

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

**Course**

EDCI 559: *Research and Assessment in Elementary Education*  
Section 009, 3 credits  
Spring 2018  
Thursdays 4:30-7:10; [Virginia Run Elementary](#)

**Instructor**

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**Prerequisites**

Admission into elementary education graduate 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.

**Nature of Course Delivery**

This course includes multiple instructional strategies and formats including face to face and asynchronous online class sessions. 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.

***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.***

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.

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.

## LEARNING OUTCOMES

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

Learning Outcomes	NBPTS Propositions	NETS Standards	InTASC Standards	ACEI Standards
1	1, 3	V	2, 3, 4, 5, 6, 9, 10	3.1, 3.2, 3.3, 3.4, 4.0, 5.1
2	1, 3, 4	IV & V	9, 10	5.1
3	1, 3, 4	IV & V	6, 9	4.0, 5.1
4	4	V	6,	4.0
5	4	V	6	4.0
6	4	V	6, 9, 10	4.0, 5.1
7	1, 3, 4	IV & V	6, 7, 9	3.1, 4.0, 5.1
8	1, 3	IV & V	6	4.0
9	4	IV & V	6, 7, 9	3.1, 4.0, 5.1
10	4	V	4	2.1, 2.6

## PROFESSIONAL STANDARDS

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

### ❖ ACEI Standards

**Standard 3.1: Integrating and applying knowledge for instruction**—Candidates plan and implement instruction based on knowledge of students, learning theory, connections across the curriculum, curricular goals, and community

**Standard 3.2: Adaptation to diverse students**—Candidates understand how elementary students differ in their development and approaches to learning, and create instructional opportunities that are adapted to diverse students

**Standard 3.3: Development of critical thinking and problem solving**—Candidates understand and use a variety of teaching strategies that encourage elementary students’ development of critical thinking and problem solving

**Standard 3.4: Active engagement in learning**—Candidates use their knowledge and understanding of individual and group motivation and behavior among students at the K-6 level to foster active engagement in learning, self-motivation, and positive social interaction and to create supportive learning environments

**Standard 4.0: Assessment for instruction**—Candidates know, understand, and use formal and informal assessment strategies to plan, evaluate and strengthen instruction that will promote continuous intellectual, social, emotional, and physical development of each elementary student.

**Standard 5.1 Professional growth, reflection, and evaluation**—Candidates are aware of and reflect on their practice in light of research on teaching, professional ethics, and resources available for professional learning; they continually evaluate the effects of their professional decisions and actions on students, families and other professionals in the learning community and actively seek out opportunities to grow professionally.

#### ❖ 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.

❖ **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.

❖ **National Technology Standards**

**Standard IV:** Teachers apply technology to facilitate a variety of effective assessment and evaluation strategies.

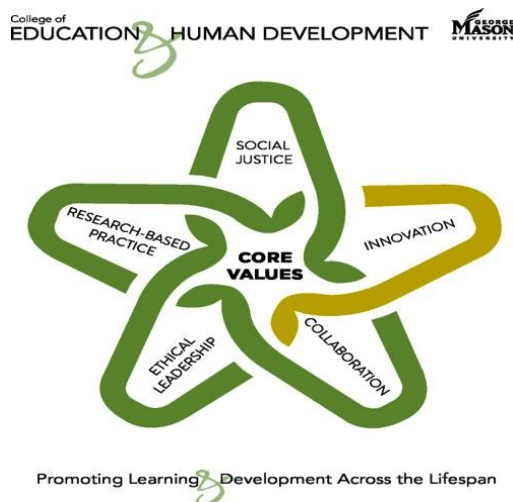
**Standard V:** Teachers use technology to enhance their productivity and professional practice.

❖ **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.

**CORE VALUES COMMITMENT**

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/>



## GMU POLICIES AND CAMPUS 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 <http://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 <http://ods.gmu.edu/>).

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

### CAMPUS RESOURCES

Support for submission of assignments to Tk20 should be directed to [tk20help@gmu.edu](mailto:tk20help@gmu.edu) or <https://cehd.gmu.edu/aero/tk20>. Questions or concerns regarding use of Blackboard should be directed to <http://coursessupport.gmu.edu/>.

- For information on student support resources on campus, see <https://ctfe.gmu.edu/teaching/student-support-resources-on-campus>

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

### ADDITIONAL PROGRAM INFORMATION AND REQUIREMENTS

To participate in this course, students will need to satisfy the following technical requirements:

- **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.
- **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.

- High-speed Internet access with a standard up-to-date browser, either Internet Explorer or Mozilla Firefox is required (note: Opera and Safari are not compatible with Blackboard).
- Students must maintain consistent and reliable access to their GMU email and Blackboard, as these are the official methods of communication for this course.
- 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://windows.microsoft.com/en-us/windows/downloads/windows-media-player/>
  - Apple Quick Time Player: [www.apple.com/quicktime/download/](http://www.apple.com/quicktime/download/)

### 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).

### REQUIRED TEXT

Mills, G. E. (2018). *Action research: A guide for the teacher researcher* (6<sup>th</sup> ed.). New York, NY: Pearson.

### COURSE PERFORMANCE EVALUATIONS:

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

### TK20 Performance-Based Assessment Submission Requirement

Every student registered for any Elementary Education course with a required performance-based assessment is required to submit these assessments, Action Research Report to Tk20 through Blackboard (regardless of whether the student is taking the course as an elective, a onetime course or as part of an undergraduate minor). Evaluation of the performance-based assessment by the course instructor will also be completed in Tk20 through Blackboard. Failure to submit the assessment to Tk20 (through Blackboard) will result in the course instructor reporting the course grade as Incomplete (IN). Unless the IN grade is changed upon completion of the required Tk20 submission, the IN will convert to an F nine weeks into the following semester.

### ASSIGNMENTS

Assignment	Points
<b>1. Attendance and Participation</b> [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]	20
<b>2. Component Drafts:</b> [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10] a. <b>Part One:</b> Rationale and Research Question(s) b. <b>Part Two A:</b> Annotated Bibliography 1 c. <b>Part Two B:</b> Annotated Bibliography 2 d. <b>Part Three:</b> Context and Instructional Change e. <b>Part Four:</b> Data Collection and Student Assessment f. <b>Part Five:</b> Data Analysis g. <b>Part Six:</b> Findings and Implications	5 points EACH (35 total)
<b>3. Final Action Research Report (PBA)</b> [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]	30
<b>4. Action Research Poster and Presentation</b> [Outcomes 1, 2, 3, 7]	15
<b>Total</b>	<b>100</b>

### **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 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 their 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 6th 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](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.*

*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) (35 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 Jan 24)

Part Two A: Annotated Bibliography #1 (due Feb 7)

Part Two B: Annotated Bibliography #2 (due Feb 21)

Part Three: Context and Instructional Change (due Feb 28)

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

Describe the instructional change

Part Four: Data Collection and Student Assessments (due March 7)

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 May 16)

Describe how you analyzed your data

Part Six: Findings and Implications (due May 30)

Describe your findings and their implications for teaching and learning

## 3. Action Research FINAL Report (30 points) — TK20 Requirement – DUE June 3rd

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 TK20 by June 3<sup>rd</sup>, 11:59pm**

## 4. Action Research Poster Presentation (15 points)

You will present your action research. This presentation will be based on your written final report (see above). You will participate with other sections of EDCI 559 in a poster session. You will prepare a conference-style poster and one-page handout for distribution to your audience. Date and location of presentation TBA.

### Grading Scale

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

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

<b>Date</b>	<b>Readings</b>	<b>Topics and Activities</b>	<b>Assignment Due</b>
<b>1/10</b>	▪ Mills Ch 1: What is Action Research?	<b>F2F</b> - Introductions and Syllabus - Review Teacher Research - Critical Friends Groups - Rationale and Research Question(s)	
<b>1/17</b>	▪ Mills Ch 3: Deciding on an Area of Focus	<b>ONLINE</b> - <i>Work on Rationale &amp; Research Question(s)</i>	
<b>1/24</b>	▪ Mills Ch. 4: Review of Related Literature	<b>F2F</b> - Reviewing the Literature	Part 1: Rationale & Research Question(s)
<b>1/31</b>		<b>ONLINE</b> - <i>Work on reviewing the literature</i>	
<b>2/7</b>	▪ Mills Ch 5: Data Collection techniques	<b>F2F</b> - Context and Change overview - Designing your study - Qualitative Data Collection and Analysis	Part 2A: Annotated Bib: 5 research articles related to your topic
<b>2/14</b>		<b>ONLINE</b> - <i>Work on reviewing the literature</i> - <i>Work on Context and Change</i>	
<b>2/21</b>	▪ Mills Ch 6: Data Collection considerations	<b>F2F</b> - Quantitative Data Collection and Analysis - Validity, Reliability, Generalizability	Part 2B: Annotated Bib: 5 research articles related to your topic
<b>2/28</b>		<b>ONLINE</b> - <i>Work on Context and Change</i>	Part 3: Context and Change
<b>3/7</b>		<b>ONLINE</b> - <i>Work with mentor teacher on study</i>	Part 4: Data Collection

3/14		No Class – IT, data collection	
3/21		No Class – IT, data collection	
3/28		No Class – IT, data collection	
4/4		No Class – IT, data collection	
4/11		No Class – FCPS Spring Break	
4/18	▪ Mills Appendix 1: Elizabeth McPolin	<b>ONLINE</b> - <i>Work to organize data</i>	
4/25	▪ Mills Ch. 7 Data analysis and interpretation	<b>F2F</b> - Analyzing data	
5/2		<b>ONLINE</b> - <i>Work on data analysis</i>	
5/9		<b>ONLINE</b> - <i>Work on data analysis</i>	
5/16	▪ Mills Ch. 9 Writing up action research	<b>F2F</b> - Preparing final research report	Part 5: Data Analysis
5/23		<b>ONLINE</b> - <i>Work on Findings, Implications, and Presentation</i>	
5/30		<b>ONLINE</b> - <i>Work on Findings, Implications, and Presentation</i>	Part 6: Findings
<b>Date TBA</b>		<b>F2F</b> - Sharing Symposium (Date and location TBD)	June 3: Final Report

**Action Research Rubric**

Levels/Criteria	3	2	1
<p>Introduction: Describes the problem. Clear research question stated. Significance of problem is addressed. <b>InTASC 9</b> <b>ACEI 5.1</b></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 measureable. 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 measureable. 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 measureable. 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. <b>InTASC 9</b> <b>ACEI 5.1</b></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. <b>InTASC 9</b> <b>ACEI 5.1</b></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>
<p>Research Design: Design of study matches goals. Formative and Summative Assessments included. Data sources appropriate. <b>InTASC 9</b> <b>ACEI 5.1</b></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</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</p>

