

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

**Course**

EDCI 559: *Research and Assessment in Elementary Education*  
Section 004, 3 credits  
Spring 2017  
Tuesday 4:30-7:10; Daniels Run ES, Room C239

**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.**

**Technical Requirements**

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

- 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/)

## COURSE EXPECTATIONS

**COURSE WEEK:** Our course week will begin on Thursdays 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 *twice* a week.

**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:** Learners who require effective accommodations to insure accessibility must be registered with George Mason University Disability Services.

**WRITTEN WORK:** All assignments must be written in Times New Roman 12 point font, double-spaced, and follow APA (6th edition) formatting guidelines (see <http://owl.english.purdue.edu/owl/resource/560/01/> for more information). Assignments should be submitted electronically via email and are due by the class 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: Groth\_LitReview**

**ABSENTEE POLICY:** I understand that we all get sick and busy. However, if you are absent more than once, I will deduct points from your class participation grade as a result. You cannot contribute to class if you do not attend.

**IN CLASS TECHNOLOGY POLICY:** 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.

## 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 Standards

**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.

**REQUIRED TEXT**

Mills, G. E. (2014). *Action research: A guide for the teacher researcher* (5<sup>th</sup> ed.). Boston, MA: 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 and Critical Incident Reflection, 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
1. Readings and Activities (in-class and online) [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]	20
2. Critical Incident Reflection [Outcomes 1, 8, 10]	20
3. Action Research Report (PBA) [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]	35
4. Quantitative Data Analysis [Outcomes 4, 5, 6]	10
5. Qualitative Data Analysis [Outcomes 4, 5, 6]	10
6. Action Research Presentation [Outcomes 1, 2, 3, 7]	5
<b>Total</b>	<b>100</b>

**1. Reading and Activities (In-Class and Online) (20 points)**

I expect that you will complete all assigned readings and tasks 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 and tasks. In the event of an emergency, I must be notified of your absence in advance of class.

**2. Critical Incident Reflection (20 points) (Due February 5)—a TK20 Requirement**

*Rationale:* According to John Dewey (1933) reflection is an active, persistent, and careful consideration of any belief or supposed form of knowledge in light of the grounds supporting it and future conclusions to which it tends. Critical reflection delves even more deeply. Critical reflection allows teachers to make teaching decisions on the basis of a conscious awareness and careful consideration of the assumptions on which the decisions are based, and the technical, educational, and ethical consequences of those decisions. The end result of critical reflection for the individual is cognitive change (Yost et al., 2011).

Van Manen (1977) describes three hierarchical levels of reflection:

- **Technical reflection** – focuses on effective application of skills and knowledge in the classroom so reflection focuses on analyzing the effects of strategies used.

- **Practical reflection** – focuses on the assumptions underlying a specific practice and the consequences of that practice on student learning. It implies the assessment of the educational implications of actions and beliefs.
- **Critical reflection** – includes emphases from technical and practical reflection and goes deeper. It focuses on questioning moral and ethical dimensions of decisions related, directly or indirectly, to the classroom. Teachers make connections between situations they encounter and the broader social, political, and economic forces that influence those events.

*Assignment: Video analysis and Written Reflection*

This assignment requires you to reflect at all three levels. Sometime during one of the lessons you teach during your internship, record yourself teaching a lesson. **Prior to recording, be sure to obtain appropriate permissions from school system, school, and families as needed in your specific context.**

*Part 1 – Holistic Reflection* – Directly following the lesson presentation, write a reflective statement that includes technical, practical, and critical reflections.

*Part 2 – Critical Incident Analysis* – From your recorded lesson, select a segment (~5-10 minutes in length) that contains a critical incident, **an incident that did not go as anticipated, causing you to adjust and/or rethink your instruction.**

The following should be used to guide your description of and reflection on the critical teaching incident captured within your videotaped lesson:

- Provide a brief description of what is happening in the selected clip.
- Explain why this particular segment was selected.
- Briefly describe what went well and what aspects of the lesson you would like to revise.
- Propose alternative ways of handling the critical incident. You should draw upon your readings, knowledge of best practice, observations, and course work for support.
- Summarize what was learned and how it will impact your future teaching.

Students will (a) post the critical incident video to Edthena, and turn in (b) the lesson plan for the recorded lesson, (c) the holistic reflection, and (d) critical incident video written analysis on Blackboard.

### **3. Action Research Report (35 points) (Final due June 6)—TK20 Requirement**

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 seven sections below. These sections will be submitted throughout the semester for formative feedback from peers and your instructor. These drafts **MUST** be submitted by their syllabus due dates. Not doing so will affect your Readings and Activities (in class and online) grade. Points will also be earned for quality of writing and use of APA style. See attached rubric.

- Part One: Rationale and Research Question(s) (due Feb 12)
- Part Two: Annotated Bibliography Literature Review (due Feb 26)
- Part Three: Context and Instructional Change (due March 5)
  - Describe your school, community, classroom and student population; and
  - Describe the instructional change
- Part Four: Data Collection and Student Assessment (due March 12)
  - 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 21)
  - Describe how you analyzed your data
- Part Six: Findings (due May 28)
  - Describe your findings and their implications for teaching and learning
- Part Seven: Implications (due May 28)
  - Describe the implications of your study for your teaching

**Final Report must be submitted via TK20 on June 6<sup>th</sup>**

**4. Qualitative Data Analysis (10 points) (Due March 9 )**

Groups of students will analyze qualitative data.

**5. Quantitative Data Analysis (10 points) (Due March 9)**

Groups of students will analyze quantitative data.

**6. Action Research Presentation (5 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 roundtable session. You will prepare a one-page handout for distribution to your audience.

**Grading Scale**

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

Students are expected to exhibit professional behaviors and dispositions at all times. (See Elementary Education Program Handbook).

**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>Deliverables</b>
<b>1/19</b>		<b>F2F</b> <ul style="list-style-type: none"> <li>• Introductions and Syllabus</li> <li>• Review Critical Reflection</li> <li>• Review Teacher Research</li> <li>• Critical Friends Groups</li> <li>• What is Action Research               <ul style="list-style-type: none"> <li>- Inquiry as a part of teaching not apart from teaching</li> </ul> </li> <li>• Academic research vs. action research</li> </ul>	
<b>1/26</b>	Mills ch. 1, 2, & articles	<b>Online</b> <ul style="list-style-type: none"> <li>• Work on video analysis/critique</li> <li>• Research ethics</li> <li>• Searching databases</li> <li>• APA</li> <li>• Compile ideas for research questions</li> </ul>	
<b>2/2</b>	Mills, Ch. 3	<b>F2F</b> <ul style="list-style-type: none"> <li>• Rationale and Research Questions               <ul style="list-style-type: none"> <li>- Wonderings and questions</li> <li>- Writing your introduction and research question(s)</li> </ul> </li> <li>• Reviewing the literature               <ul style="list-style-type: none"> <li>- The five whys</li> <li>- Connecting academic and action research</li> </ul> </li> </ul>	<b>DUE 2/5: Critical Incident Reflection</b>

2/9	Mills ch. 4, 6 (Qual) Articles **	<b>F2F</b> <ul style="list-style-type: none"> <li>Qualitative Data Collection and Analysis</li> <li>Matching methods to questions (chart)</li> <li>Interview &amp; Focus Groups</li> <li>Have interview questions approved before leaving class</li> </ul>	<b>DUE 2/12:</b> Part 1: Rationale and Research Question
2/16	Mills, Ch. 5 Articles**	<b>Online</b> <ul style="list-style-type: none"> <li>Work on annotated bibliography</li> <li>Qual data collection</li> </ul>	<b>DUE 2/19:</b> Annotated Bibliography: chart 5 research articles related to your topic
2/23	Mills, Ch. 4 & 6 (Quant) Appendices B & C Articles**	<b>F2F</b> <ul style="list-style-type: none"> <li>Quantitative Data Collection &amp; Analysis</li> <li>Matching methods to questions (chart)</li> <li>Designing Quantitative Trials</li> <li>Survey Design</li> </ul>	<b>DUE 2/26:</b> Part 2: Annotated Bibliography (including 8-10 articles)
3/2	Mills, Ch. 7	<b>F2F</b> <ul style="list-style-type: none"> <li>Evaluating the quality of Action Research</li> <li>Quantitative and Qualitative Trial Analyses</li> </ul>	<b>DUE 3/5:</b> Part 3: Context and Change
3/9	Mills ch. 8 & 9 Appendix A	<b>F2F</b> <ul style="list-style-type: none"> <li>Organizing and Displaying Findings</li> <li>Ensuring Trustworthiness</li> <li>Validity, Reliability, Generalizability</li> <li>Qual and Quant Trial Sharing</li> </ul>	<b>DUE 3/12:</b> Part 4: Data Collection Plan And Data Analysis Plan
3/16		<b>No Class – Mason Spring Break</b>	
3/23		<b>Individual Conferences</b>	
3/30		<b>No Class – IT, data collection</b>	
4/6		<b>No Class – IT, data collection</b>	
4/13		<b>No Class – FCPS Spring Break</b>	
4/20		<b>No Class – IT, data collection</b>	
4/27		<b>No Class – IT, data collection</b>	
5/4	Mills, Ch. 8	<b>F2F</b> <ul style="list-style-type: none"> <li>Preparing final research report</li> <li>Preparing presentation</li> <li>Drawing implications</li> </ul>	<b>DUE:</b> Bring your data
5/11		<b>Online</b> - Analyzing data	



5/18		<b>F2F</b> <ul style="list-style-type: none"> <li>Findings and Implications</li> </ul>	<b>DUE 5/21:</b> Part 5: Data Analysis
5/25		<b>F2F</b> <ul style="list-style-type: none"> <li>Individual Conferences</li> </ul>	<b>DUE 5/28:</b> Part 6: Findings Part 7: Implications
6/1		<b>Online</b> <ul style="list-style-type: none"> <li>Work on final presentation and handouts</li> </ul>	
6/6 Tues		<b>F2F</b> <ul style="list-style-type: none"> <li>Sharing Symposium</li> <li>Mason Location TBD</li> </ul>	<b>DUE 6/6:</b> Final Report

### 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 <http://oai.gmu.edu/the-mason-honor-code/>).

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/>.

The Writing Center 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/>).

The 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/>).

The Student Support & Advocacy Center staff helps students develop and maintain healthy lifestyles through confidential one-on-one support as well as through interactive programs and resources. Some of the topics they address are healthy relationships, stress management, nutrition, sexual assault, drug and alcohol use, and sexual health (see <http://ssac.gmu.edu/>). Students in need of these services may contact the office by phone at 703-993-3686. Concerned students, faculty and staff may also make a referral to express concern for the safety or well-being of a Mason student or the community by going to <http://ssac.gmu.edu/make-a-referral/>.

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

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

### Action Research Rubric

Levels/Criteria	3	2	1
Introduction: Describes the problem. Clear research question stated. Significance of problem is addressed.  <i>InTASC 9 ACEI 5.1</i>	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.
Annotated Bibliography: Research studies are used. Studies relate to the research question.  <i>InTASC 9 ACEI 5.1</i>	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	The setting is fully described. It includes, size of school, location,	The setting is adequately described. Most information is included,	Setting is not included or inadequately described. It is not clear where the

<p>Described. Population identified. Intervention.</p> <p><b><i>InTASC 9 ACEI 5.1</i></b></p>	<p>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>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>research will be conducted.</p> <p>Population is not included or inadequately described. It is not clear who will be participating in the research study.</p> <p>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.</p> <p>Data sources appropriate.</p> <p><b><i>InTASC 9 ACEI 5.1</i></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.</p> <p>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.</p> <p>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.</p> <p>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><b><i>InTASC 9 ACEI 5.1</i></b></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</p>	<p>Findings are presented</p>	<p>Findings are presented in</p>	<p>Findings are not</p>

<p>Implications: Findings are presented clearly. Implications from data proposed. Connects back to the findings.</p> <p><b><i>InTASC 9 ACEI 5.1</i></b></p>	<p>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>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>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>
<p>Overall Style: Clear, concise writing. Grammar and punctuation. Multiple levels of headings used to organize ideas.</p> <p><b><i>InTASC 9 ACEI 5.1</i></b></p>	<p>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.</p>	<p>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.</p>	<p>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.</p>