

**GEORGE MASON UNIVERSITY
COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT
GRADUATE SCHOOL OF EDUCATION**

EDCI 559: Research and Assessment in Elementary Education (3 credits)

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Date and Time: May 17 – June 18 (M, W, F 7:20 -10:00 pm)

Class Location: Innovation Hall 223

Course Description

- A. Prerequisites: Admission into GMU Elementary Education Graduate program; capstone course for degree and must be taken last in sequence.
- B. This course is designed to help teacher candidates understand various research paradigms utilizing research literature and systematic evidence to improve teacher practice, and to further their skills at assessment of learning outcomes. Course emphasizes linking research and practice and making instructional decisions based on systematically collected data.

Nature of Course Delivery

This course includes multiple instructional strategies. Individual session formats vary and may include lecture, small group/large group discussion, hands-on, interactive work, student presentations, and cooperative learning. Practical applications of theory are explored in group activities.

Standards

- A. National Board for Professional Teaching Standards:
 - Proposition 1: Teachers are committed to students and learning
 - Proposition 3: Teachers are responsible for managing and monitoring student learning
 - Proposition 4: Teachers think systematically about their practice and learn from their experience.
- B. National Technology Standards:
 - Standard IV: Teachers apply technology to facilitate a variety of effective assessment and evaluation strategies.
 - Standard V: Teachers use technology to enhance their productivity and professional practice.
- C. The [Virginia State Technology Standards for Instructional Personnel](#):
 - 1. Instructional personnel shall be able to demonstrate effective use of a computer system and utilize computer software.
 - 2. Instructional personnel shall be able to apply knowledge of terms associated with educational computing and technology.

3. Instructional personnel shall be able to apply computer productivity tools for professional use.
4. Instructional personnel shall be able to use electronic technologies to access and exchange information.

Learning Outcomes

- A. Students will be able to:
1. Articulate the role of systematic evidence in the improvement of teaching and learning.
 2. Use educational research literature as a basis for reflecting on and improving their teaching practice.
 3. Make explicit linkages between research and assessment practice.
 4. Distinguish between the purposes and methods of theoretical, applied, and action research as well as quantitative and qualitative research.
 5. Explain the fundamentals of validity and reliability, and articulate the potential threats to validity within various research paradigms.
 6. Critique the quality of research studies within various paradigms.
 7. Describe the purpose and cycle of action research, specifically in relationship to assessment of their learners.
 8. Design appropriate and authentic assessments and analyze student data.
 9. Design an action research study based on research and student assessments.
 10. Use technology to assist in locating, using, conducting research, and analyzing data.

B. Outcomes and Standards

Learning Outcomes	NBPTS Propositions	NETS Standards
1	1, 3	V
2	1, 3, 4	IV & V
3	1, 3, 4	IV & V
4	4	V
5	4	V
6	4	V
7	1, 3, 4	IV & V
8	1, 3	IV & V
9	4	IV & V
10	4	V

Texts

A. Required Texts

Jones, W. P., & Kottler, J. A. (2008). *Understanding Research: Becoming a Competent and Critical Consumer*. New York, NY: Pearson.

Mills, G. E. (2008). *Action research: A guide for the teacher researcher (3rd ed.)*. Upper Saddle River, NJ: Pearson Merrill Prentice Hall.

B. Strongly Recommended

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

Course Requirements

A. Assignments (Guidance is attached.)	<u>Points</u>
Project 1. Educational Setting Review for a Delivery/Research Theoretical Framework.	15
Project 2. Reflection with Relation to Ingredients Essential for Qualitative and Quantitative Research.	10
Project 3. Research Plan Outline for Qualitative Inquiry.	15
Project 4. Research Plan Outline for Quantitative Inquiry.	15
Project 5. Action Research Proposal	<u>45</u>
Total:	100

B. Final Grading Scale

94-100 = A
90-93 = A-
88-89 = B+
83-87 = B
70-79 = C
Below 70 = F

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT STATEMENT OF EXPECTATIONS:

Students are expected to exhibit professional behavior and dispositions. See <http://gse.gmu.edu> for a listing of these dispositions.

Students must follow the guidelines of the University Honor Code. See http://www.gmu.edu/catalog/apolicies/#TOC_H12 for the full honor code.

Students must agree to abide by the university policy for Responsible Use of Computing. See <http://mail.gmu.edu> and click on Responsible Use of Computing at the bottom of the screen.

Students with disabilities who seek accommodations in a course must be registered with the GMU Disability Resource Center (DRC) and inform the instructor, in writing, at the beginning of the semester. See www.gmu.edu/student/drc or call 703-993-2474 to access the DRC.

University and Elementary Program Policies

Attendance. This is an advanced graduate level course, therefore the quality of work, attendance, and informed participation are expected to be of the highest caliber. Unless it is an emergency situation, no absences are excused. Should you need to miss a class, it is your responsibility to inform the instructor ahead of time, turn in your assignments, collect any notes/assignments from a colleague, and do your utmost to remain current in the class. (See GMU Catalog, page 32.)

Late Assignments. Points will be deducted from late assignments without the prior consent of the instructor.

Quality of Written Work. Written work should be word-processed in 12-point font. Legibility, organizational clarity, and standard English usage and mechanics are expected. Unacceptable work may be returned for editing prior to grading. Quotations, paraphrases, and references must appear in proper APA format. If you require special assistance, see the instructor.

Cell Phones. The university has a policy that requests students to turn off pagers and cell phones before class begins. One cell phone will remain on in class that is registered with the Mason Alert System.

Honor Code. To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of George Mason University and with the desire for greater academic and personal achievement, George Mason University has set forth a code of honor that includes policies on cheating and attempted cheating, lack of participation in group work, plagiarism, lying and stealing. Detailed information on these policies is available in the GMU Student Handbook.

Individuals with Disabilities. The university is committed to complying with the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 by providing reasonable accommodations for applicants for admission, students, applicants for employment, employees, and visitors who are disabled. Students requiring specific accommodations for a disability should contact the Disability Resource Center at 993-2474, or the University Equity Office at 993-8730.

Course Calendar

Dates

Topics/Assignments

5/17	Course Overview The Research/ Theoretical Context: Describing the Delivery Setting and Constructs Building the Action Research Framework
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- 5/19** Library Searching; Asking Good Research Questions; Narrowing a Topic
Meet in the Johnson Center, room A (3rd floor) at 7pm
Watch this 5 minute video at least twice.
<http://infoguides.gmu.edu/content.php?pid=7745&sid=327054>
Jones: Ch 1; Mills: Ch 1 and 3
- 5/21** **Component 1: Rationale and Research Question**
- Review of Projects 1 and 2
Measurement for Research: Definition, Scaling, Reliability and Validity
Jones: Ch 2 and 4; Mills: Ch 5
Due: Projects 1 and 2
- 5/24** Overview of Qualitative and Quantitative Research -
Supporting Action Research
Component 2: Literature Review
Jones: Ch 1 and 2; Mills Ch 1
- 5/26** **Component 3: Context and Intervention**
- Review of Projects 1 and 2
- Measurement for Research (Continued)
Review of Qualitative Research Procedures
Jones: Ch 3 and 4; Mills Ch 4
- 5/28** Complete online assignment (TBA)
Work on Project 3
- 5/31** Memorial Day Holiday - No Class
- 6/2** Review of Quantitative Research Procedures
Component 4: Data Collection and Student Assessment Plan
Jones: Ch 3, 4 and 5; Mills Ch 4 and 5
- 6/4** Review of Research Plan Outline for Qualitative Inquiry.
Jones: Ch 3 and 4; Mills Ch 4
Due: Project 3
- 6/7** **Component 5: Data Analysis Plan**
Writing the Action Research Report and Communicating with Professional
Learning Communities
Jones: Ch 5 and 6; Mills Ch 6 and 8
- 6/9** Review of Draft Action Research Proposals
Implications for the Field of Educational Research
Jones: Ch 7 and Appendices A, B and C; Mills: Ch 7, 8 and Appendix A
- 6/11** Complete online assignment (TBA)

- 6/14** Review of Research Plan Outline for Quantitative Inquiry.
Jones: Ch 3 and 4; Mills Ch 4
Due: Project 4
- 6/16** Research Ethics, Human Subjects
Mills: Ch 2
- 6/18** Review of Final Action Research Proposals
Implications for Individual Research
Due: Project 5

Project Descriptions

Project 1. Educational Setting Review for a Delivery/Research Theoretical Framework. (15 points)

- A. Describe the educational setting within which you teach:
- o Intended outcomes
 - o Resources
 - o Strategies
 - o Assessment of intended outcomes at the following levels:
 - process
 - acquisition
 - use
 - results
- B. Analyze an intended outcome of the educational setting within which you teach to include the following:
- o Who and what are involved
 - o What is to be accomplished
 - o Why
 - o When/where
 - o How
 - o How well

Project 2. Reflection with Relation to Ingredients Essential for Qualitative and Quantitative Research. (10 points)

View the video presentation on African American Emergence at the following website:
<http://www.todaysdrum.com/4933/banking-on-african-american-emergence>
Drawing from the video write a 1 page reflection describing two insights that are critical for research in education.

Read the paper "Thinking Skills for Innovation and School Improvement" at the following website: <http://www.paedeia.com/Thinking%20Skills.asp>. Drawing from the paper write a 1 page reflection describing two insights that are critical for research in education.

Project 3. Research Plan Outline for Qualitative Inquiry. (15 points)

Develop an outline of a plan for conducting qualitative research in your educational setting. Include the following parts:

- o Review your Delivery/Theoretical Research Framework from Project 1 to identify a phenomenon/construct for analysis.
- o Develop a draft systems representation of the phenomenon/construct.
- o From the context of your Delivery/Theoretical Research Framework, provide a brief rationale for the need to analyze the phenomenon/construct.
- o Develop an information/data collection matrix identifying sources of information/data and the qualitative research methods for obtaining the information/data from these sources.
- o Identify three procedures to validate the information/data to be collected.
- o Outline the information/data collection activity
- o Identify steps for analyzing the information/data collected and possible inductive and deductive paths available in your Delivery/Theoretical Research Framework for research follow-up.

Project 4. Research Plan Outline for Quantitative Inquiry. (15 points)

Develop an outline of a plan for conducting quantitative research in your educational setting. Include the following parts:

- o Review your Delivery/Theoretical Research Framework from Project 1 to identify a question, problem, or issue that includes a construct from the Process area and a construct from the Outcome area of your Framework.
- o Write an operational definition for the constructs from the Process and Outcome areas of your Framework. Identify the scaling options possible from your operational definitions and any parametric-nonparametric issue.
- o Write a research question or hypothesis reflecting your Process construct as an independent variable and your Outcome construct as a dependent variable.
- o Develop an experimental design diagram for your research using the following two designs.
 - One shot experimental case study
 - Pretest-Post Test Control Group DesignBriefly describe the terms in both diagrams
- o Briefly discuss data analysis tools you might use with these designs.

Project 5. Action Research Proposal. (45 points)

**COURSE EDCI 559
PBA Rubric: Final Action Research Proposal**

Name: _____

Date: _____

CRITERIA	No Evidence Not Met 1	Beginning (Limited evidence) 2	Developing (Clear evidence) 3	Accomplished (Clear, convincing, substantial evidence) 4	SCORE
Introduction					/4
Describes the problem					
Clear research question stated					
Significance of problem addressed					
Literature Review					/4
Research studies are used					
Analysis of literature is evident					
Synthesis of literature is evident					
Context and Intervention Provided					/4
Setting described					
Population identified					
Intervention thoroughly described					
Research Design					/4
Design of study matches goals					
Formative and Summative Assessments included					
Data sources appropriate					
Analysis of Data					/4
Appropriate analysis for data collected described					

Implications from data proposal					
References					/4
Full citations for all sources mentioned					
Use of APA style for formatting					
All listed references are used in the paper					
Most references are from scholarly sources (at least 10 are scholarly)					
Overall Style					/4
Clear, concise writing					
Grammar and punctuation					
Multiple levels of headings used to organize ideas					
Subtotal					/28
Reflection					/2
Total					/30

Comments