George Mason University
College of Education and Human Development
Elementary Education Program

EDCI 559.003 – Research and Assessment In Elementary Education
3 Credits, Spring 2020
Thursdays 4:30-7:10
Robinson B Hall:222   Fairfax Campus

Faculty

Name:	Lois Groth
Office Hours:	By Appointment
Office Location:	Thompson 1801
Office Phone:	703-993-2139
Email Address:	lgroth@gmu.edu

Prerequisites/Corequisites
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 in the assessment of learning outcomes. The course emphasizes linking research and practice and making instructional decisions based on systematically collected data.

Course Delivery Method
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.
- 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://windows.microsoft.com/en-us/windows/downloads/windows-media-player/
  - Apple Quick Time Player: www.apple.com/quicktime/download/

COURSE EXPECTATIONS

COURSE WEEK: Our class will meet on Mondays 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: Please see Item #1 under course assignments. 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: <u>All assignments must be written in Times New Roman, 12 point font, double-spaced, and follow APA (6th edition) formatting guidelines</u> (see <u>http://owl.english.purdue.edu/owl/resource/560/01/</u> for more information). Assignments should be submitted electronically via email and are due by class time on the date indicated in an appropriate format (i.e., Word document*). **Assignments turned in late or in an inappropriate format will have a deduction of points. If there is an emergency, contact Dr. Bean 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: Bean_LitReview**

IN CLASS TECHNOLOGY POLICY: *When you are using laptops or other electronic devices, 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 <u>will impact your participation grade</u>.*

Learner Outcomes or Objectives
This course is designed to enable students to do the following:
   A.
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
1	1, 3	V	2, 3, 4, 5, 6, 9, 10
2	1, 3, 4	IV & V	9, 10
3	1, 3, 4	IV & V	6, 9

Last revised July 2017

4	4	V	6,
5	4	V	6
6	4	V	6, 9, 10
7	1, 3, 4	IV & V	6, 7, 9
8	1, 3	IV & V	6
9	4	IV & V	6, 7, 9
10	4	V	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.

❖ **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 Texts

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

Course Performance Evaluation

Students are expected to submit all assignments on time in the manner outlined by the instructor (e.g., Blackboard, Tk20, hard copy).

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. Attendance and Participation [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]	20

2. Component Drafts: [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
 	
   a. **Part One**: Rationale and Research Question(s)
   b. **Part Two A**: Annotated Bibliography 1
   c. **Part Two B**: Annotated Bibliography 2
   d. **Part Three:** Context and Instructional Change
   e. **Part Four:** Data Collection and Student Assessment Plan
   f. **Part Five:** Data Analysis
   g. **Part Six:** Findings
	5 points EACH
	
	(35 total)

3. Final Action Research Report (PBA) [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]	30
4. Action Research Poster and Presentation [Outcomes 1, 2, 3, 7]	15
Total	**100**

1. *Attendance and Participation Expectations (20 points)*

This course operates with the assumption that knowledge is socially constructed and the most meaningful learning opportunities are those where you have the opportunity to offer and explore diverse perspectives with peers. To do this **it is expected that you attend all scheduled classes (both in person and online)** 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. Cell phones are for emergency use only and **it is expected that you will not use cell phones in class** for purposes such as texting, social media, or phone calls.

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 current 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

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 receive an automatic deduction of one letter grade making the highest possible score equivalent to 80%(B). All assignments must be submitted on the due date stated within the syllabus (see below) 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.

2. ***Component Drafts (1-6) (35 points)***

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

Part One: Rationale and Research Question(s) (Due Feb 2)

Part Two A: Annotated Bibliography #1 (Due Feb 23)

Part Two B: Annotated Bibliography #2 (Due March 1)

Part Three: Context and Instructional Change (Due March 15)
                       Describe your school, community, classroom and student population; and
                       Describe the instructional change

Part Four: Data Collection Plan and Student Assessments Plan (Due March 22)

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

Part Five: Data Collection and Analysis (Due May 10)
                       Change your Collection plan to the past tense to reflect what you did
                       Describe how you analyzed your data

Part Six: Findings (Due May 28)
                       Describe your findings and their implications for teaching and learning

3. ***Action Research FINAL Report (30 points) —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 sections above and a final implications section for a total of seven sections.

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

Part One: Rationale and Research Question(s)

Part Two: Annotated Bibliography

Part Three: Context and Instructional Change

Part Four: Data Collection Plan and Student Assessments

Part Five:	Data Collection and Analysis
Part Six:	Findings
Part Seven:	Implications

Final Report must be submitted via TK20 by June 2nd, 11:59pm

> **4. Action Research Poster Presentation (15 points)**

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

COURSE EXPECTATIONS

COURSE WEEK: Our class will meet on Thursdays as indicated on the Schedule of Classes.

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: Please see Item #1 under course assignments.

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 (newest 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 class time on the date indicated in an appropriate format (i.e., Word document*). **Assignments turned in late or in an inappropriate format will be eligible for only 50% of the available points. If there is an emergency, contact me as soon as possible.** All assignments should be submitted with the following naming convention: student's last name and the title of the assignment**. For example: Groth_Rationale**

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.*

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/

Grading Scale

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

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

Class Schedule

Date	Readings	Topics and Activities	Assignment Due
1/16	Mills Ch 1: Understanding Action Research	**Face to face - GMU** - Introductions and Syllabus - Review Teacher Research - Critical Friends Groups - Rationale and Research Question - Reviewing the Literature	
1/23	Mills Ch 3: Deciding on an area of focus	Online - asynchronous - Rationale and research question(s) - Annotated bibliography	Individual conferences as needed
<u>**1/30**</u>	Mills Ch 5: Data Collection Techniques	**Face to face - GMU** - Designing your study	Feb 2: Part 1: Rationale and Research Question(s)
2/6	Mills Ch 4: review of Related Literature	Online asynchronous - Work on Annotated bibliography	
<u>**2/13**</u>	Review Mills Ch 5 Data Collection techniques	**Online synchronous** - Qualitative Data Collection and Analysis - Quantitative Data Collection and Analysis	
2/20		Online asynchronous - Work on annotated bibliography	Feb 23: Part 2A: Annotated Bibliography: 5 research articles related to your topic
<u>**2/27**</u>	Mills Ch 6 Data Collection considerations Chapters	**Face to Face GMU** - Ensuring Trustworthiness - Validity, Reliability, Generalizability - Evaluating the Quality of Action Research - Context and Change overview	March 1: Part 2B: Annotated Bibliography: 5 MORE research articles
3/5		Online asynchronous Work on Context and change *Data Collection Plan Student Assessments	
3/12		**GMU Spring Break – no class**	March 15: Part 3: Context and Change

3/19		**No Class – IT, data collection** -	March 22: Part 4: Data Collection Plan and Student Assessments
3/26		**No Class – IT, data collection ***	*You will meet with Dr. Groth at least once individually from 3/26 to 5/3
4/2		**No Class – IT, data collection ***	
4/9		**No Class – FCPS Spring Break**	
4/16		**No Class –IT, data collection ***	
4/23		**No Class – IT, data collection ***	
4/30	Mills Ch 7: Data analysis and interpretation	**Face to face** - Data Analysis - Critical Friends Group Work on Data Collection and Analysis Write Up	
5/7		Online asynchronous - Analyzing data	
5/14	Mills Ch 9: Writing Up Action Research	**Face to face** - Preparing final research report - Preparing presentation materials	May 10: Part 5: Data Collection and Analysis
5/21		Online - asynchronous - Work on final research report - Work on presentation materials	
5/28		**Online – synchronous** - Work on implications - Preparing presentation	May 28: Part 6: Findings
6/4 on campus		**Face to face GMU** - Sharing Symposium (tentatively scheduled) - Location TBD	Final Report due to TK20 by 6/2 Poster due 6/4

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

Core Values Commitment

The College of Education and Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles: http://cehd.gmu.edu/values/.

GMU Policies and Resources for Students

POLICIES

Students must adhere to the guidelines of the Mason Honor Code (see 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 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/.

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/.

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. *InTASC 9*	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 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 Described. Population	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	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	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

identified. Intervention. *InTASC 9*	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.	described, but either the description of the intervention or the implementation is confusing.	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*	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: Appropriate analysis for data collected. *InTASC 9*	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.
Findings and Implications: Findings are presented clearly. Implications from data proposed. Connects back to the findings.	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.

		15	
InTASC 9			
Overall Style: Clear, concise writing. Grammar and punctuation. Multiple levels of headings used to organize ideas. *InTASC 9*	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.