

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

EDCI 559: Research and Assessment in Elementary Education

Section 6K1, (3 credits)

Summer 2016

Tuesdays 4:30-7:30; Hunters Woods Elementary School Library

Instructor

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Office Hours: By appointment

Course Description

- A. Prerequisites:** Admission into GMU Elementary Education Graduate program; capstone course for degree and must be taken last in sequence.
- B. University Catalog 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
- C. Expanded Course Description:** n/a

Nature of Course Delivery

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

Standards

A. 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.

B. ACEI Standards:

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

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

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

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

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

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

C. 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.

D. 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.

E. 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.

Learner 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	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

Required Text

Mills, G. E. (2014). *Action research: A guide for the teacher researcher* (5th ed.). Boston, MA: Pearson.

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	Due Date
1. Readings and Activities (in-class and online) [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]	20	ongoing
2. Critical Incident Reflection [Outcomes 1, 8, 10] *TK20	20	1/26
3. Action Research Report (*PBA and TK20) [Outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]	35	Ongoing Final 6/7
4. Quantitative Data Analysis [Outcomes 4, 5, 6]	10	3/15
5. Qualitative Data Analysis [Outcomes 4, 5, 6]	10	3/15
6. Action Research Presentation [Outcomes 1, 2, 3, 7]	5	6/7
Total	100	

1. Reading and Activities (In-Class and Online) (30 points)

I expect that you will complete all assigned readings and tasks each week. You also must be present during each class session by actively engaging with the content and your peers. Online discussions and activities must also clearly demonstrate your thoughtful completion of the readings and tasks. In the event of an emergency, I must be notified of your absence in advance of class.

2. Critical Incident Reflection (20 points)-a TK 20 Requirement

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

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

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

Video analysis

This assignment requires you to reflect at all three levels. Choose a videotaped lesson from one of your previous courses to use for analysis and reflection. You may discover a research question emerges from the analysis. If you do not have a lesson you can use, then record yourself teaching a lesson. **Prior to recording, be sure to obtain appropriate permissions from school system, school, and families as needed in your specific context.**

Part 1 – Holistic Reflection

Following the lesson presentation, write a reflective statement that includes technical, practical, and critical reflections.

Part 2 – Critical Incident Analysis

From your recorded lesson, select a segment (~5-10 minutes in length) that contains a critical incident [critical incident can be replaced or defined by the program and/or course].

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

- a. Provide a brief description of what is happening in the selected clip.

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

Students will turn in (a) the lesson plan for the recorded lesson (if available), (b) the holistic reflection, (c) the critical incident video clip, and (d) critical incident video analysis.

3. Action Research Report (35 points) (Due: _____) – TK20 Requirement

This is the major assignment for this class and is a Performance Based Assessment (PBA) for the course. The final written report will include the seven sections below. These sections will be submitted throughout the semester for formative feedback from peers and your instructor. **These drafts MUST be submitted by their syllabus due dates.** Not doing so will affect your Readings and Activities (in class and online) grade. Points will also be earned for quality of writing and use of APA style. See attached rubric.

- Part One: Rationale and Research Question(s)
- Part Two: Annotated Bibliography Literature Review
- 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 Assessment
 - Describe how you collected data to answer your research question(s). This includes formative and summative assessments designed to gather that data.
- Part Five: Data Analysis
 - Describe how you analyzed your data
- Part Six: Findings
 - Describe your findings and their implications for teaching and learning
- Part Seven: Implications
 - Describe the implications of your study for your teaching

The final action research report must be submitted via TK20.

4. Quantitative Data Analysis (10 points)

Groups of students will develop a short survey instrument with 10-12 questions, collect data from at least 15 people each, analyze the data using descriptive statistics, and write up a short report. This does not have to be related to the focus of your Action Research Report. Typically students do better when the topic can be asked of non-school personnel- for example, you may ask parents about their views of schools, or ask college students to identify top issues in education. Your survey instrument must be workshopped with and approved by your critical friends.

5. Qualitative Data Analysis (10 points)

Groups of students will collect qualitative data through interviews, observation, or a focus group; code and interpret the data; and write a short report. This does not have to be related to the focus of your Action Research Report. Your data collection protocol must be workshopped with and approved by your critical friends

6. Action Research Presentation (5 points)

You will present your Action Research. This presentation will be based on your written report (see above). You will participate with other sections of EDCI 559 in a roundtable symposium.

Course Policies

All assignments must be written in Times New Roman 12 point font, double-spaced, and follow APA (6th edition) formatting guidelines (see <http://owl.english.purdue.edu/owl/resource/560/01/> for more information). **Assignments should be submitted electronically in an appropriate format (i.e., Word document) via Blackboard or TK20 and are due by class time on the date indicated.** 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_AnnotatedBibliography

Absentee Policy: It is expected that you attend all scheduled classes and asynchronous/synchronous online meetings 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.

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.

Grading Scale

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

GMU POLICIES AND RESOURCES FOR STUDENTS

- 1) Students must adhere to the guidelines of the George Mason University Honor Code (See <http://oai.gmu.edu/the-mason-honor-code/>).
- 2) Students must follow the university policy for Responsible Use of Computing (<http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/>).
- 3) Students are responsible for the content of university communications sent to their George Mason University 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.
- 4) The George Mason University 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/>].

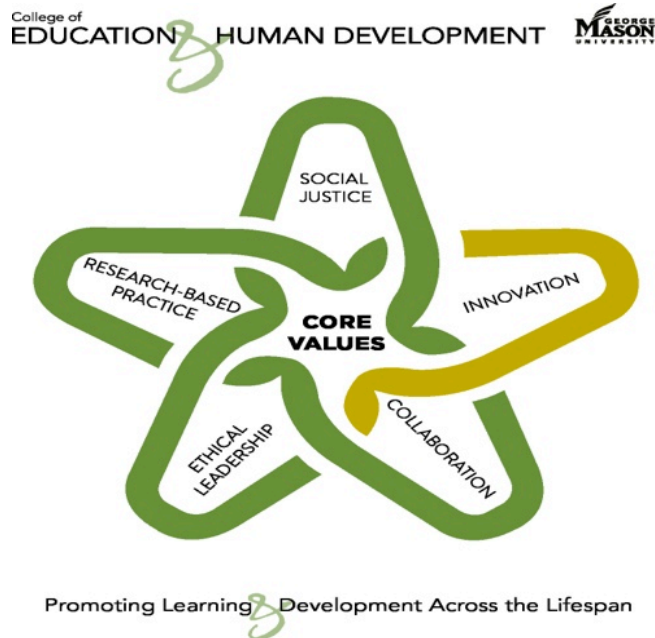
- 5) Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, as soon as possible [See <http://ods.gmu.edu/>]. Approved accommodations will begin at the time the written letter from Disability Services is received by the instructor (See <http://ods.gmu.edu/>)
- 6) Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.
- 7) The George Mason University Writing Center staff 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/>).

PROFESSIONAL DISPOSITIONS

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

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/>



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>

Course Schedule

Date	Readings	Topics and Activities	Due
1/12 T		F2F <ul style="list-style-type: none"> - Introductions and Syllabus - Critical Reflection - Review Teacher Research - Critical Friends Groups - What is action research? <ul style="list-style-type: none"> o Inquiry as a part of teaching not apart from teaching - Academic research vs. action research 	
1/19 T	Mills, Ch. 1, 2, & articles	Online <ul style="list-style-type: none"> - Work on video analysis/critique - Research ethics - Searching databases - APA - Compile ideas for research questions 	
1/26 T	Mills, Ch. 3	F2F <ul style="list-style-type: none"> - Rationale and Research Question <ul style="list-style-type: none"> o Wonderings and questions o Writing your introduction and research question(s) - Reviewing the Literature <ul style="list-style-type: none"> o The five whys o Connecting academic and action research - 	DUE: Critical Incident Reflection
2/2 T	Articles**	F2F – Individual Conferences <ul style="list-style-type: none"> - Determining your question and getting started on the literature review 	DUE: Research question
2/9 T	Mills	F2F	DUE:

	Ch. 4 & 6(Qual)	<ul style="list-style-type: none"> - Qualitative Data Collection and Analysis - Matching methods to questions (chart) - Interview & Focus Groups - Have Interview questions approved before leaving class 	Part 1: Rationale and Research Question
2/16 T	Mills, Ch., 5 Articles**	Online <ul style="list-style-type: none"> - Work on resources for lit review - Qual data collection 	DUE: Annotated bibliography: chart 5 research articles related to your topic
2/23 T	Mills, Ch. 4 & 6 (Quant) Appendices B, C Articles**	F2F <ul style="list-style-type: none"> - Quantitative Data Collection and Analysis - Matching methods to questions (chart) - Designing Quantitative Trials - Survey Design 	DUE: Part 2: Annotated Bibliography (including 8-10 articles)
3/1 T	Mills Ch 7.	F2F <ul style="list-style-type: none"> - Evaluating the Quality of Action Research - Qualitative and Quantitative Trial Analyses 	DUE: Part 3: Context and Change
3/8 T		No Class – Mason Spring Break	
3/15 T	Mills, Ch. 8 & 9 Appendix A	F2F <ul style="list-style-type: none"> - Organizing and Displaying findings - Ensuring Trustworthiness - Validity, Reliability, Generalizability - Qual and Quant Trial Sharing 	DUE: Part 4: Data Collection Plan DUE: Part 5: Data Analysis Plan
3/22 T		No Class – FCPS Spring Break	
3/29 T		No Class – IT, data collection	
4/5 T		No Class – IT, data collection	
4/12 T		F2F - Individual Conferences	
4/19 T		No Class – IT, data collection	
4/26 T		No Class – IT, data collection	
5/3		No Class – IT, data collection	

T			
5/10 T		Online - Analyzing data	
5/17 T	Mills Ch. 8	F2F - Preparing final research report - Preparing presentation - In class presentations of qualitative and quantitative group projects - Drawing implications -	DUE: Bring in your data
5/24 T		F2F – Individual Conferences - Findings and implications	
5/31 T		Online - Work on final presentations and handouts	
6/7 T		F2F - Sharing Symposium - Location TBD	DUE: Action Research Report (PBA) to TK 20

***Instructor reserves the right to adjust the syllabus**

PBA Rubric

Levels/Criteria	3	2	1
Introduction: Describes the problem. Clear research question stated. Significance of problem is addressed.	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 not 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.
Literature Review: Research studies are used. Analysis of literature is evidence. Synthesis of literature is evident.	At least ten research studies are used to support the literature review. These are from respectable journals. The studies are appropriate for the topic. Analysis of the literature is well-developed. It connects directly to the problem statement and the research question. There is a good synthesis of the literature. This goes beyond restating what is in the articles. Student is able to tie the studies together and connect this back to the importance of the topic.	Six to nine research studies are used. At least one of them is from a respectable journal. The studies are somewhat appropriate for the topic. The analysis of the literature is adequate. It connects somewhat to the problem statement and research question, but leaves the reader wanting to know more. There is an adequate synthesis of the literature. Student primarily relies on restating the research studies to support the topic, but is able to include own thoughts regarding the studies.	Less than six research studies are used. The articles are not from respectable journals. The studies are not appropriate for the topic. The analysis of the literature is inadequate. It does not connect to the problem statement and research question. There is an inadequate synthesis of the literature. The studies are treated separately and not tied together. Student is unable to connect studies to the importance of the topic.
Context and Intervention Provided: Setting	The setting is fully described. It includes, size of school, location, grade level, subject	The setting is adequately described. Most information is included, but not all.	Setting is not included or inadequately described. It is not clear where the research will be

Levels/Criteria	3	2	1
<p>Described. Population identified. Intervention.</p>	<p>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 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>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>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.</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>

Levels/Criteria	3	2	1
<p>Analysis of Data: Appropriate analysis for data collected. Implications from data proposed.</p>	<p>The entire analysis of the data is appropriate. The information gathered will address the research question. Implications from the data are well-developed and fully discussed. The implications are connected back to the results of the data analysis.</p>	<p>The majority of the analysis is appropriate. However, it is not clear how other parts will be analyzed. Implications from the data are adequately discussed. It is clear the student is able to interpret the findings. However, the implications are not tied back to the results.</p>	<p>The analysis is inappropriate or not well-defined. Implications from the data are inadequately discussed. It is not clear the student is able to interpret the findings. The implications are not tied back to the results.</p>
<p>References: Full citations for all sources mentioned. Use of APA style for formatting. All listed references are used in the paper. Most references are from scholarly sources.</p>	<p>All sources are completely and correctly cited. All articles cited are referenced in the proposal and all references contain complete citations. All citations and references follow APA style. There are no errors. All references listed are cited in the proposal. All references are from scholarly sources (journal articles, text books, etc.) They are not just from websites.</p>	<p>Only one source is not cited correctly. There are one to three APA errors. One reference is not cited in the proposal The majority of the references are from scholarly sources.</p>	<p>Two or more sources are not cited correctly. There are four or more APA errors. Two or more references are not cited. The majority of the references are not from scholarly sources.</p>

Levels/Criteria	3	2	1
<p>Overall Style: Clear, concise writing.</p> <p>Grammar and punctuation.</p> <p>Multiple levels of headings used to organize ideas.</p>	<p>The writing is very clear and concise. The reader can understand what the problem is and how the research will address it.</p> <p>There are no grammar and punctuation errors.</p> <p>There is evidence of multiple levels of headings. These are used appropriately in all instances.</p>	<p>The majority of the writing is clear and concise.</p> <p>There are one to three grammar and punctuation errors.</p> <p>There is evidence of multiple levels of headings. These are used appropriately in the majority of instances.</p>	<p>The majority of the reading is vague and unclear. The reader has difficulty seeing the connections between the various sections.</p> <p>There are four or more grammar and punctuation errors.</p> <p>There is no evidence of multiple levels of headings or these are used inappropriately in the majority of instances.</p>