

George Mason University
College of Education and Human Development
Graduate School of Education: Elementary Education

ELED 559. DL4 – Research in Elementary Education
3 Credits, Spring 2022
Tuesdays, 4:30 – 7:10 PM, Online

Faculty

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Prerequisites/Corequisites

Admission into Elementary Education graduate program; capstone course for degree must be taken last in programmatic sequence.

University Catalog Course Description

Provides an understanding of research paradigms utilizing systematic evidence to improve practice and further skills in assessment of learning outcomes. Emphasizes the linkage of research and practice and making instructional decisions based on systematically collected data.

Course Overview

Students in this course will participate in individual and group activities that focus on the integration of technology into work with children in diverse settings through use of computers and mobile devices. Students will also participate in large group discussions led by the instructor and in small group discussions and activities with their classmates.

Course Delivery Method

This course will be delivered online (76% or more) using both synchronous and asynchronous classes (designated in the **Class Schedule** section) format via Blackboard Learning Management system (LMS) housed in the MyMason portal. 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 starting on January 22nd.

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.

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 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 three 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. These meetings will take place 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 INTASC professional standards:

- 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.
- 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.
- 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 these aspects of the discipline accessible and meaningful for learners to assure mastery of the content.
- 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.
- 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.

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.

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.

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.). Boston, MA: Pearson. (Previous editions may be used.)

A list of required readings is available on MyMason. Some of the articles are available on GMU's e-reserves which can be accessed within Blackboard.

Course Performance Evaluation

Students are expected to submit all assignments on time in the manner outlined by the instructor (e.g., Blackboard or via other website as appropriate for the individual assignment).

COURSE ASSIGNMENTS:

Assignment	Points
1. Attendance and Participation [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]	20
2. Component Drafts: [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10] a. Part One: Rationale and Research Question(s) b. Part Two: Literature Review c. Part Three: Context and Instructional Change d. Part Four: Data Collection and Student Assessment e. Part Five: Data Analysis f. Part Six: Findings and Implications	5 points EACH (30 total)
3. Final Action Research Report (PBA) [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]	30
4. Action Research Poster and Presentation [Outcomes 1, 2, 3, 7]	20
Total	100

1. Attendance and Participation Expectations (20 points)

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 scheduled synchronous classes** outlined within the syllabus. 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.

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.

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.

You must actively check the course Blackboard site and your GMU email for communications from the instructor, class discussions, and/or access to course materials at least *twice* a week.

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. If you do not have a 7th Edition APA manual, the OWL at Purdue is an excellent resource.
<http://owl.english.purdue.edu/owl/resource/560/01/>

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

Assignments should be submitted electronically via Blackboard and are due by class time on the date indicated in an appropriate format (i.e., Word document). It is expected that all class assignments will be submitted on time to the correct location; therefore, **late assignments will not receive full credit.** *Assignments turned in late or in an inappropriate format will be eligible for only 50% of the available points. If there is an emergency, contact me as soon as possible.*

Revise & Resubmit: If a student submits an assignment that may indicate limited understanding or confusion about the content as indicated by scoring on the assignment rubric, the instructor may request for a student to revise and resubmit the assignment based on feedback. This is an opportunity for a student to clarify understanding of the content and demonstrate growth. In most cases, the original assignment and revision will be averaged for a new final grade. The instructor

will communicate with the student to determine a reasonable timeframe within which to complete the revision.

Note: I reserve the right to add, alter, or omit any assignment as necessary during the course of the semester. You will always receive advanced notice of any modifications.

2. Component Drafts (1-6) (30 points)

These sections will be submitted throughout the semester for formative feedback. These drafts **MUST** be submitted by their syllabus due dates. They are worth 5 points each.

Part One: Rationale and Research Question(s) (due Feb 8)

Part Two: Annotated Bibliography (due Feb 22)

Part Three: Context and Instructional Change (due Feb 15)

Describe your school, community, classroom and student population; and

Describe the instructional change

Part Four: Data Collection and Student Assessments (due Mar 1)

Describe how you collected data to answer your research question(s). This includes formative and summative assessments designed to gather that data.

Part Five: Data Analysis (due Apr 12)

Describe how you analyzed your data

Part Six: Findings and Implications (due Apr 19)

Describe your findings and their implications for teaching and learning

3. Action Research FINAL Report (30 points) —PBA Requirement –DUE May 6th

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 and a final implications section 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

Final Report must be submitted via Blackboard by May 6th, 11:59pm

4. Action Research Presentation (20 points)

You will present your action research. This presentation will be based on your written final report (see above). You will prepare a conference-style roundtable presentation and one-page handout for distribution to your audience. **Due May 3rd.**

Course Policies

All assignments must be written in Times New Roman 12 point font, double-spaced, and follow APA (7th edition) formatting guidelines (see https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_style_introduction.html for more information). **Assignments should be submitted electronically via Blackboard and are due by class time on the date indicated in an appropriate format (i.e., Word document).** Assignments turned in late or in an inappropriate format will be eligible for only 50% of the available points. If there is an emergency, contact me as soon as possible. **All assignments should be submitted with the following naming convention: student's last name and the title of the assignment.** For example: Sprague_Rational.

Grading Scale

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

Professional Dispositions

Students are expected to exhibit professional behaviors and dispositions at all times. See <https://cehd.gmu.edu/students/policies-procedures/>

Class Schedule

Note: Calendar is tentative and may be modified in line with course needs.

Date	Readings	Topics and Activities	Assignments Due
1/25 Synchronous		<i>Introduction to Action Research</i> <ul style="list-style-type: none">• Inquiry as a part of teaching, not apart from it (surfacing potential benefits and challenges)• How does academic research differ from action research?	Module 1 Online work: Searching for articles, APA, CBIT Training Module 2 Online Work: What is Action Research?

2/1 Synchronous	Mills Ch. 1	<i>Crafting and reflecting on your teacher research</i> <ul style="list-style-type: none"> • Wonderings and questions • Writing your introduction and research question • The 5 Whys 	Module 3 Online Work: Creating your Rationale and Problem Statement
2/8 Synchronous	Mills Ch. 3	<i>Reviewing the Literature</i> Connecting academic and action research <i>Ethics in Action Research</i>	Due Part 1: Rationale and Research Module 4 Online Work: Ethics in Research
2/15 Asynchronous		<i>Designing your study</i> <ul style="list-style-type: none"> • Introduction: Types of Research Designs • Developing the action plan 	Due Part 3: Context and Change Module 5 Online Work: Quantitative Data and Survey Questions
2/22 Synchronous	Mills Ch. 2	<i>Qualitative Data Collection, Designing Interview Questions</i> Matching methods to questions (chart) <ul style="list-style-type: none"> • Surfacing bias, being open 	Due Part 2: Annotated Bibliography Summarize at least five and no more than ten research articles based on the chart provided in Blackboard. Submit this and a list of articles related to your action research topic in Blackboard, under Assessments. Module 6 Online Work: Qualitative Data
3/1 Synchronous	Mills Ch. 4, 5 (Quant) App. B	<i>Quantitative Data Collection, Designing Surveys</i> <ul style="list-style-type: none"> • Matching methods to questions (chart) • What makes a good survey? 	Due Part 4: Data Collection
3/8 Synchronous	Mills Ch.4, 5 (Qual)	<i>Analyzing Quantitative Data</i>	If the Data Collection is approved, begin collecting data for your action research study. Module 7 Online Work: Quantitative Data Analysis

3/15		No Class – Spring Break	
3/22 Synchronous	Mills Ch. 5, 6	<i>Analyzing Qualitative Data</i> <ul style="list-style-type: none"> • Interviews and Focus Groups 	Continue collecting data for your action research study. Module 8 Online Work: Qualitative Data Analysis
3/29 Asynchronous		<i>Working on collecting and analyzing data.</i>	Continue collecting data for your action research study. Begin analyzing data.
4/5 Asynchronous	Mills Ch.7	<i>Working on collecting and analyzing data.</i>	Continue analyzing data. Write up results.
4/12 Synchronous	Mills Ch.8, 9 App. C	<i>Organizing and Displaying Findings</i> <ul style="list-style-type: none"> • Summarizing data 	Due Part 5: Data Analysis
4/19 Synchronous		<i>Drawing Implications from Findings</i> <ul style="list-style-type: none"> • Parts a, b, c of Data Analysis section 	Due Part 6: Findings and Implications
4/26 Asynchronous		<i>Workshopping your presentation and handouts</i>	Final Handout for presentation posted in Blackboard.
5/3 Synchronous		<i>Action Research Symposium</i>	Due Friday 5/6 Action Research Report Due (PBA) submitted to Blackboard under Assessments.

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

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 VIA 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 “Responsible Employee,” and must report all disclosures of sexual assault, 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 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/> .

For additional information on the College of Education and Human Development, School of Education, please visit our website [See <https://education.gmu.edu/>]

EMERGENCY PROCEDURES

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

Action Research Rubric

Levels/Criteria	5	3	1
<p>Introduction: Describes the problem. Clear research question stated. Significance of problem is addressed.</p> <p><i>InTASC 9</i> <i>ACEI 5.1</i></p>	<p>The problem is described in details. 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.</p>	<p>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.</p>	<p>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.</p>
<p>Annotated Bibliography: Research studies are used. Studies relate to the research question.</p> <p><i>InTASC 9</i> <i>ACEI 5.1</i></p>	<p>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.</p>	<p>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.</p>	<p>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.</p>
<p>Context and Intervention Provided: Setting Described. Population identified. Intervention.</p> <p><i>InTASC 9</i> <i>ACEI 5.1</i></p>	<p>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.</p>	<p>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.</p>	<p>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.</p>

Levels/Criteria	5	3	1
<p>Research Design: Design of study matches goals. Formative and Summative Assessments included. Data sources appropriate.</p> <p>InTASC 9 ACEI 5.1</p>	<p>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.</p>	<p>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.</p>	<p>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.</p>
<p>Analysis of Data: Appropriate analysis for data collected.</p> <p>InTASC 9 ACEI 5.1</p>	<p>The entire analysis of the data is appropriate. The information gathered addresses the research question.</p>	<p>The majority of the analysis is appropriate. However, it is not clear how other parts were analyzed.</p>	<p>The analysis is inappropriate or not well-defined.</p>
<p>Findings and Implications: Findings are presented clearly. Implications from data proposed. Connects back to the findings.</p> <p>InTASC 9</p>	<p>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.</p>	<p>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 is able to interpret the findings. However, the implications are not tied back to the results.</p>	<p>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.</p>

Levels/Criteria	5	3	1
ACEI 5.1			
<p>Overall Style: Clear, concise writing. Grammar and punctuation. Multiple levels of headings used to organize ideas.</p> <p>InTASC 9</p> <p>ACEI 5.1</p>	<p>The writing is very clear and concise. The reader can understand what the problem is and how the research will address it.</p> <p>There are no grammar and punctuation errors.</p> <p>There is evidence of multiple levels of headings. These are used appropriately in all instances.</p>	<p>The majority of the writing is clear and concise.</p> <p>There are one to three grammar and punctuation errors.</p> <p>There is evidence of multiple levels of headings. These are used appropriately in the majority of instances.</p>	<p>The majority of the reading is vague and unclear. The reader has difficulty seeing the connections between the various sections.</p> <p>There are four or more grammar and punctuation errors.</p> <p>There is no evidence of multiple levels of headings or these are used inappropriately in the majority of instances.</p>