College of Education and Human Development

Division of Elementary, Literacy and Secondary Programs
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http://gse.gmu.edu/elementary-education/

EDCI 559 6K2 Spring –22039
Research and Assessment in Elementary Education
Spring 2015
Monday 5:00pm - 9:00pm
Founders Hall (ARLFH) 324

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Course Description
Provides teacher candidates an understanding of research paradigms utilizing systematic evidence to improve practice and further skills in assessment of learning outcomes. Emphasizes linking research and practice, making instructional decisions based on systematically collected data

Prerequisite: Admission into elementary education graduate program; capstone course for degree must be taken last in programmatic sequence.

Nature of Course Delivery
This course utilizes a distributed learning format requiring timely and active participation of all students throughout the semester. Activities to support student achievement of the learner outcomes include instructor presentations, videos, student individual and group presentations, collaborative student work in small groups in class and in on-line discussion groups, assigned readings, and projects leading to written products. Students engage in timely critical reflection and discussion related to the learning activities.

Learner Outcomes
This course is designed to enable students 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.

Professional 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	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

Nature of the Course
This course is structured to utilize multiple instruction formats. We will engage in face to face class sessions, as well as scheduled online discussions and activities. Face to face class sessions will include small/large group discussions and tasks, lecture, and student leading of discussions.

George Mason University Policies and Resources for Students

- Students must adhere to the guidelines of the George Mason University Honor Code [See http://academicintegrity.gmu.edu/honorcode/].

- Students must follow the university policy for Responsible Use of Computing [See http://universitypolicy.gmu.edu/1301gen.html].

- 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, and program will be sent to students solely through their Mason email account.

- 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/].

- 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 [See http://ods.gmu.edu/].

- Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.

- 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/].

Emergency Procedures
You are encouraged to sign up for emergency alerts by visiting the website
http://ready.gmu.edu/masonalert/. There are emergency posters in each classroom explaining what to do in the event of crises. Further information about emergency procedures exists on
http://cert.gmu.edu/

Professional Dispositions
Students are expected to exhibit professional behaviors and dispositions at all
times. http://cehd.gmu.edu/assets/docs/forms/secondary_ed/sec_ed_handbook.pdf

Core Values Commitment: The College of Education & 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/

Collaboration
Collaboration is an important human activity that involves shared responsibility in promoting healthy, productive lives, and educational success. We commit ourselves to work toward these

goals in genuine partnerships with individuals, families, community agencies, schools, businesses, foundations, and other groups at the local, regional, national, and international levels.

Ethical Leadership
In all professions represented by the college, leadership is an essential component denoting ability and willingness to help lead professional practice to higher levels. We commit ourselves to practice ethical leadership through deliberate and systematic attention to the ethical principles that guide all leaders in a moral society.

Innovation
We have a history of creating dynamic, innovative programs, and we are dedicated to continue creating innovative approaches in all areas of our work. We commit ourselves to seeking new ways to advance knowledge, solve problems, improve our professional practice, and expand on our successes.

Research-Based Practice
The best practice in any discipline is based upon sound research and professional judgment. We commit ourselves to basing our instruction, scholarship, and policy recommendations on well-established principles that, wherever possible, emerge from research and reflection on its implications for professional practice.

Social Justice
Social justice embodies essential principles of equity and access to all opportunities in society, in accordance with democratic principles and respect for all persons and points of view. We commit ourselves to promoting equity, opportunity, and social justice through the college's operations and its missions related to teaching, research, and service.

For additional information on the College of Education and Human Development, Graduate School of Education, please visit our website [See http://gse.gmu.edu/].

Course Requirements
Required Texts and Readings
Mills, G. (2010 or 2013). *Action Research: A Guide for the Teacher Researcher*. (4th or 5th edition is fine). Boston, MA: Pearson.

Additional selected readings will be posted on Blackboard.

General Requirements

1. The completion of all readings assigned for the course is assumed. Because the class will be structured around discussion and small group activities, it is imperative that students keep up with the readings and participate in class.

2. Attendance in class and/or online is important to students' learning; therefore, students are expected to make every effort to attend class sessions and/or complete online modules within the designated timeframe. Absences, tardiness, leaving early, and not completing online

modules in the designated timeframe may negatively affect course grades. If, due to an emergency, students will not be in class, they must call the instructor and leave a message or send an email before class. The following policy is from the university course catalog:

> Students are expected to attend the class periods of the courses for which they register. In-class participation is important not only to the individual student, but also to the class as a whole. Because class participation may be a factor in grading, instructors may use absence, tardiness, or early departure as de facto evidence of nonparticipation. Students who miss an exam with an acceptable excuse may be penalized according to the individual instructor's grading policy, as stated in the course syllabus.

3. In line with Mason's policy that students should not be penalized because of observances of their religious holidays, students shall be given an opportunity to make up, within a reasonable time, any academic assignment that is missed due to individual participation in religious observances. It is the student's responsibility to inform the instructor of any intended absences for religious observations in advance of the class that will be missed. Notice should be provided in writing as soon as possible.

4. During face-to-face and live online meetings, cell phones, pagers, and other communicative devices are not allowed in this class. Students must keep them stowed away and out of sight. Laptops or tablets (e.g., iPads) may be permitted for the purpose of taking notes only. Engaging in activities not related to the course (e.g. gaming, email, chat, etc.) will result in a significant deduction in their participation grade.

5. It is expected that assignments will be turned in on time. However, it is recognized that students occasionally have serious problems that prevent work completion. If such a dilemma arises, students should speak to the instructor prior to the assignment due date (when possible). If the student does not communicate with the instructor, a late penalty will be applied.

6. Mason is an Honor Code university; please see the Office for Academic Integrity for a full description of the code and the honor committee process. The principle of academic integrity is taken very seriously and violations are treated gravely. What does academic integrity mean in this course? Essentially this: when responsible for a task, students will perform that task. When students rely on someone else's work in an aspect of the performance of that task, they will give full credit in the proper, accepted form. Another aspect of academic integrity is the free play of ideas. Vigorous discussion and debate are encouraged in this course, with the firm expectation that all aspects of the class will be conducted with civility and respect for differing ideas, perspectives, and traditions. When in doubt (of any kind), students will ask for guidance and clarification.

Written Assignments
All formal written assignments will be evaluated for content <u>and</u> presentation. The American Psychological Association, Sixth Edition (APA) style will be followed for all written work. All written work unless otherwise noted must be completed on a word processor and should be proofread carefully. (Use spell check!) If students are not confident of their own ability to catch errors, they should have another person proofread their work. When in doubt, they should check the APA manual. Portions of the APA manual appear at the Style Manuals link on the Mason library web guide at http://infoguides.gmu.edu/content.php?pid=39979. Students may consult the Writing Center for additional writing support.

Students will do the following:

1. Present ideas in a clear, concise, and organized manner. (Avoid wordiness and redundancy.)
2. Develop points coherently, definitively, and thoroughly.
3. Refer to appropriate authorities, studies, and examples to document where appropriate. (Avoid meaningless generalizations, unwarranted assumptions, and unsupported opinions.)
4. Use correct capitalization, punctuation, spelling, and grammar.

Grading Criteria
A = 93-100   A- = 90-92   B+=87-89   B=80-86   C=70-79   F=below 70
A course grade less than B requires that you retake the course.

Note: Assignments earning less than a passing grade may be rewritten and resubmitted so that the assignment is satisfactorily completed. In fact, because learning is the goal, I may *require* you to redo an assignment that is far below expectations. All written papers must be double-spaced, with 1 margins, and in 12 point font (Times New Roman, Calibri, or Arial). APA format is expected. If you do not have a 6th Edition APA manual, the OWL a Purdue is an excellent resource http://owl.english.purdue.edu/owl/resource/560/01/.

Grading Policy
All CEHD undergraduate and graduate students are held to the university grading policies as described in the Academic Policies section of the current catalog, which can be accessed at http://catalog.gmu.edu. Those students enrolled in a CEHD Licensure Graduate Certificate program, however, must earn a B- or better in all licensure coursework. A degree-seeking graduate student will be dismissed after accumulating grades of F in two courses or 9 credits of unsatisfactory grades (C or F) in graduate courses. A 3.0 grade point average is required for completion of the graduate degree.

Submission of Performance-Based Assessment (TASKSTREAM)
Every student registered for any Elementary Education course with a required performance-based assessment (designated as such in the syllabus) is required to submit this assessment (EDCI 559: *Action Research Proposal*) to TaskStream (regardless of whether a course is an elective, a onetime course or part of an undergraduate minor). Evaluation of your performance-based assessment will also be provided using TaskStream. Failure to submit the assessment to TaskStream will result in the course instructor reporting the course grade as Incomplete (IN). Unless this grade is changed upon completion of the required TaskStream submission, the IN will convert to an F nine weeks into the following semester.

EDCI 559 Course Assignments

Assignments	Learning Outcomes	Due Dates	Points
Readings, Class and Online Participation/Activities	1,2,3,4,5,6,7,8,9,10	Ongoing	30
Action Research Proposal Development Pieces	1,2,3,4,6,7,8,9	Jan-Feb	20
Action Research Proposal (PBA)	1,2,3,4,6,7,8,9	Mar 2	21
Action Research Final Report	2,3,5,6,7,8,9,10	Apr 27	19
Action Research Presentation and Reflection	1,2,3,7	May 4	10
TOTAL			100

Readings, Class and Online Participation/Activities (30 points)
Action research is just as much as about utilizing academic research to guide your teaching, as it is about examining your own instructional practice and student learning for your own personal change. You must place yourself within the larger institution of which you are a part. This means that you must utilize the professional research literature to help you make connections between theory and practice by using what we know globally to act locally. To strengthen your professional development, it is expected that you will complete all assigned readings and assignments each week. You also must be present during each class session by actively engaging with the content and your peers. Online discussions and activities must also clearly demonstrate your thoughtful completion of the readings.

Note: To determine whether the campus is closed due to inclement weather, call 703-993-1000 or go to www.gmu.edu.

Action Research Proposal Developmental Pieces (20 points ongoing)
The Action Research Proposal consists of five sections, to be submitted throughout the first 4 weeks of class. Submit the following sections for instructor review:

Part One: *Rationale* (provide background information the general climate of accountability in education) and *Research Question*

Part Two: *Literature Review* (supporting the research question)

Part Three: *Instructional Context and Planned Change* (describe your school, community, classroom and student population, and the planned instructional change)

Part Four: *Data Collection and Student Assessment Plan* (lay out specific plan for what data to collect to answer the research question and how to collect it; includes formative and summative assessments designed to gather data; this will revised to reflect any changes)

Part Five: *Data Analysis Plan* (describe the plan to analyze data; this will be revised to reflect your actual data analysis process)

Action Research Proposal (PBA) (21 points)
You will combine all proposal pieces with suggested revisions from parts 1 through 5 into one document for final submission. Submit through TaskStream.

Action Research Final Report (19 points)
You will implement your Action Research using your proposal as a guide. Building on your proposal document, you will write up an action research report (building from and filling in any gaps from your proposal and revising, as necessary). Include Parts Six and Seven.

Part Six: *Findings* (report your findings from your analysis)

Part Seven: *Implications and Discussion* (What did you learn about student learning? What did you learn about yourself as a teacher? How do your findings fit into the existing literature that you reviewed? How will your findings impact your future instruction?)

Action Research Presentation and Reflection (10 points)
Create a handout for distribution and present your research to your peers. Include a reflection on your project, including future directions for research and other suggestions to improve this research. Guidelines for presentations will be provided in class.

EDCI 559: Course Schedule and Topics*

Class	Date	Topics	Readings** and Assignments Due
		Setting the Stage: The Action Research Process and Proposal	
1	Jan 12 (4 hrs)	*Research and Evaluation in Education* Accountability and its Role in Education Data Driven Decision Making Inquiry as a Reflective Teaching Practice Academic vs. Action Research	Mills, Chapters 1, 3 *Understanding Action Research* What is Action Research? Why Action Research? Using Action Research in the Classroom *Areas of Focus* Central Ideas and Research Questions Review of the Literature Parts of the Action Research Plan
2	Jan 26 (4 hrs)	*Critical Analysis of Research* Connecting Academic and Action Research Using the Literature Forming Your Action Research Sources of Funding Practical Considerations	Mills, Chapters 2, 4 *Ethics* Informed Consent Human Subjects Panels *Data Collection* Qualitative vs. Quantitative Observation Options in the Classroom **DUE: Proposal Parts 1, 3**
3	Feb 2 (4 hrs)	*Data Collection and Analysis* Methods Data Collection Instruments Sources of Data in the Classroom Classroom, School, and District Assessments Matching Analyses with Research Questions	Mills, Chapters 5, 6 *Using Data* Reliability Validity Generalizabiliy *Interpreting Data* Using Data to Inform Instruction **DUE: Proposal Part 2**
4	Feb 9 (4 hrs)	*Case Study* Critical Analysis	Mills, Appendix A **DUE: Proposal Parts 4, 5**

Schedule subject to change based on class needs and at discretion of the instructor.
*** Additional readings may be added*

Class	Date	Topics*	Readings** and Assignments Due
		Conducting the Research	
Online	Mar 2 (4 hrs)	*Standard Deviation in Action Research* *Displaying Data Visually*	Mills, Appendices B, C **DUE: Action Research Proposal to TaskStream**
Online	Mar 23 (4 hrs)	Update on Data Collection	
Online	Apr 13 (4 hrs)	Pulling it all Together	Review Mills, Chapter 6

Schedule subject to change based on class needs and at discretion of the instructor.
*** Additional readings may be added.*

Class	Date	Topics*	Readings** and Assignments Due
		Summarizing and Discussing the Project	
5	Apr 20 (4 hrs)	*Reflection* Using Data to Reflect on Practice NBPTS Presenting Results without Bias Format for Writing a Report for Stakeholders	Mills, Chapters 7, 8 *Using Data for Educational Change* Reflecting on Results Interpretation Creating Change *Writing Up Action Research* Outline for Report Presenting Data to Stakeholders
6	Apr 27 (4 hrs)	*Evaluating Action Research* Critical Analysis Application	Mills, Chapter 9 **DUE: Project Final Report**
7	May 4 (4 hrs)	Presentations	**DUE: Project Handouts, Presentation**
8	May 11 (4 hrs)	Reflections Final Discussions Summarizing Action Research Course Evaluation	

Schedule subject to change based on class needs and at discretion of the instructor.
*** Additional readings may be added.*

Action Research Proposal (PBA) Rubric (Parts 1–5)

	3	2	1
Introduction: Describes the problem. Clear research question stated. Significance of problem is addressed.	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.	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 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.
Literature Review: Research studies are used. Analysis of literature is evidence. Synthesis of literature is evident.	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 what is in the articles. Student is able to tie the studies together and connect this back to the importance of the topic.	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. Student primarily relies on restating the research studies to support the topic, but is able to include own thoughts regarding the studies.	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 together. Student is unable to connect studies to the importance of the topic.
Context and Intervention Provided: Setting Described. Population identified. Intervention.	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.	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.	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.

	3	2	1
Research Design Design of study matches goals. Formative and Summative Assessments included. Data sources 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.	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.	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.
Analysis of Data: Appropriate analysis for data collected. Implications from data proposed.	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 implications are connected back to the results of the data analysis.	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 student is able to interpret the findings. However, the implications are not tied back to the results.	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 implications are not tied back to the results.
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.	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.	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.	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.

	3	2	1
Overall Style: Clear, concise writing. Grammar and punctuation. Multiple levels of headings used to organize ideas.	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.	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 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.