated to class. Such disruptions may affect your participation grade.

### • Assignments and/or Examinations

**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. 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/institutionalreview-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 GMU Office of Research Subject Protection website: <http://oria.gmu.edu/research-with-humans-or-animals/institutionalreview-board/human-subjects-policies-procedures-forms-and-instructions/>

**Critique of Two Empirical Research Articles (10% each)** Students will write a critique of one quantitative intervention study and one qualitative study obtained from a peer-reviewed journal. The critiques should include the following parts: purpose, methods, results, and critical comments as well as your reflections about the article (see Blackboard site for specific instructions).  
\*\*The quantitative article critique is a Performance-Based Assessment. See end of syllabus for rubric.

**Research Proposal (paper) (40%)** 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). 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.  
\*\*\*There are checkpoints along the way where drafts may be submitted for feedback (noted as CP on the tentative schedule).

**Proposal Requirements** (Organizational headings may vary depending on your research design and the specifics of your individual study):

- 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
  - 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
- Limitations
- References

**Exam (20%)** One exam will cover the material from the class and textbook and include multiple choice as well as short answer questions.

**In Class Assignments, Participation, and Attendance Policy (10%)** Students will be asked to work individually or in groups of 2-3 students in class assignments throughout the semester. Because of the importance of lecture and discussion to your total learning experience, I wish to encourage you to both attend and participate in class regularly. Attendance, punctuality, preparation, and active contribution to small and large group efforts are essential. These elements of your behavior will reflect the professional attitude implied in the course goals and will account for 10% of your course grade. Students who must miss a class must notify the instructor (preferably in advance) and are responsible for completing all assignments and readings for the next class.

- **Other Requirements**

Format for written work:

- 1-inch margins on all sides, double-spaced, 12-point Times New Roman font.
- Include the following information: title, name, date, professor, course number.
- Fully proofread for spelling, grammar, and clarity errors; citation and references in APA format.

*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). [e.g., attendance, participation]*

- **Grading**

Your final grade for this class will be based on the following:

A+ 98 – 100%	A 93 – 97.99%	A- 90 – 92.99%
B+ 88 – 89.99%	B 83 – 87.99%	B- 80 – 82.99%
C 70 – 79.99%	F < 70%	

### **Professional Dispositions**

See <https://cehd.gmu.edu/students/policies-procedures/>

### **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/>.

## Class Schedule

Note: Faculty reserves the right to alter the schedule as necessary, with notification to students.

Date	Topic	Reading	Due
Aug. 28	Intro: What is Research? Types of Research	Chap. 1	
Sept. 4	Ethics	Chap. 2	Examine CITI Training Info (due June 29 on Bb)
Sept. 11	Research Questions, Variables, and Hypotheses	Chap. 3	Locate articles for critique assignments
Sept. 18	Literature Review	Chap. 4	CP1: Research questions/variables/hypothesis
Sept. 25	Sampling	Chap. 5	CP2: List of minimum 5 articles for literature review
Oct. 2	Measures, Reliability, & Validity	Chap. 6 (138-142, 155-168) & Chap 7	CP3: Sample
Oct. 9	Statistics Review for Exam	Chap. 6 (143-153)	Exam review exercise
Oct. 16	EXAM		CITI training due
Oct. 23	Quantitative Design	Chap. 8 & 9	CP4: Literature review
Oct. 30	Quantitative Design & Data Analysis	Chap. 10	
Nov. 6	Qualitative Design	Chap. 11	
Nov. 13	Qualitative Design & Data Analysis	Chap. 12	Quantitative critique due
Nov. 20	Mixed Methods & Conclusions	Chap. 13 & 15	CP5: Design section
Nov. 27	NO CLASS – University closed for holiday.		Qualitative critique due
Dec. 4	NO CLASS --- REQUIRED INDIVIDUAL MEETINGS – sign-ups will be distributed		
Dec. 11	No Exam or Class --- Research proposal due by 11:59pm		

## 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 <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 Tk20 should be directed to [tk20help@gmu.edu](mailto:tk20help@gmu.edu) or <https://cehd.gmu.edu/aero/tk20>. Questions or concerns regarding use of Blackboard should be directed to <http://coursessupport.gmu.edu/>.
- For information on student support resources on campus, see <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 <https://cehd.gmu.edu/students/> .**

# EDRS 590 Quantitative Article Critique

	Does Not Meet Standards	Approaching Standards	Meets Standards	Exceeds Standards	Score/Level
Writing and Mechanics  Program Standard 6	Writing has significant stylistic, grammatical or organizational issues AND there are significant errors in APA usage.	Writing has stylistic, grammatical, or organizational issues OR there are significant errors in APA usage.	Writing is clear and APA style has minor or no errors.	Excellent writing APA style has very minor or no errors	
<b>Standards</b> <b>VA- George Mason University non-SPA Educational Psychology (2014)</b> <b>Standard:</b> 6. Candidates will demonstrate critical thinking, oral presentation, technological, and writing skills as they are used in the profession. These include: Knowledge and use of APA style; Oral presentations; Poster presentations; Article abstracts; Research proposals; Literature reviews; Technological skills (including library/reference skills, interactive displays skills, data analysis)					
Description and summary of how components of research design are reflected in the article.  Program Standard 3	There are many inaccuracies in how components of research design are addressed.	There are some inaccuracies in how components of research design are addressed,	Each component of research is addressed accurately.	Each component of research is treated fully and accurately	
<b>Standards</b> <b>VA- George Mason University non-SPA Educational Psychology (2014)</b> <b>Standard:</b> 3. Candidates will demonstrate an understanding of the basic concepts, principles, techniques, approaches, and ethical issues involved in educational research.					
Identification and Analysis of Design Elements : Lit Review, Research Problem, and Methodology  Program Standard 4	Does not identify or analyze design elements.	Identification of design elements is present, but either contains inaccuracies or is missing analyses.	Accurate identification of elements and some analysis of design elements.	Insightful analysis and accurate identification of key research design elements.	
<b>Standards</b> <b>VA- George Mason University non-SPA Educational Psychology (2014)</b> <b>Standard:</b> 4. Candidates will use their knowledge of quantitative and qualitative research methodology to critically read and evaluate quantitative and qualitative research articles.					
Analysis of Design and Presentation of Findings  Program Standard 4	The design is not addressed.  There is minimal analysis of the presentation of findings.	The design is identified. Strengths and limitations of the presentation of findings are discussed. Claims need further explication or leave key gaps.	The design is identified and discussed. Strengths and limitations of the presentation of findings are discussed and claims are reasonable and meaningful.	Insightful accounts of the qualities, strengths and limitations of the presentation of findings and the design. Claims are reasonable and meaningful.	
<b>Standards</b> <b>VA- George Mason University non-SPA Educational Psychology (2014)</b> <b>Standard:</b> 4. Candidates will use their knowledge of quantitative and qualitative research methodology to critically read and evaluate quantitative and qualitative research articles.					



	<b>Does Not Meet Standards</b>	<b>Approaching Standards</b>	<b>Meets Standards</b>	<b>Exceeds Standards</b>	<b>Score/Level</b>
Use of Evidence to support Explanations and judgments  Program Standard 4	There is minimal use evidence to support claims.	Uses evidence to support some claims.	Uses evidence to illustrate and support most claims.	Consistently uses evidence well to explicate, support and illustrate claims.	
<b>Standards</b> <b>VA- George Mason University non-SPA Educational Psychology (2014)</b> <b>Standard: 4.</b> Candidates will use their knowledge of quantitative and qualitative research methodology to critically read and evaluate quantitative and qualitative research articles.					
Reflection and Discussion Component  Program Standard 6	There is minimal discussion or no reflection section.	Reflective component is present but is under-developed or lacks connections to analysis.	Reflections are developed and have clear connections to analysis.	Reflections are thoughtfully and fully developed with clear and meaningful connections to analysis.	
<b>Standards</b> <b>VA- George Mason University non-SPA Educational Psychology (2014)</b> <b>Standard: 6.</b> Candidates will demonstrated critical thinking, oral presentation, technological, and writing skills as they are used in the profession. These include: Knowledge and use of APA style; Oral presentations; Poster presentations; Article abstracts; Research proposals; Literature reviews; Technological skills (including library/reference skills, interactive displays skills, data analysis)					