EDCI 559: Research and Assessment in Elementary Education (3 credits)
Blackboard: https://mymasonportal.gmu.edu/

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Office Hours: By appointment
Date and Time: May 21 – June 22 (M, W, F: 3:45 - 6:50 pm)
Class Location: Krug 3

Course Description (from catalog)

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, assessment, and instruction.
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. Use data to inform instructional planning and decisions
10. Design an action research study based on research and student assessments.
11. 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 (4th ed.).* Upper Saddle River, NJ: Pearson Merrill Prentice Hall.

B.   Recommended

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

Course Requirements
A.   Assignments

Assignment	Points
Action Research Proposal Components 1. Rationale and research question (**Due: 5/29**) 2. Literature review (**Due: 6/3**) 3. Context and Intervention (**Due: 6/7**) 4. Data Collection Plan/Student Assessment (**Due 6/13**) 5. Data Analysis Plan (**Due 6/16**)	30
Final Action Research Proposal (PBA) (**Due: 6/21**)	25
Action Research Proposal Presentation (6/20)	6
Quantitative Data Collection/Report/Reflect (Survey Due for approval 6/1; Report Due 6/10)	12
Qualitative Data Collection/Report/Reflect (Due 6/17)	12
Chapter Discussion/Class Participation	15
Total	**100**

Final Action Research Proposal (25 points) (Due: 6/21)
This is the major assignment for this class and is the Performance Based Assessment (PBA) for the course. The final written proposal will include the five components plus a short reflection. See attached rubric.

Action Research Proposal Presentation (6 points) (6/20; Note time: 6:45-9:30 pm)
The presentation will be based on the written proposal. We will participate with all other sections of EDCI 559 in a Gallery Walk/Poster session. **Students will prepare a one-page summary for distribution to peers.** Students are encouraged to prepare a poster for this gallery walk although other options exist.

Components of Action Research Proposal (30 points)
- Part One: Rationale and research question (6 points)
- Part Two: Literature review (6 points) (in preparation, an analysis of three research articles will be sent for feedback on Sunday 5/27)
- Part Three: Context and Intervention – description of the school, community, classroom and student population, and description of instructional intervention (6 points);

- Part Four: Data Collection and Student Assessment Plan: specific plan on the data you will collect to answer your research question(s), and formative and summative student assessments designed to gather those data (6 points)
- Part Five: Data Analysis Plan – describe how you would you analyze the data, if you collected them (6 points)

Class participation and leadership of topic discussion (15 points)
Students, in pairs or small groups, will devise an active-learning activity to engage class members in a discussion of the types of research chapters. Chapters will be determined at the start of the course. Students are expected to attend class and participate in small and large group discussions and submit written work on time. Points will be deducted for not doing so, unless previous arrangements have been made with Dr. Sprague. Students will be evaluated on their level of class participation. Attention will be paid to their level of interaction in discussions of the readings, group work, and other learning activities. Readings must be completed before class and drafts of assignments must be provided to your learning team on time to facilitate effective feedback discussions. Attendance, punctuality, preparation and engagement are essential.

Quantitative Data Collection and Report (12 points) (DUE: Survey 6/1; Report Due 6/10)
Groups of students will develop a short survey instrument with 10-12 questions, collect data from at least 15 people each, analyze the data using descriptive statistics, and write up a short report. This does not have to be related to the focus of your Action Research Proposal (see scoring). Typically students do better when the topic can be asked of non-school personnel; for example, you may ask parents' views of schools, or identify top issues in education, etc. **Survey instrument must be approved by Dr. Sprague.**

Qualitative Data Collection and Report (12 points) (DUE: 6/17)
Individually, students will collect qualitative data through interviews, observation, or a focus group, code and interpret the data and write a short report. This does not have to be related to the focus of your Action Research Proposal (see scoring); however, most individuals who tie them together feel they have a better handle on their topic. **Your proposal must be approved by Dr. Sprague**.

Please Note: Your assignments are only accepted electronically. You must name your file in the following way:
Yourlastname_assignment
For example, for the quantitative assignment, mine would be: sprague_quant

Final Grading Scale

94-100 = A
90-93 = A-
88-89 = B+
81-87 = B
70-80 = C
Below 70 = F

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT STATEMENT OF EXPECTATIONS:

1. George Mason University Policies and Resources for Students
    a. Academic integrity (honor code, plagiarism) – Students must adhere to guidelines of the George Mason University Honor Code [See http://academicintegrity.gmu.edu/honorcode/].
    b. Mason Email – Students are responsible for the content of university communications sent to their George Mason University email account and are required to activate their account and check it regularly. All communication from the university, college, school, division, and program will be sent to students solely through their Mason email account. Students must follow the university policy for Responsible Use of Computing [See http://universitypolicy.gmu.edu/1301ge.html].
    c. Counseling and Psychological Services – The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops, and outreach programs) to enhance students' personal experience and academic performance [See http://caps.gmu.edu/].
    d. Office of Disability Services – Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor in writing at the beginning of the semester http://ods.gmu.edu/].
    e. Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.
    f. The Writing Center (Optional Resource) – The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing [See http://writingcenter.gmu.edu/].
    g. University Libraries (Optional Resource) – The George Mason University Libraries provide numerous services, research tools, and help with using the library resources [See http://library.gmu.edu/].

2. 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.
3. GSE website: http://gse.gmu.edu

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.

Rubric for the **Final Action Research Proposal**

Levels/Criteria	1	2	3	Score/Level
Introduction: Describes the problem. Clear research question stated. Significance of problem is addressed.	The problem is not adequately described. It does not lead the reader to the research question. The research question is unclear. It is not measureable. The significance of the problem is unfocused and rambles. It is not clear why this is an important topic to study.	The problem is adequately described. The description partially leads the reader to the research question. The research question is vague. It is measureable. The significance of the problem is adequately addressed, but it is not clear as to why this is important.	The problem is described in details. The description fully leads the reader to the research question. The research question is clear. It is measureable. The significance of the problem is addressed fully. It is clear why this is an important problem to study.	
Literature Review: Research studies are used. Analysis of literature is evidence. Synthesis of literature is evident.	Less than six research studies are used. The articles are not from respectable journals. The studies are not appropriate for the topic. The analysis of the literature is inadequate. It does not connect to the problem statement and research question. There is an inadequate synthesis of the literature. The studies are treated separately and not tied	Six to nine research studies are used. At least one of them is from a respectable journal. The studies are somewhat appropriate for the topic. The analysis of the literature is adequate. It connects somewhat to the problem statement and research question, but leaves the reader wanting to know more. There is an adequate synthesis of the literature.	At least ten research studies are used to support the literature review. These are from respectable journals. The studies are appropriate for the topic. Analysis of the literature is well-developed. It connects directly to the problem statement and the research question. There is a good synthesis of the literature. This goes beyond restating	

Levels/Criteria	1	2	3	Score/Level
	together. Student is unable to connect studies to the importance of the topic.	Student primarily relies on restating the research studies to support the topic, but is able to include own thoughts regarding the studies.	what is in the articles. Student is able to tie the studies together and connect this back to the importance of the topic.	
Context and Intervention Provided: Setting Described. Population identified. Intervention described.	Setting is not included or inadequately described. It is not clear where the research will be conducted. Population is not included or inadequately described. It is not clear who will be participating in the research study. There is no intervention or implementation explained or the intervention does not align with the research question.	The setting is adequately described. Most information is included, but not all. The population is adequately described. Most information is included, but not all. Intervention is adequately described, but either the description of the intervention or the implementation is confusing.	The setting is fully described. It includes, size of school, location, grade level, subject taught, etc. All pertinent information is included. The population is fully described. It includes number of students, gender and ethnic breakdown, grade levels, academic abilities, etc. Information relevant to the research is included. Intervention is fully described. It is clear what the intervention is and how it will be implemented. Intervention is realistic.	
Research Design: Design of study matches goals. Formative and Summative Assessments included. Data sources appropriate.	None or one of the criteria is adequate. The research is not ethical. Either formative or summative assessments are included, but not both. Copies are not included and they are not well described. The majority of the data sources are not appropriate for the research question. Data collected is not ethical.	Two of the three stated criteria are adequate. Formative and summative assessments are included in the design. Copies are not included and they are not well described. Most, but not all, of the data sources are appropriate.	The methodology chosen (quantitative, qualitative, mixed methods) is appropriate for the research question. There is adequate time allowed for data collection. The treatment is reasonable and ethical. There is a mixture of formative and summative assessments included in the design. They are well-described or a copy is included. All data sources are appropriate for the research question. The information collected will help answer the question.	
Analysis of Data: Appropriate analysis for data collected. Implications from data proposed.	The analysis is inappropriate or not well-defined. Implications from the data are inadequately discussed. It is not clear the student is able to interpret the findings.	The majority of the analysis is appropriate. However, it is not clear how other parts will be analyzed. Implications from the data are adequately discussed. It is clear the	The entire analysis of the data is appropriate. The information gathered will address the research question. Implications from the data are well-developed and fully discussed. The	

Levels/Criteria	1	2	3	Score/Level
	The implications are not tied back to the results.	student is able to interpret the findings. However, the implications are not tied back to the results.	implications are connected back to the results of the data analysis.	
References: 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.	Two or more sources are not cited correctly. There are four or more APA errors. Two or more references are not cited. The majority of the references are not from scholarly sources.	Only one source is not cited correctly. There are one to three APA errors. One reference is not cited in the proposal The majority of the references are from scholarly sources.	All sources are completely and correctly cited. All articles cited are referenced in the proposal and all references contain complete citations. All citations and references follow APA style. There are no errors. All references listed are cited in the proposal. All references are from scholarly sources (journal articles, text books, etc.) They are not just from websites.	
Overall Style: Clear, concise writing. Grammar and punctuation. Multiple levels of headings used to organize ideas.	The majority of the reading is vague and unclear. The reader has difficulty seeing the connections between the various sections. There are four or more grammar and punctuation errors. There is no evidence of multiple levels of headings or these are used inappropriately in the majority of instances.	The majority of the writing is clear and concise. There are one to three grammar and punctuation errors. There is evidence of multiple levels of headings. These are used appropriately in the majority of instances.	The writing is very clear and concise. The reader can understand what the problem is and how the research will address it. There are no grammar and punctuation errors. There is evidence of multiple levels of headings. These are used appropriately in all instances.	

EDCI 559 Course Schedule Summer 2012

Date	Readings	Topics and Activities	Deliverables & Due Dates
5/21		Introduction to syllabus; what will we do for five weeks? Overview of Educational Research Organize Leading Discussion; Library Searching	
5/23	**Jones** Chapter 1; **Mills** Chapter 1	Introduction to Action Research Groups for supporting our Action Research (AR); Intro to APA - Watch this 5 minute video at least twice http://infoguides.gmu.edu/content.php?pid=7745&sid=327054	**Email by 8 pm Tue 5/22**: 3 possible research topics to search; explore possible rationale and research question(s).
5/25	**Jones** Chapter 2	Reviewing the Literature; Component 1: Rationale and Research Questions	Summary of 2-3 research articles related to your topic **Email by 8 pm Sun 5/27**
5/28		**Memorial Day No Class**; Please check email for dialogue regarding your article analysis! Feel free to email to Dr. Sprague drafts of your component 1	Component 1: Introduction, research question **Due Tue 5/29** by 8 pm.
5/30	**Mills 2,** 3	Continue Component 2: Review and Synthesis of Literature Introduction: Types of Research Designs; Groups formed and begin planning for Quantitative Activity	
6/1	**Jones**: 3 and Appendix A	Component 3: Context and Intervention. Student Assessment as evidence. Designing Formative and Summative Assessments; Finish planning Quantitative Activity	Draft of Survey **Due Sunday 6/1** by 9 pm; Component 2 – Literature Review Draft with at least 5 (out of ten required) scholarly references; **Due 6/3 by 8pm**
6/4	**Mills** Chapter 4; **Jones** 4	Component 4: Research Design, Methods, Quantitative Data Collection; Continue your efforts on Quantitative Activity	
6/6	**Mills** Chapter 5; 6	Stats, stats and some more stats Meet in quantitative groups for discussion of results, plan analysis	Component 3: Context, population, intervention. **Due Thursday 6/7** by 8 pm

6/8	**Jones** 5;Appendix B	Component 4: Data Collection, organization, and reading research reports; spend time analyzing quantitative data	Quantitative Data Collection Results and Interpretation **Due Sunday 6/10** by 8 pm.
6/11	**Mills** Appendices B and C	Qualitative Research: Introduction to Qualitative, considering our projects	Component 4: Method and data sources and formative and summative assessment plans. **Due Tuesday 6/12** by 8 pm
6/13	**Mills** Chapter 7; **Jones** Chapter 6	Component 5: and Data Analysis Activities on Analyzing Qualitative Data	
6/15	**Mills 7, Appendix B & C; Jones** Chapter 7 & Appendix C	Displaying results, summarizing data; Ethics, Human Subjects	Component 5: Data analysis plan **due Saturday 6/16** by 8 pm
6/18	**Mills** Chapters 8, 9	Individual present qualitative reports (5 minutes each) Action Research: Findings, Conclusions, Implications; how to write a report; summary of all things research	Qualitative Data Collection Results and Interpretation **Due Sunday 6/17** by 8 pm.
6/20		Poster Fair and Gallery Walk – both 3:45 classes (Mason Hall)	
6/22		TBD	Action Research Proposal (PBA) due **Thursday 6/21 midnight**