

**GEORGE MASON UNIVERSITY
COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT
EDUCATIONAL PSYCHOLOGY**

EDRS 590. 001/P01 - Educational Research

3 credits, Spring 2018

Mondays 7:20-10pm, Thompson Hall L018

FACULTY

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Prerequisite/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 you to an understanding of quantitative, qualitative, and mixed methods inquiry. This will involve reading about research. You 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 is structured around readings, reflections on readings, class projects, technology activities, and writing assignments. This course will be taught using lectures, discussions, and small and large group activities. The Blackboard site for the class can be accessed at: <https://mymason.gmu.edu>.

For those in the Educational Psychology master's program, review the student Handbook:
<http://cehd.gmu.edu/documents/epsychology/edpsych-handbook.pdf>

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 TEXT

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: Author.

COURSE PERFORMANCE EVALUATION

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

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 and/or discuss assigned readings in class
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

A. 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/institutional-review-board/human-subjects-training/>

*Upload a PDF copy of the certification on Blackboard (no webpage links please).

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/institutional-review-board/human-subjects-policies-procedures-forms-and-instructions/>

B. 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.***

C. 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). 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.

*****There are checkpoints along the way where drafts may be submitted for feedback (noted as CP on the tentative schedule).***

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**
 - **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**

D. Exam (20%)

One exam will cover the material from the class and textbook and include multiple choice as well as short answer questions.

E. 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.

PROFESSIONAL DISPOSITIONS

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

GRADING

1. Students' final grade for this class will be based on the following:

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

2. **Final grades** on written work will take into account the following factors:
 - a. quality of written work,
 - b. knowledge of content area, and
 - c. adherence to requirements of assignment.
3. **Late Assignments:** All assignments are to be posted on Blackboard before the start of class on the assigned date. A late assignment is subject to a penalty of 10% of the award for every day that it is overdue. 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 may mean that you will be sacrificing a portion of your grade for extra time)

All assignments are to be posted on Blackboard. *DO NOT* slide assignments under the office door.

4. **Assignment Weighting:** A summary of the major assignment weightings is listed in the table below.

Major Assignments	Percent %
HSRB CITI Training Completion	10%
Critique of Two Empirical Research Articles	20%
Research Proposal	40%
Exam	20%
Attendance & Class Participation	10%
Total	100%

TK20 PERFORMANCE-BASED ASSESSMENT SUBMISSION REQUIREMENT

The Quantitative Article Critique assignment is designated for the TK20 assessment. The respective rubric is located at the end of the syllabus.

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 <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 follow the university policy stating that all sound emitting devices shall be silenced 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>

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

Tentative Class Schedule			
Class	Topic	Reading	Assignments Due
Week 1 1/22	* Intro: What is Research? Types of Research	Chapter 1	
Week 2 1/29	* Ethics	Chapter 2	<i>Examine CITI Training Info (due March 19 on Bb)</i>
Week 3 2/5	* Research Questions, Variables, and Hypotheses	Chapter 3	<i>Locate articles for critique assignments</i>
Week 4 2/12	* Literature Review	Chapter 4	CP1: Research questions/variables/hypothesis
Week 5 2/19	* Sampling	Chapter 5	CP2: List of minimum 5 articles for literature review
Week 6 2/26	* CP2: List of minimum 5 articles for literature review	Chapter 6 (138-142, 155- 168) & Chapter 7	CP3: Sample
Week 7 3/5	* Statistics [& Review/Catch-up]	Chapter 6 (143-153)	Exam review exercise
3/12	Spring Break		
Week 8 3/19	EXAM		CITI training due

Week 9 3/26	* Quantitative Design	Chapter 8 & Chapter 9	CP4: Literature review
Week 10 4/2	* Quantitative Design & Data Analysis	Chapter 10	
Week 11 4/9	* Qualitative Design	Chapter 11	Quantitative critique due
Week 12 4/16	* Qualitative Design & Data Analysis	Chapter 12	CP5: Design section
Week 13 4/23	* Mixed Methods & Conclusions	Chapter 13 & Chapter 15	Qualitative critique due
Week 14 4/30	REQUIRED INDIVIDUAL MEETINGS		
Week 15 5/7	Exam Period		Research proposal due by 10pm

EDRS 590 Quantitative Article Critique TK20 Rubric

	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	
Standards VA- George Mason University non-SPA Educational Psychology (2014) Standard: 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	
Identification and Analysis of Design Elements :	Does not identify or analyze design elements.	Identification of design elements is present, but either contains inaccuracies or is	Accurate identification of elements and some analysis of design elements.	Insightful analysis and accurate identification of key research design elements.	

	Does Not Meet Standards	Approaching Standards	Meets Standards	Exceeds Standards	Score/Level
Lit Review, Research Problem, and Methodology Program Standard 4		missing analyses.			
Standards VA- George Mason University non-SPA Educational Psychology (2014) Standard: 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	Insightful accounts of the qualities, strengths and limitations of the presentation of findings and the design. Claims are reasonable and meaningful.	
Standards VA- George Mason University non-SPA Educational Psychology (2014) Standard: 4. Candidates will use their knowledge of quantitative and qualitative research methodology to critically read and evaluate quantitative and qualitative research articles.					
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.	
Standards VA- George Mason University non-SPA Educational Psychology (2014) Standard: 4. Candidates will use their knowledge of quantitative and qualitative research methodology to critically read and evaluate quantitative and qualitative research articles.					
Reflection and	There is minimal discussion or no	Reflective component is present but is under-	Reflections are developed and have	Reflections are thoughtfully and fully	

	Does Not Meet Standards	Approaching Standards	Meets Standards	Exceeds Standards	Score/Level
Discussion Component Program Standard 6	reflection section.	developed or lacks connections to analysis.	clear connections to analysis.	developed with clear and meaningful connections to analysis.	
Standards VA- George Mason University non-SPA Educational Psychology (2014) Standard: 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)					