

## Methods of Educational Research

George Mason University, Graduate School of Education

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Fall 2009

EDRS 590-002

Class Meeting: Robinson Hall-B, Room 103 Wednesday 7:20pm to 10:00pm

Office Hours:

May be arranged by appointment.

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### COURSE DESCRIPTION:

- Course description from the University Catalog: Develops skills, insights, and understanding to perform research, with emphasis on interpreting and applying research results. Critiques research, and uses findings in educational settings.

### NATURE OF COURSE DELIVERY:

This course consists of lectures, large group discussion, in class activities, and individual/team assignments. In addition, we will be using Blackboard, an online system for class organization. Students are expected to have a working knowledge of this system within the first week of class as we will be utilizing blackboard for various assignments and between class interactions, <http://gmu.blackboard.com>

1. Classes will reflect a balance of activities that encourage the exploration of the use of research in instructional leadership. To promote an atmosphere that allows us to accomplish this, we will:

- a. Start and end on time;
- b. Maintain (flexibly) a written agenda reflecting objectives for each class;
- c. Agree to disagree respectfully during class discussions;
- d. Backup claims with evidence;
- e. Strive to be open to new ideas and perspectives; and
- f. Listen actively to one another.

2. Students are expected to:

- a. Write papers that are well researched, proofed, submitted in a timely fashion, and that conform to APA guidelines;
- b. Participate actively in class discussions in a manner that challenges the best thinking of the class;
- c. Provide constructive feedback to others both on their ideas and on their written work, striving to learn from each other and to test each other's ideas.

3. We will endeavor to create a classroom climate that approximates what we know about communities of practice. As such, it is important that we create a space that allows participants to try out new ideas and voice opinions without fear of ridicule or embarrassment. The hallmark of a community of practice is a balance between openness and constructive feedback; hence, everyone is expected to:

- a. Come fully prepared to each class;

- b. Demonstrate appropriate respect for one another;
- c. Voice concerns and opinions about class process openly;
- d. Recognize and celebrate each other's ideas and accomplishment;
- e. Show an awareness of each other's needs.

### **STUDENT OUTCOMES:**

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 improvement. Learners will begin to:

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

### **Course Objectives**

Upon successful completion of the course, students should:

- be familiar with current research on educational issues;
- be able to recognize and understand different methods of research, including quantitative and qualitative analyses and variations within each broad category;
- be able to conduct literature searches using educational and psychological databases;
- be able to use electronic resources to find research relevant to a specific topic;
- have developed a perspective on how different kinds of research are useful in different settings;
- be able to critically evaluate educational research in terms of validity and applicability to their field;
- be able to engage in informal research within their area of specialization;
- be able to write a comprehensive literature review of a topic in education and or psychology;
- be able to present written research results clearly and coherently;
- be able to use the writing style described in the Fifth Edition of the *Publication Manual of the American Psychological Association* (APA) for writing term and research papers;

- be able to design and critique educational and psychological research;
- be able to reflect on their actions and choices and use that reflection to inform practice;
- be able to evaluate the appropriateness of substantive interpretations in light of statistical results

**Required Text:** McMillan, J.H. & Schumacher, S. (2010). *Educational Research: Evidence-Based Inquiry* (7th ed). Boston, MA: Pearson.

**Recommended Texts:**

Salking, N. J. (2006). *Statistics for people who (think they) hate statistics: The excel edition* (3<sup>rd</sup> ed.). Thousand Oaks, CA: Sage Publications, Inc..

American Psychological Association. (2001). *Publication manual of the American Psychological Association* (5th ed.). Washington, DC: Author.

**Course Requirements:** It is expected that each of you will:

- (1) Read all assigned materials for the course.
- (2) Participate in classroom activities that reflect critical reading of materials.
- (3) Write a focused research paper and present it in class in a poster format.
- (4) Write two article critiques.
- (5) Complete five in-class assignments
- (6) Attend each class session.

**Course Evaluation**

**1. In class/group Assignments:** Students will be asked to work individually or in groups of 3-4 students on activities throughout the course.

**2. Individual Research Proposal:** Students will work individually to develop a research proposal. The proposal is intended to demonstrate and reflect upon what you learn from this course. It should be written in a way that one would submit for a national professional conference paper presentation. Research papers must be handed in on time and must adhere to the APA Publication Manual Guidelines. Class time will be allocated for peer review and feedback.

**This focused research project will be divided into 6 sequential parts.**

1. Identify broad topic of interest; conduct a literature review; discuss significance of the proposed study; state purpose and hypotheses.
2. Methods- describe sample; identify measures to test hypotheses; discuss procedures and design of the study.
3. Data collection.
4. Data analysis.
5. Results section.
6. Discussion and Conclusion.

**3. Article Critiques:** This course requires students to write 2 critiques of two research articles. The critiques should include the following parts: purpose, methods, results, and critical comments as well as your reflections about the article. The research articles must be empirically based and can include mixed-methods, quantitative, survey, qualitative, or action research design.

**4. Proposal Presentation:** The presentation of the final proposal will take place the last day of class in a poster session format. The proposal presentation will follow APA poster presentation guidelines. Guidelines will be posted on blackboard. The course instructor and students will evaluate posters. Students should come prepared to give a 5-10 minute presentation of the proposal. Students will also bring an abstract and a reference list as handouts for each member of the class.

**5. Class Participation and Attendance Policy:** 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. With reference to the grading scale described later in this syllabus, you will note that this percentage is equivalent to a full letter 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.

**Rubric For Attendance and Participation**

	<b>Level of Performance</b>			
<b>Element</b>	<b>(A) Distinguished</b>	<b>(B) Proficient</b>	<b>(C) Basic</b>	<b>(D) Unsatisfactory</b>
<b>Attendance &amp; Participation</b>	In addition to attending all classes, being on time, being prepared, and following outlined procedures in case of absence, the student actively participates and supports the members of the learning group and the members of the class.	In addition to attending all classes, being on time, being prepared, and following outlined procedures in case of absence, the student makes active contributions to the learning group and class.	Student is on time, prepared for class, and participates in group and class discussions. Aspiring teacher attends all classes and if an absence occurs, the procedure outlined in this section of the syllabus is followed.	The student is late for class. Absences are not documented by following the procedures outlined in this section of the syllabus. The aspiring teacher is not prepared for class and does not actively participate in discussions.

**6. Late Assignments:** Assignments are due at the start of class on the assigned due date. If an assignment must be turned in late or outside of class, students may email the assignment with prior agreement (using the format of LASTNAME-ASSIGNMENT in the subject line). Assignments submitted via email without prior agreement will not be accepted or graded and will be considered missing. Late assignments will be marked down by half a letter grade for each day the assignment is late.

## **Grading Policy**

In-class Assignments (5)	4 pts each/20pts
Article Critiques (2)	10 pts each/20 pts total
Research Proposal	40 pts
Presentation of Focused Research Project (Poster Session)	10 pts
Class Participation and Attendance	10 Pts
<b>TOTAL</b>	<b>100 pts</b>

### **Letter grades will be assigned as follows:**

A+ 98-100%    A 93-97.49%    A- 90-92.49%    B+ 88-89.49%    B 80-87.49%    C 70-79.49%    F below 70%

## **Honor Code**

All evaluations and homework will be taken under the GMU Honor Code. Students are expected to abide by the honor code set forth in the current edition of the Student Handbook. All exams, assignments and papers are honor work. That means that students must not give nor receive any unauthorized assistance. While members of a team may collaborate on written paper assignments, they may not give or receive assistance from other teams. Plagiarism is also a violation of the honor code. The University's Honor Code guidelines for academic honesty are at:

<http://mason.gmu.edu/~montecin/plagiarism.htm>.

## **Learning Disabilities**

Students with any type of documented disability that may interfere with their learning in this class may negotiate a reasonable accommodation with the instructor.

EDRS 590: Tentative Course Organization and Schedule – *Subject to change*

DATE	TOPIC	ASSIGNED READING	CLASS ACTIVITY	WORK DUE
<b>September 2</b>	<ul style="list-style-type: none"> <li>Review syllabus</li> <li>Introduction to Research in Education</li> <li>APA style/content and organization of a manuscript</li> </ul>	<ul style="list-style-type: none"> <li>none</li> </ul>	<ul style="list-style-type: none"> <li>activity &amp; discussion</li> </ul>	none
<b>September 9</b>	<ul style="list-style-type: none"> <li>Research designs &amp; Research problems, questions, &amp; hypotheses</li> </ul>	<ul style="list-style-type: none"> <li>Chapter 1, 2</li> </ul>	<ul style="list-style-type: none"> <li>activity &amp; discussion</li> </ul>	none
<b>September 16</b>	<ul style="list-style-type: none"> <li><b>MEET in JC library, 2<sup>nd</sup> floor instruction room!</b></li> <li>Locating and Reviewing Related Literature</li> </ul>	<ul style="list-style-type: none"> <li>Chapter 3,4</li> <li>Appendix B &amp; C in text</li> </ul>	<ul style="list-style-type: none"> <li>research activity</li> </ul>	Bring your research question to class
<b>September 23</b>	<ul style="list-style-type: none"> <li>Quantitative Research</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>activity &amp; discussion</li> </ul>	<ul style="list-style-type: none"> <li>Bring 2 empirical research articles to class (1, quantitative, 1 qualitative) pertaining to your research interests</li> <li>Topic of interest/summary paragraph</li> </ul>
<b>September 30</b>	<ul style="list-style-type: none"> <li>Participants, subjects, and sampling</li> </ul>	<ul style="list-style-type: none"> <li>Chapter 6</li> </ul>	<ul style="list-style-type: none"> <li>activity &amp; discussion</li> </ul>	<ul style="list-style-type: none"> <li>Article Critique #1- rubric on blackboard</li> </ul>
<b>October 7</b>	<ul style="list-style-type: none"> <li>Descriptive statistics</li> </ul>	<ul style="list-style-type: none"> <li>Chapter 7</li> </ul>	<ul style="list-style-type: none"> <li>activity &amp; discussion</li> </ul>	<ul style="list-style-type: none"> <li>Literature Review &amp; Introduction Draft Due (see guidelines on blackboard)</li> <li><i>-must include 6-8 journal articles</i></li> </ul>
<b>October 14</b>	<ul style="list-style-type: none"> <li>Data collection &amp; educational measures</li> </ul>	<ul style="list-style-type: none"> <li>Chapter 8 &amp; 9</li> </ul>	<ul style="list-style-type: none"> <li>activity &amp; discussion</li> </ul>	<ul style="list-style-type: none"> <li>Methods of focused research project Draft Due - guidelines on blackboard</li> </ul>
<b>October 21</b>	<ul style="list-style-type: none"> <li>Non-experimental</li> </ul>	<ul style="list-style-type: none"> <li>Chapter 10</li> </ul>	<ul style="list-style-type: none"> <li>activity &amp;</li> </ul>	<ul style="list-style-type: none"> <li>Article Critique #2</li> </ul>

	Research Designs		discussion	due
DATE	TOPIC	ASSIGNED READING	CLASS ACTIVITY	WORK DUE
October 28	<ul style="list-style-type: none"> <li>Experimental Research Designs</li> <li>Understanding Statistical Inferences</li> </ul>	<ul style="list-style-type: none"> <li>Chapter 11, 12</li> </ul>	<ul style="list-style-type: none"> <li>activity &amp; discussion</li> </ul>	<ul style="list-style-type: none"> <li><i>(Anticipated)</i> Results section of proposal Draft Due</li> </ul>
November 4	<ul style="list-style-type: none"> <li>Qualitative Research Designs &amp; collecting data</li> </ul>	<ul style="list-style-type: none"> <li>Chapter 13 &amp; 14</li> <li>activity &amp; discussion</li> </ul>	<ul style="list-style-type: none"> <li>In-class peer review of proposal draft</li> </ul>	<ul style="list-style-type: none"> <li>Bring Proposal Draft for peer review</li> <li>-Rubric on Blackboard</li> </ul>
November 11	<ul style="list-style-type: none"> <li>Qualitative Data Analysis &amp; Action Research</li> </ul>	<ul style="list-style-type: none"> <li>chapter 15, 19</li> </ul>	<ul style="list-style-type: none"> <li>activity &amp; discussion</li> </ul>	<ul style="list-style-type: none"> <li>First Draft of Proposal Due for feedback</li> </ul>
November 18	<ul style="list-style-type: none"> <li>Mixed-method and action research &amp; Evaluation &amp; policy analysis</li> </ul>	<ul style="list-style-type: none"> <li>Chapter 16, 17</li> </ul>	<ul style="list-style-type: none"> <li>activity &amp; discussion</li> </ul>	
November 25	<ul style="list-style-type: none"> <li><b>No Class – Happy Thanksgiving</b></li> </ul>			
December 2	<ul style="list-style-type: none"> <li>Evaluation &amp; policy analysis</li> <li>Discussion and Conclusions: Putting it all together</li> </ul>	<ul style="list-style-type: none"> <li>Chapter 18</li> <li>Handout</li> </ul>	<ul style="list-style-type: none"> <li>activity &amp; discussion</li> </ul>	
December 9	<ul style="list-style-type: none"> <li>Proposal presentation &amp; poster session</li> </ul>			<ul style="list-style-type: none"> <li><b>Final Proposal Due</b></li> <li>Poster Presentations</li> </ul>