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

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Course
ELED 559: *Research and Assessment in Elementary Education*
Section 004, 3 credits
Spring 2020 (1 cr); Summer 2020 (2 cr)
Tuesdays 4:30-8:30; Garfield Elementary

Instructor
Audra Parker
Office Hours: By appointment
Thompson 1805
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Course Meetings
Our class will meet using a variety of structures: face to face, synchronously online and asynchronously online. In addition, we will meet individually using a conference format for the a number of sessions. While you will have less class face-to-face time, you will spend much of the course engaged in individual and small group conferences, independently writing, and providing peer feedbacking—all of which will help you be successful in this course.

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

University Catalog Course Description
Provides teacher candidates an understanding of research paradigms utilizing systematic evidence to improve practice and further skills in assessment of learning outcomes. Emphasizes linking research and practice, making instructional decisions based on systematically collected data.

Course Overview
This course is designed to help teacher candidates understand various research paradigms utilizing research literature and systematic evidence to improve teacher practice and to further their skills at assessment of learning outcomes. Course emphasizes linking research and practice and making instructional decisions based on systematically collected data.

Nature of Course Delivery
The primary purpose of this course is for you to learn how to conduct action, teacher, or practitioner research and apply it in your classroom in order to improve your teaching and your students' learning. This course requires a combination of face-to-face, online, and individual conferencing. This course is student-centered and will be conducted using a project-based approach. 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, teacher, or practitioner research project that you complete.

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. The course will be delivered through a variety of online, face-to-face, and individualized instructional approaches.

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.

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.

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

You will have the opportunity to construct knowledge and critically reflect on the research process as you complete the action, teacher, or practitioner research proposal and report, and then prepare your "Action/Teacher/Practitioner Research Impact Presentation" for graduation. You will be expected to post your own assignments and respond to peers' feedback in accordance with the scheduled provided. During class meetings there will be large group, small group, and individual activities.

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.

GMU's Blackboard course framework will be used regularly throughout the course, and you will also be required to use Google Drive to upload and share drafts of your research project with me and a small group of your peers. Your GMU email address is required for communication with the course instructor and must be active by the first week of class. Please inform me of any accessibility problems the first day of class.

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.

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:

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.

REQUIRED TEXT

Lattimer, H. & Caillier, S. (2015). Surviving and thriving with teacher action research: Reflections and advice from the field. New York: Peter Lang.

Recommended Texts American Psychological Association (2009). Publication manual (6th ed.). Washington, DC: American Psychological Association. Note: APA guidelines are available online at http://owl.english.purdue.edu/owl/resource/560/01/

COURSE PERFORMANCE EVALUATIONS:

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

ASSIGNMENTS SPRING 2020:

Assignment	Points	Due Dates
1. **Attendance and Participation** [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10] in online and face to face class meetings/activities	35 points 5 points EACH	Ongoing
2. Component Drafts: [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10] **a. Part One**: Rationale and Research Question(s) **b. Part Two**: Annotated Bibliography 1 (Entries 1-5; 6-10) **c. Part Three:** Context and Instructional Change **d. Part Four:** Data Collection and Student Assessment	25 point 5 points EACH	**Part 2** Draft: 2/5 & 2/16; Revisions: 3/9 **Parts 1 & 3** Draft: 2/26 Revisions: 3/9

		Part 4 Draft: 3/9 Revisions: 3/16
TOTAL	**60 points**	

ASSIGNMENTS SUMMER 2020:

1. Attendance and Participation [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10] in online and face to face class meetings/activities	20 points 5 points EACH	Ongoing
2. Data Collection and Analysis Activity	20	May 20th
3. Component Drafts: [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10] **a. Part Five:** Data Analysis Plan and Potential Implications **b. Part Six:** Reflection on AR	10 total 5 points EACH	**Parts 5** Draft: 5/20 **Parts 6** Draft: 5/27
4. Final Action Research Proposal (PBA) [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]	42	June 4th
5. Action Research Poster and Presentation [Outcomes 1, 2, 3, 7]	10	June 4th
TOTAL	**102 points**	

1. ***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 (F2F and synchronous) and complete all asynchronous assignments by the due dates assigned** as 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 Blackboard 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

All assignments and online activities are to be completed by the date listed in the syllabus. Written work will not be accepted after the due date unless prior arrangements have been made with the instructor. Drafts should be submitted electronically via Google Drive and are due as indicated on the course syllabus schedule. Please use google docs to submit these drafts—not Microsoft Word.

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. Qualitative and Quantitative Data Collection & Analysis Assignment

For this assignment you will collect and analyze quantitative and qualitative data in the form of a survey and one 10-minute interviews or one 30 min observation. The survey should have 10-12 questions from at least 15 people. You will write a brief report of this exercise explaining what you did and what you found.

Steps to completing this assignment:

1. Create a research question that can be addressed with a survey and an interview or an observation
2. Decide on the methods

3. Create a protocol (the survey questions you will ask, the interview questions you will ask or the format for your observation notes)
4. Have our instruments and protocols peer reviewed
4. Collect the data
5. Prepare the data for analysis (transcribe the interviews)
6. Analyze the data
7. Interpret the data (how does it address your question?)
8. Consider implications (what do your results mean for others?)

Your report will include the following:

- An introduction
    - Describe your research question
- Short description of the methods
    - What did you do?
    - Describe the protocol
    - Describe the participant(s)
    - Describe how you analyzed the data
- Results
    - What did you find?
    - What is the answer to your question based upon your data?
- Implications
    - What does this mean for others?
    - What should be done next?
- Reflection
    - What did you learn about quantitative an qualitative data analysis from this project?
    - If you did this again, what would you do differently?

3. ***Component Drafts***

These sections **must be submitted by their due dates** throughout the semester for formative feedback. They are worth 5 points each. Late assignments will receive 0 points.

Part One: Rationale and Research Question(s)

Describe the origin of your inquiry? From what has your research question emerged? What question(s) are you asking?

Part Two: Annotated Bibliography

Review the literature relevant to your question. What does it tell you about your area of inquiry? What tensions exist in the studies? How do they shape your question?

Part Three: Context and Instructional Change

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

Describe the instructional change.

Part Four: Data Collection and Student Assessments

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

Part Five: Data Analysis

Describe how you would analyze your data and discuss potential implications of your study

Part Six: Reflection

What do you learn from creating your action research proposal? What might you do with our proposal in the future—in other words, what aspects might be applicable to future work? How did the action research experience inform your teaching during the spring semester? What will you take from this process into your teaching career?

4. Action Research FINAL Proposal Report —PBA 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 sections above for a total of six sections.

Points will also be earned for quality of writing and use of APA style in FINAL REPORT. See attached rubric.

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

5. Action Research Poster Presentation

You will present your action research to our class at the end of the summer course. This presentation will be based on your written final report (see above) and the data collection and analysis activities that you complete in the summer session. You will participate with other sections of EDCI 559 in a poster session. ***You will prepare a brief (10 min) powerpoint presentation using the format provided and will respond to peer questions (5 min) as a follow up.***

Date: Thursday, June 4th
Location/Format TBD

Grading Scale

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

PROFESSIONAL DISPOSITIONS

See https://cehd.gmu.edu/students/polices-procedures/

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

COURSE SCHEDULE

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

Date	Readings	Topics and Activities	Assignment Due
Wednesday 1/22 Garfield Elem **4:30-7:10 F2F**	Action Research Exemplars (2) with guiding questions Lattimer & Callier, Chs. 1-7	***F2F SESSION 1:*** - Introductions, Course Structure, Syllabus - Norm Setting for Class Meetings and Feedback; Using Online Tools - Understanding Google Drive - Why Action Research - Overview of Components of Teacher Research - Considering "Wonderings"	N/A
Wednesday 1/29 Garfield Elem **4:30-7:10 F2F**	Bb Readings: Lattimer & Callier, Chs. 8-10	***F2F SESSION 2:*** - Using the literature to explore "wonderings" and guide question construction - Role of Journaling/Pre-assessment and Baseline Data	N/A
Wednesday, 2/5		***INDIVIDUAL CONFERENCES:***	***DUE Feb 5th***

Online (Individual Conferences 4:30-7:10)		- Individual conferences with teacher candidate • Refining our wonderings • Using the literature to refine our wonderings	Section 2: Annotated Bib Sources 1-5
Week of 2/10		**No Class – Continue reviewing and summarizing the literature**	***DUE Feb 16th:*** Section 2: Annotated Bib Sources 6-10
Wednesday 2/19 5:30-6:10 Online Synchronous	Bb Readings: Sample Sections 1 and 3	***ONLINE SYNCHRONOUS SESSION:*** - Writing a Rationale, Research Questions, and Context and Change ***ONLINE ASYNCHRONOUS:*** • Provide peer feedback on Annotated Bib • Review and Analyze Samples of Rationale, Research Questions, Annotated Bibs, and Context and Change (prior to 2/19 synchronous session) • Drafting sections 1, 2, and 3	
Wednesday, 2/26 **4:30-7:10 Garfield Elementary F2F**	Lattimer & Callier, Chs. 11-13 Bb Readings: Sample Data Collection sections	***F2F SESSION 3:*** In class feedback (Sections 1, 2 and 3) Data Collection Techniques - Reviewing Progress - Data Collection Techniques - Reviewing Samples of Data Collection - Developing a Data Collection Plan	***DUE BEFORE CLASS FEBRUARY 26th*** First Draft: Sections 1, and 3
Week of 3/2		**No Class – Drafting data collection; revisions to Sections 1, 2, and 3**	
Wednesday, March 11th **Online**	Lattimer & Callier, Chs. 14, 16	***INDIVIDUAL CONFERENCES:***	***DUE MARCH 9th:*** First draft: Section 4 Revisions: Sections 1, 2, and 3

(Individual Conferences 4:30-7:10)		- Individual Conferences with teacher candidates to refine data collection techniques ***<u>ONLINE ASYNCHRONOUS:</u>*** - Readings and Responses - Drafting and Providing Peer Feedback	
Week of 3/16		**No Class – revising sections 1-4**	***<u>DUE MARCH 16th</u>*** *Revisions to Section 4*
Week of 3/23		**No Class – revising sections 1-4**	
Wednesday, April 1st 4:30-5:30 Online (synchronous)		***<u>ONLINE SYNCHRONOUS SESSION 4:30-5:30 using Blackboard Collaborate</u>*** - Overview of Course Changes - Reframing our questions to practice data collection - Introduction to Revised Data Collection/Analysis Activity	
Week of 4/6		**No Class – revising sections 1-4; data collection activity**	
Week of 4/13		**No Class – revising sections 1-4; data collection activity**	
Week of 4/20		**No Class – revising sections 1-4; data collection activity**	
Wednesday, April 29th 4:30-5:30 Online (synchronous)	Lattimer & Callier, Chs. 19-24 Bb Readings: Sample Data Analysis, Findings, & Implication sections	***<u>ONLINE SYNCHRONOUS SESSION 4:30-5:30 using Blackboard Collaborate</u>*** - Overview of Data Analysis Plan and Potential Implications	
Week of May 4th		**No Class – revised data analysis activity and writing the data analysis section of your proposal**	

Wednesday, May 13th		**No Class – revised data analysis activity and writing the data analysis section of your proposal**	
Wednesday, May 20th 4:30-5:30 Synchronous Online		***ONLINE SYNCHRONOUS SESSION*** ***(F2F is schools reopen!)*** - Considering our collected data - Overview of Final Presentation (reflection) ***ONLINE ASYNCHRONOUS:*** - Drafting and Providing Peer Feedback on Data Section in Proposal and Final Paper	**DUE May 20th:** Data Collection/Analysis Activity First Draft of Section5
Week of May 25th		**No Class – Preparing final papers and presentations**	**DUE May 27th:** First Draft of Section6
Thursday, June 4th		**FINAL PRESENTATIONS** ***(F2F is schools reopen!)*** - Sharing Symposium - Location/Format TBD	**DUE JUNE 4th:** Activity Final Report & Final Presentation

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.

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.

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 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/

Action Research Rubric

Levels/Criteria	3	2	1
Introduction: Describes the problem. Clear research question stated. Significance of problem is addressed. ***InTASC 9*** ***ACEI 5.1***	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. ***InTASC 9***	At least nine to ten research studies are used to support the literature review. These are from respectable journals. The studies are appropriate for the topic and research questions. Bibliography	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	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.

ACEI 5.1	is in APA style with no errors.	style with no more than two errors.	
Context and Intervention Provided: Setting Described. Population identified. Intervention. ***InTASC 9*** ***ACEI 5.1***	The setting is fully described. It includes, size of school, location, grade level, subject taught, etc. All pertinent information is included. The population is fully described. It includes number of students, gender and ethnic breakdown, grade levels, academic abilities, etc. Information relevant to the research is included. Intervention is fully described. It is clear what the intervention is and how it will be implemented. Intervention is realistic.	The setting is adequately described. Most information is included, but not all. The population is adequately described. Most information is included, but not all. Intervention is adequately described, but either the description of the intervention or the implementation is confusing.	Setting is not included or inadequately described. It is not clear where the research will be conducted. Population is not included or inadequately described. It is not clear who will be participating in the research study. There is no intervention or implementation explained or the intervention does not align with the research question.
Research Design: Design of study matches goals. Formative and Summative Assessments included. Data sources appropriate. ***InTASC 9*** ***ACEI 5.1***	The methodology chosen (quantitative, qualitative, mixed methods) is appropriate for the research question. There is adequate time allowed for data collection. The treatment is reasonable and ethical. There is a mixture of formative and summative assessments included in the design. They are well-described or a copy is included. All data sources are appropriate for the research question. The information collected will help answer the question.	Two of the three stated criteria are adequate. Formative and summative assessments are included in the design. Copies are not included and they are not well described. Most, but not all, of the data sources are appropriate.	None or one of the criteria is adequate. The research is not ethical. Either formative or summative assessments are included, but not both. Copies are not included and they are not well described. The majority of the data sources are not appropriate for the research question. Data collected is not ethical.
Analysis of Data:	The entire analysis of the data is appropriate. The	The majority of the analysis is appropriate.	The analysis is inappropriate or not well-

Appropriate analysis for data collected. ***InTASC 9*** ***ACEI 5.1***	information gathered addresses the research question.	However, it is not clear how other parts were analyzed.	defined.
Findings and Implications: Findings are presented clearly. Implications from data proposed. Connects back to the findings. ***InTASC 9*** ***ACEI 5.1***	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.
Overall Style: Clear, concise writing. Grammar and punctuation. Multiple levels of headings used to organize ideas. ***InTASC 9*** ***ACEI 5.1***	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.