

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

Course

ELED 559: *Research and Assessment in Elementary Education*
Section DL2
Spring 2022 (1 cr); Summer 2022 (2 cr)
Thursdays 4:30 – 7:10pm

Instructor

Mandy Bean
Office Hours: By appointment
Thompson 1406
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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 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 January 18th, 2021.

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 in order 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. Your research questions and methodology will be the focus of the course and will drive readings, classroom discussions, peer review activities, reflections, and the action research project that you complete.

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. In general, we will engage in four activities across the course: 1) Mini-lectures, activities, and discussions related to research methods led by the instructor and course participants and supported by course text and selected readings 2) Discussions of the week's readings led by the instructor and course participants 3) Class and peer review group meetings in which students

concentrate on selected readings, provide feedback and support for each other's writing and research processes, and share how they have presented their research efforts to authentic audiences 4) Individual, small group, and whole group meetings to discuss research efforts.

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. The purpose of the draft research project sections and the peer review sessions will be to support completion of our action research projects and provide opportunities for us to learn about and analyze methods and techniques of 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/

COURSE EXPECTATIONS

COURSE WEEK: Our class will meet 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 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: Learners who require effective accommodations to insure accessibility must be registered with George Mason University Disability Services.

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

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 TEXT

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

RECOMMENDED TEXT

American Psychological Association (2019). *Publication manual* (7th ed.). American Psychological Association.

*Note: APA guidelines are available online at <http://owl.english.purdue.edu/owl/resource/560/01/>

WRITTEN WORK: All assignments must be written in Times New Roman, Calibri, or Arial, 12 point font, double-spaced, and follow APA (7th edition) formatting guidelines (see <http://owl.english.purdue.edu/owl/resource/560/01/> for more information).

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

All assignments and online activities are to be completed by the date listed in the syllabus.

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 will have 1 point deducted for each day it is late; this policy will be strictly followed.**

ASSIGNMENTS SPRING 2022- 1 credit

Assignment	Points
1. Attendance and Participation (includes google doc assignments due in class) [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]	7 sessions 5 points EACH

2. Component Drafts: [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10] <ul style="list-style-type: none"> a. Research Question with paragraph on “why it matters to you” (a mini-rationale) <ul style="list-style-type: none"> • Due Feb 13 b. Alphabetical list of 10 peer-reviewed articles <ul style="list-style-type: none"> • Due Feb 20 c. Context of your School and Classroom and Instructional Change <ul style="list-style-type: none"> • Due Feb 27 d. Annotated Bibliography Chart (choose 8 articles) <ul style="list-style-type: none"> • Due Mar 6 e. Data Collection <ul style="list-style-type: none"> • Due Mar 13 f. Data Analysis <ul style="list-style-type: none"> • Due Apr 24 	6 assignments 5 points EACH
TOTAL	65 points

ASSIGNMENTS SUMMER 2022- 2 credits

1. Attendance and Participation (includes meetings with Dr. Bean) [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]	10 points 5 points EACH
2. Component Draft: [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10] <ul style="list-style-type: none"> a. Findings <ul style="list-style-type: none"> • Due May 15 	5 points
3. Final Action Research Report (PBA) [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10] <p>This final paper includes all the above sections plus Rationale/Introduction and Implications.</p> <ul style="list-style-type: none"> • Due June 5 	42
4. Action Research Presentation [Outcomes 1, 2, 3, 7] <ul style="list-style-type: none"> • Due June 2 	18
TOTAL	75 points

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 will have 1 point deducted for each day it is late; this policy will be strictly followed.** All assignments must be

submitted on the due date stated in the syllabus and should be submitted in the format outlined below.

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.

Assignments

Attendance and Participation Expectations

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 unless advance notice has been provided to the instructor.**

You are expected to contribute to both in class 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.

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**.

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.

Component Drafts

These sections **must be submitted by their due dates** throughout the semester for formative feedback.

○ Research Question with paragraph on “why it matters to you” (a mini-rationale)

Write the research question in the correct format (provided in class). Underneath it, write a paragraph with the following questions as a guide:

- describe the origin of your inquiry – how did it come to your attention as a research idea?
- why does this matter to your classroom? Your school? Your students? And... the broader educational community

○ Alphabetical List of 10 peer-reviewed articles in APA format

Review academic literature relevant to your question. Use ERIC or other platforms for searching. More information provided in class. Use the APA, 7th edition, as the guide for formatting, for ALL sections:

https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/apa_changes_7th_edition.html

○ Context of your School and Classroom and Instructional Change

Describe your school, community, classroom and student population. Use the most up-to-date data. Describe the instructional change: what steps am I going to take to address or learn more about the issue in your question?

○ Annotated Bibliography Chart

Use the provided chart to answer these questions: “*What does the article tell you about your area of inquiry? What tensions exist in the studies? How might it inform your own study?*”

○ Data Collection

Describe *how* you will collect data to answer your research question. 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 helping to inform the rationale for your research or to support the research question directly.

○ Data Analysis

Describe *how* you analyzed your data.

○ Findings

What are the findings from the data, both qualitative and quantitative? What do the patterns and outliers have you noticed in your data?

Action Research Poster Presentation

You will present your action research at a symposium at the end of the course. This presentation will be based on your written final report. ***For the symposium, you will prepare a conference-style digital poster.***

Final Action Research Report

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 component sections, with the ADDITION of two sections: Rationale and Implications. Points will also be earned for quality of writing and use of APA style in FINAL REPORT. See attached rubric.

- Title Page and Running Head
- Section 1: Rationale and Research Question
- Section 2: Annotated Bibliography Chart

- Section 3: Context and Instructional Change
- Section 4: Data Collection
- Section 5: Data Analysis
- Section 6: Findings
- Section 7: Implications (see below for details)
- APA formatted Bibliography
- Appendices

Implication Section: *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?*

Grading

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

See <https://cehd.gmu.edu/students/policies-procedures/>

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

Class Schedule

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

Green denotes Spring Semester

Pink denotes Summer Semester

Date	Readings	Topics and Activities	Assignment Due
Thursday, Jan 27 4:30 synchronous	Text: Mills Ch 1: Understanding Action Research Bb: Sample AR Papers	<ul style="list-style-type: none"> • Introductions, Course Structure, Syllabus • Norm Setting for Class Meetings • What is Action Research? 	<ul style="list-style-type: none"> • Come to class with the Google Slide completed on Jan 27 https://docs.google.com/presentation/d/1GllmFP0ajP2GCupEVUzitP3b8-MbdFfHulQNY1B7blw/edit?usp=sharing -What makes my class unique? -What are the strengths of my current classroom? -What are the challenges of my current classroom? -What opportunities are present in my current classroom?
Thursday, Feb 3 4:30 synchronous	Text: Mills Ch 3: Deciding on an area of focus	<ul style="list-style-type: none"> • Using past research articles/literature to explore our questions • What does the Annotated Bib look like for this paper? • Research Question construction 	<ul style="list-style-type: none"> • Due IN CLASS on Thursday Feb 3: Post 2-3 ideas for your action research project to class (google link provided in previous class)
Feb 10 Self-paced work week	Text: SKIM Mills Ch 4: Review of Related Literature Review 7 th APA link (see above)	<ul style="list-style-type: none"> • Write your Research Question • Find peer reviewed articles and prepare list • Review 7th edition of APA style 	<ul style="list-style-type: none"> • Due on Bb on Sunday Feb 13: Research Question with one paragraph on “why it matters to you” (a mini-rationale) <ul style="list-style-type: none"> ○ you will revise this paragraph into a longer section for the final paper
Thursday, Feb 17 4:30 synchronous	Bb: Sample AR Sections	<ul style="list-style-type: none"> • What is the Context? • What is the Instructional Change? 	<ul style="list-style-type: none"> • Due on Bb on Sunday Feb 20: Alphabetical List of 10 peer-reviewed articles in 7th edition APA format (ex: in ABC order in addition to other formatting requirements)
Thursday, Feb 24 4:30 synchronous	Mills Ch 5: Data Collection	<ul style="list-style-type: none"> • Qualitative Data Collection and Analysis 	<ul style="list-style-type: none"> • Due on Bb on Sunday Feb 27: Context of School and Classroom and Instructional Change

		<ul style="list-style-type: none"> Quantitative Data Collection and Analysis 	
Thursday, Mar 3 4:30 <i>synchronous</i>		<ul style="list-style-type: none"> Individual meetings with Dr. Bean Be prepared to share updates and ask questions Your individual time will be given in class 	<ul style="list-style-type: none"> Due on Bb on Sunday Mar 6: Annotated Bibliography Chart (this is APA format of all 10 articles)
Week of Mar 10 <i>Asynchronous</i>	Mills Ch 6: Data Collection considerations	<ul style="list-style-type: none"> Ensuring Trustworthiness Validity, Reliability, Generalizability Data Analysis: organizing and writing Critical Friends during IT 	<ul style="list-style-type: none"> Due on Bb on Sunday Mar 13: Data Collection
Thursday, Mar 17 <i>No class meeting</i>	Schedule meetings with Dr. Bean as needed Mills Ch. 7: Data analysis and interpretation	No Class – IT, data collection	
Thursday, Mar 24 <i>No class meeting</i>		No Class – IT, data collection	
Thursday, Mar 31 <i>No class meeting</i>		No Class – IT, data collection	
Thursday, Apr 7 <i>No class meeting</i>		No Class – IT, data collection/FCPS spring break	
Thursday, Apr 14 <i>No class meeting</i>		No Class – IT, data collection/PWCS/LCPS spring break	
Thursday, Apr 21 <i>synchronous</i>	<i>SKIM</i> Mills Ch. 9: Writing Up Action Research	<ul style="list-style-type: none"> Preparing for the final research report Partner work session with your Critical Friend(s) 	<ul style="list-style-type: none"> Due on Bb on Sunday Apr 24: Data Analysis
Apr 28		<ul style="list-style-type: none"> Refine data analyses 	

Self-paced work week			
May 5 and May 12 Self-paced work weeks		<ul style="list-style-type: none"> • Prepare Findings section • Review all past sections for editing 	<ul style="list-style-type: none"> • Due on Bb on Sunday May 15: Findings
Weeks of May 19 and 26		<ul style="list-style-type: none"> • Preparing final papers and presentations <ul style="list-style-type: none"> ○ Write new introduction • Individual meetings with Dr. Bean (time given in class) 	
Thursday, June 2 4:30 <i>synchronous</i>		<ul style="list-style-type: none"> • Final Presentations/Sharing Symposium 	<ul style="list-style-type: none"> • Due in class on Thursday, June 2 Symposium Slide
			<ul style="list-style-type: none"> • Due on Bb on Sunday, June 5: FINAL Paper

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 tk20help@gmu.edu or <https://cehd.gmu.edu/aero/tk20>. 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/> .

Action Research Rubric

Levels/Criteria	6	4	2
Introduction: Describes the problem. Clear research question stated. Significance of problem is addressed. <i>InTASC 9</i>	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.	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	At least nine to ten research studies are used to support the literature	Five to eight research studies are used. At least one of them is from a	Less than five research studies are used. The articles are not from

<p>studies are used. Studies relate to the research question.</p> <p>InTASC 9</p>	<p>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>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>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>InTASC 9</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.</p> <p>InTASC 9</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</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>

	information collected will help answer the question.		
<p>Analysis of Data: Appropriate analysis for data collected.</p> <p>InTASC 9</p>	The entire analysis of the data is appropriate. The information gathered addresses the research question.	The majority of the analysis is appropriate. However, it is not clear how other parts were analyzed.	The analysis is inappropriate or not well-defined.
<p>Findings and Implications: Findings are presented clearly. Implications from data proposed. Connects back to the findings.</p> <p>InTASC 9</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.	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.	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>Overall Style: Clear, concise writing. Grammar and punctuation. Multiple levels of headings used to organize ideas.</p> <p>InTASC 9</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.	The majority of the writing is clear and concise. There are one to three grammar and punctuation errors. There is evidence of multiple levels of headings. These are used appropriately in the majority of instances.	The majority of the reading is vague and unclear. The reader has difficulty seeing the connections between the various sections. There are four or more grammar and punctuation errors. There is no evidence of multiple levels of headings or these are used inappropriately in the majority of instances.