George Mason University
College of Education and Human Development
Elementary Education

Course
ELED 559.DL1 (Spring), 559.A04 (Summer) – Research and Assessment in Elementary Education
Spring 2023 (1 cr); Summer 2023 (2 cr)
Wednesday, 4:30-7:10 (Synchronous via Zoom)

Instructor
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Prerequisites/Corequisites
Admission into Elementary Education program; Capstone course for degree must be taken last in programmatic sequence.

University Catalog 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.

Course Overview
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.

Course Delivery Method
This course will be delivered online using both synchronous and asynchronous formats via Blackboard Learning Management system (LMS) housed in the MyMason portal, Zoom, and Google Drive. You will log in to the Blackboard (Bb) course site using your Mason email name (everything before @masonlive.gmu.edu) and email password. The course site will be available on or before January 24, 2023.

Under no circumstances, may candidates/students participate in online class sessions (either by phone or Internet) while operating motor vehicles. Further, as expected in a face-to-face class meeting, such online participation requires undivided attention to course content and communication.

The primary purpose of this course is for you to learn how to conduct action research and apply it in your classroom to improve your teaching and your students' learning. This student-centered, project-based course requires a combination of asynchronous and synchronous learning and individual conferencing.

Please be aware that this course is not self-paced. Online classes are considered regular instructional time and the assignments given are the equivalent of a full in-class session. The online classes involve research, use of professional web sites, peer review, email with the instructor and classmates, readings, writing reflections, and other assignments.

Students are expected to meet *specific deadlines* and *due dates* listed in the **Class Schedule** section of this syllabus. It is the student's responsibility to keep track of the weekly course schedule of topics, readings, and activities and assignments due. The purpose of the draft research project sections is to support completion of our action research projects and provide opportunities for us to implement action research. You will be expected to post your own assignments and respond to peers' feedback in accordance with the scheduled provided.

Students may schedule a one-on-one meeting to discuss course requirements, content, or other course-related issues. Students should email the instructor to schedule a one-on-one session, including their preferred meeting method and suggested dates/times.

Technical Requirements
To participate in this course, students will need to satisfy the following technical requirements:
- High-speed Internet access with standard up-to-date browsers. To get a list of Blackboard's supported browsers see:
  https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support#supported-browsers
  To get a list of supported operation systems on different devices see:
  https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support#tested-devices-and-operating-systems
- Students must maintain consistent and reliable access to their GMU email and Blackboard, as these are the official methods of communication for this course.
- Students will need a headset microphone for use with the Zoom web conferencing tool.
- Students may be asked to create logins and passwords on supplemental websites and/or to download trial software to their computer or tablet as part of course requirements.
- The following software plug-ins for PCs and Macs, respectively, are available for free download:
  - Adobe Acrobat Reader: https://get.adobe.com/reader/
  - Windows Media Player:
    https://support.microsoft.com/en-us/help/14209/get-windows-media-player
  - Apple Quick Time Player: www.apple.com/quicktime/download/

Expectations

- Course Week:
  Our course week will begin on the day that our synchronous meetings take place as indicated on the Schedule of Classes.
- Log-in Frequency:
  Students must actively check the course Blackboard site and their GMU email for communications from the instructor, class discussions, and/or access to course materials at least 3 times per week. In addition, students must log-in for all scheduled online synchronous meetings.
- Participation:
  Students are expected to actively engage in all course activities throughout the semester, which includes viewing all course materials, completing course activities and assignments, and participating in course discussions and group interactions.
- Technical Competence:
  Students are expected to demonstrate competence in the use of all course technology. Students who are struggling with technical components of the course are expected to seek assistance from the instructor and/or College or University technical services.
- Technical Issues:
  Students should anticipate some technical difficulties during the semester and should, therefore, budget their time accordingly. Late work will not be accepted based on individual technical issues.
- Workload:
  Please be aware that this course is **not** self-paced. Students are expected to meet *specific deadlines* and *due dates* listed in the **Class Schedule** section of this syllabus. It is the student's responsibility to keep track of the weekly course schedule of topics, readings, activities and assignments due.
- Instructor Support:
  Students may schedule a one-on-one meeting to discuss course requirements, content or other course-related issues. Those unable to come to a Mason campus can meet with the instructor via telephone or web conference. Students should email the instructor to schedule a one-on-one session, including their preferred meeting method and suggested dates/times.
- Netiquette:
  The course environment is a collaborative space. Experience shows that even an innocent remark typed in the online environment can be misconstrued. Students must always re-read their responses carefully before posting them, so as others do not consider them as personal offenses. *Be positive in your approach with others and diplomatic in selecting your words*. Remember that you are not competing with classmates, but sharing information and learning from others. All faculty are similarly expected to be respectful in all communications.
- Accommodations:
  Online learners who require effective accommodations to insure accessibility must be registered with George Mason University Disability Services.

Learner Outcomes or Objectives

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 (see below)

Learning Outcomes	InTASC Standards
1	2, 3, 4, 5, 6, 9, 10
2	9, 10
3	6, 9
4	6,
5	6
6	6, 9, 10
7	6, 7, 9
8	6
9	6, 7, 9
10	4

PROFESSIONAL STANDARDS
Upon completion of this course, students will have met the following professional standards:

INTASC
Standard #2: Learning Differences. The teacher uses understanding of individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards.
Standard #3: Learning Environments. The teacher works with others to create environments that support individual and collaborative learning, and that encourage positive social interaction, active engagement in learning, and self-motivation.
Standard #4: Content Knowledge. The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates learning experiences that make the discipline accessible and meaningful for learners to assure mastery of the content.
Standard #5: Application of Content. The teacher understands how to connect concepts and use

differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues.

Standard #6: Assessment. The teacher understands and uses multiple methods of assessment to engage learners in their own growth, to monitor learner progress, and to guide the teacher's and learner's decision making.

Standard #7: Planning for Instruction. The teacher plans instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.

Standard #8: **Instructional Strategies**. The teacher understands and uses a variety of instructional strategies to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways.

Standard #9: Professional Learning and Ethical Practice. The teacher engages in ongoing professional learning and uses evidence to continually evaluate his/her practice, particularly the effects of his/her choices and actions on others (learners, families, other professionals, and the community), and adapts practice to meet the needs of each learner.

Standard #10: Leadership and Collaboration. The teacher seeks appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with learners, families, colleagues, other school professionals, and community members to ensure learner growth, and to advance the profession.

Required Texts
Mills, G. E. (2017). *Action research: A guide for the teacher researcher* (6th ed.). Pearson

Recommended Texts
APA guidelines are available online at http://owl.english.purdue.edu/owl/resource/560/01/

Course Performance Evaluation
Students are expected to submit all assignments on time in the manner outlined by the instructor.

ASSIGNMENTS SPRING 2023

Assignment	Points	Due Dates
1. **Attendance and Participation** [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]	40	Ongoing

2. **Component Drafts:** [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
    a. **Part One**: Rationale and Research Question(s)
       - **Draft Due: Feb 1**
    b. **Part Two**: Annotated Bibliography 1
       - **Draft Entries 1-5 Due: Feb 8**
       - **Draft Entries 6-10 Due: Feb 15**
    c. **Part Three:** Context and Instructional Change
       - **Draft Due: Mar 1**
    d. **Part Four:** Data Collection and Student Assessment
       - **Draft Due: Mar 15**
	60
	(15 each)
		Ongoing

TOTAL	**100 points**	

ASSIGNMENTS <mark>SUMMER 2023</mark>

1. **Attendance and Participation** [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]	18	Ongoing
2. **Component Drafts:** [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10] a. **Part Five:** Data Analysis - **Due May 3** b. **Part Six:** Findings and Implications - **Due May 17**	30	Ongoing
3. **Final Action Research Report (PBA)** [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]	42	May 31
4. **Action Research Poster and Presentation** [Outcomes 1, 2, 3, 7]	10	May 31
TOTAL	**100 points**	

Assignments and/or Examinations
- o All written papers are expected to be double-spaced, with 1" margins, and in 12-point font (Times New Roman, Calibri, or Arial). APA format is expected. OWL is an excellent resource. http://owl.english.purdue.edu/owl/resource/560/01/
- o Please Note: The GMU Writing Center offers online support via email. They will provide feedback on your writing within one hour. Graduate and professional writing can be difficult; I encourage you to take advantage of this service. http://writingcenter.gmu.edu/?page_id=177
- o **All assignments and online activities are to be completed by the date listed in the syllabus. Written work will not be accepted after the due date unless prior arrangements have been made with the instructor. Drafts should be submitted electronically via email.**

Assignment 1: Component Drafts (<mark>SPRING</mark>/<mark>SUMMER</mark>)
These sections **must be submitted by their due dates** throughout the semester for formative feedback. They are worth 15 points each. Late assignments will receive 0 points.

<mark>SPRING</mark> 2023 Part One: Rationale and Research Question(s)
   Describe the origin of your inquiry? From what has your research question emerged? What question(s) are you asking?

<mark>SPRING</mark> 2023 Part Two: Annotated Bibliography
   Review the literature relevant to your question. What does it tell you about your area of inquiry? What tensions exist in the studies? How do they shape your question?

<mark>SPRING</mark> 2023 Part Three: Context and Instructional Change
   Describe your school, community, classroom and student population; and
   Describe the instructional change.

SPRING 2023 Part Four: Data Collection and Student Assessments

Describe how you will collect data to answer your research question(s). This should include includes formative and summative assessments designed to gather that data. Your data collection should include one survey and at least one interview—either informing the rationale for the research or supporting the research question directly.

- How might you consider collecting data on your students' achievement, engagement, and efficacy with your teaching and subject area?
- What sort of timeline might you follow to complete your project?
- How might you involve your students in the identification of a teaching/research challenge, in the identification of research questions, in data collection methods, in data analysis methods, and/or in sharing findings of your project?
- Who might your 5-7 potential case study students be?
- What will be your specific teaching interventions?
- What will be your primary data collection methods? How might you triangulate the data collection in your study?
- How might you ensure that your study is valid and your data collection techniques are reliable?
- How might you ensure that you have met any ethical challenges associated with conducting research on your teaching and followed your school's ethics policy regarding the collection of data?

SUMMER 2023 Part Five: Data Analysis

Describe how you analyzed your data.

SUMMER 2023 Part Six: Findings and Implications

What do the patterns and outliers have you noticed in your data? What does your data tell you about the implications of your project—for you as a teacher, for your colleagues, for teacher education, and for educational policy? What should happen in your classroom, based on the results of your project so far? With whom might you share your project methods and results? What sense have your students made of your project methods and results?

Assignment 2: Action Research FINAL Report —PBA Requirement (SUMMER)

This is the major assignment for this class and is the Performance Based Assessment (PBA) for the course. The final written report will include the sections above for a total of six sections. Points will also be earned for quality of writing and use of APA style in FINAL REPORT. See attached rubric.

- Part One: Rationale and Research Question(s)
- Part Two: Annotated Bibliography
- Part Three: Context and Instructional Change
- Part Four: Data Collection and Student Assessments
- Part Five: Data Analysis
- Part Six: Findings and Implications

Assignment 3: Action Research Poster Presentation (SUMMER)
You will present your action research at a symposium at the end of the summer course. This presentation will be based on your written final report (see above). ***For the symposium, you will prepare a conference-style PowerPoint and one-page handout for your audience.***

Other Requirements
Attendance:
- o This course operates with the assumption that knowledge is socially constructed and the most meaningful learning opportunities are those where you have the opportunity to offer and explore diverse perspectives with peers. To do this **it is expected that you attend all synchronous classes and complete all asynchronous assignments by the due dates assigned** as outlined within the syllabus.
- o Absence from class to observe a religious holiday, to serve jury duty, or to participate in required military service, and medical emergencies are exceptions to the above policy. If you anticipate being absent for any of these reasons, please make arrangements at least 48 hours in advance. In addition, **you are expected to be on time to class** each week unless advance notice has been provided to the instructor.

Participation:
- o Participation is calculated through a combination of attendance, in-class participation, and completion of asynchronous tasks.
- o **You are expected to contribute to both class and online discussions and activities** as well as genuinely listen to peers as they do the same. In addition, **you are expected to be prepared for each class**, which means having completed all assigned readings and tasks for that class.
- o When you are using cell phones, laptops, etc., please be respectful of your peers and your instructor and do not engage in activities that are unrelated to class. Such disruptions show a lack of professionalism and may affect your participation grade.
- o You must actively check Blackboard and their GMU email for communications from the instructor, class discussions, and/or access to course materials at least *three times* a week.

Grading

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

Professional Dispositions
See https://cehd.gmu.edu/students/polices-procedures/
Students are expected to exhibit professional behaviors and dispositions at all times. (See Elementary Education Program Handbook).

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 https://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 https://ds.gmu.edu/).
- Students must silence all sound emitting devices during class unless otherwise authorized by the instructor.

Campus Resources
- Support for submission of assignments to Tk20 should be directed to viahelp@gmu.edu or https://cehd.gmu.edu/aero/assessments. Questions or concerns regarding use of Blackboard should be directed to https://its.gmu.edu/knowledge-base/blackboard-instructional-technology-support-for-students/.
- For information on student support resources on campus, see https://ctfe.gmu.edu/teaching/student-support-resources-on-campus

Notice of mandatory reporting of sexual assault, interpersonal violence, and stalking:
As a faculty member, I am designated as a "Non-Confidential Employee," and must report all disclosures of sexual assault, sexual harassment, interpersonal violence, and stalking to Mason's Title IX Coordinator per University Policy 1202. If you wish to speak with someone confidentially, please contact one of Mason's confidential resources, such as Student Support and Advocacy Center (SSAC) at 703-380-1434 or Counseling and Psychological Services (CAPS) at 703-993-2380. You may also seek assistance or support measures from Mason's Title IX Coordinator by calling 703-993-8730, or emailing titleix@gmu.edu.

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

Class Schedule

Date	Readings	Topics and Activities	Assignment Due
Jan 25 *synchronous*	Mills ch. 1	- Introductions, course structure, syllabus - Why action research? - Problem, rationale, research questions	
Feb 1 *synchronous*	Mills ch. 3	- Using the literature to explore "problems / wonderings" and guide question construction	Draft: Part 1
Feb 8 *asynchronous/ individual conferences*	Mills ch. 4	- Literature searching and annotating	Annotated Bib Sources 1-5
Feb 15 *asynchronous*		- Literature searching and annotating	Annotated Bib Sources 6-10
Feb 22 *synchronous*		- Writing about context and change	
Mar 1 *asynchronous*		- Writing about context and change	Draft: Part 3
Mar 8 *synchronous*	Mills ch. 5 & 6	- Data Collection Techniques—Quantitative and Qualitative	
Mar 15 *Asynchronous*		- Refine data collection techniques	Draft: Part 4
Mar 22 *No class meeting*		**No Class – IT, data collection**	
Mar 29 *No class meeting*		**No Class – IT, data collection**	
Apr 5 *No class meeting*		**No Class – FCPS Spring Break**	
Apr 12 *No class meeting*		**No Class – IT, data collection**	
Apr 19 *No class meeting*		**No Class – IT, data collection**	
April 26 *synchronous*	Mills ch. 7	- Data Analysis Techniques - Constructing findings & implications	

May 3 *asynchronous*		- Refine data analyses	Draft: Part 5
May 10 *synchronous*	Mills ch. 9	- Preparing final papers and presentations	
May 17 *asynchronous*		- Preparing final papers and presentations	Draft: Part 6
May 24 *asynchronous*		- Preparing final papers and presentations	
May 31 *synchronous*		- Final Presentations Sharing Symposium	Final Report & Final Presentation

Note: Faculty reserves the right to alter the schedule as necessary, with notification to students.

Action Research Rubric

Levels/Criteria	6	4	2
Introduction: Describes the problem. Clear research question stated. Significance of problem is addressed. *InTASC 9*	The problem is described in detail. The description fully leads the reader to the research question. The research question is clear. It is measurable. 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 measurable. 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 measurable. The significance of the problem is unfocused and rambles. It is not clear why this is an important topic to study.
Annotated Bibliography: Research studies are used. Studies relate to the research question. *InTASC 9*	At least nine to ten research studies are used to support the literature review. These are from respectable journals. The studies are appropriate for the topic and research questions. Bibliography is in APA style with no errors.	Five to eight research studies are used. At least one of them is from a respectable journal. The studies are somewhat appropriate for the topic and research question. Bibliography follows APA style with no more than two errors.	Less than five research studies are used. The articles are not from respectable journals. The studies are not appropriate for the topic or research question.
Context and Intervention Provided: Setting Described. Population identified. Intervention. *InTASC 9*	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.

Levels/Criteria	6	4	2
Research Design: Design of study matches goals. Formative and Summative Assessments included. Data sources appropriate. *InTASC 9*	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. Most of the data sources are not appropriate for the research question. Data collected is not ethical.
Analysis of Data: Appropriate analysis for data collected. *InTASC 9*	The entire analysis of the data is appropriate. The information gathered addresses the research question.	Most of the analysis is appropriate. However, it is not clear how other parts were analyzed.	The analysis is inappropriate or not well-defined.
Findings and Implications: Findings are presented clearly. Implications from data proposed. Connects back to the findings. *InTASC 9*	Findings are presented in a clear format. Key findings are thoroughly discussed. Implications from the data are well-developed and fully discussed. The implications are connected back to the results of the data analysis.	Findings are presented in an appropriate format, although they could be clearer. Key findings are discussed in general terms. Implications from the data are adequately discussed. It is clear the student can interpret the findings. However, the implications are not tied back to the results.	Findings are not presented in a clear format or are absent. Key findings are not adequately discussed. 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.
Overall Style: Clear, concise writing. Grammar and	The writing is very clear and concise. The reader can understand what the problem is and how the research will	Most of the writing is clear and concise. There are one to three grammar and	Most of the reading is vague and unclear. The reader has difficulty seeing the connections between

Levels/Criteria	6	4	2
punctuation. Multiple levels of headings used to organize ideas. *InTASC 9*	address it. There are no grammar and punctuation errors. There is evidence of multiple levels of headings. These are used appropriately in all instances.	punctuation errors. There is evidence of multiple levels of headings. These are usually used appropriately.	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.