

**Research in Secondary Education****EDCI 597 – 003****EDUC 597-004**

1 Credit

Spring 2023

Wednesday 7:20 p.m. - 10:00 p.m.

Class Location: Fairfax Campus, Thompson Hall 2022

Instructor: Dr. Lynda Herrera**Office Hours:** By appointment in person or via Zoom <https://gmu.zoom.us/j/2601356921>**Office Location:** SEED Program office Thompson Hall 1800; Fairfax campus**Email:** lherrer8@gmu.edu**Mobile Phone:** 917-703-1404 (for voice calls only between the hours of 9 a.m. - 5 p.m.; no texts please)**Synchronous Class Zoom Link:** <https://gmu.zoom.us/j/2601356921>**Course Description**

SEED 675: Research in Secondary Education. 3 credits. Links evidence of student learning to make informed instructional decisions. Engages students in critiquing various research paradigms, reviewing literature, and systematically collecting and interpreting evidence to improve practice. Notes: All students enrolled in this course must be working daily in or have access to a classroom setting classroom setting (during the semester in which they enroll in this course or a semester following), since the major course assignment involves a classroom-based teacher research project. Offered by [School of Education](#). May not be repeated for credit. **PLEASE NOTE:** The course is SEED 675 but with the 2+1 credit conversion SEED is using the temporary course number of EDCI 597/EDUC 597. *The combination of 1-credit (this course) and 2-credit course (previous semester) to reach the required 3-credit total.* **Recommended Prerequisite:** SEED 540, SEED 522 Recommended Corequisite: For students seeking English licensure: SEED 669 and EDRD 619 For students seeking math licensure: SEED 672 and EDRD 619 For students seeking science licensure: SEED 673 and EDRD 619 For students seeking history/social studies licensure: SEED 667 and EDRD 619 For students seeking computer science licensure: SEED 676 and EDRD 619 Registration Restrictions: Required Prerequisites: (SEED 569B, 569XS, 572B, 572XS, 573B, 573XS, 567B, 567XS, 566B or 566XS). B Requires minimum grade of B. XS Requires minimum grade of XS.

Course Overview

The purpose of this course is for you to learn how to design and conduct a teacher research project situated in a classroom with the goal of improving your teaching and your students' learning. The course is designed to promote a professional teaching and learning community with peer review/critical friend support. Throughout the course, you will complete stages of your research project (proposal) to compile into your final paper. Your ultimate success with the final project requires your ongoing commitment to each step in the process and collaboration with peers for reciprocal review. As a whole course, it provides an opportunity for your personal and ongoing professional development.

Course Delivery Method

This course will be delivered via a hybrid model, **with face-to-face, asynchronous, synchronous sessions** format via Blackboard Learning Management system (LMS) housed in the MyMason portal. You will log in to the Blackboard (Bb) course site using your Mason email name (everything before @masonlive.gmu.edu) and email password. The course site will be available on **January 23rd**.

All SEED classes have designated delivery modes and specific modes for each class session (e.g., face-to-face, virtual synchronous, virtual asynchronous). The majority of SEED classes are held in a face-to-face mode. **Students are expected to attend every class session in the mode that it is offered.** If you must miss a class session for illness or another valid reason, you are expected to proactively communicate (ahead of the class session) with your instructor about your expected absence. Material will be presented, and course objectives met in a variety of ways, including through class discussions, small and large group activities, individual and group work sessions, lecture, student presentations in a hybrid format. Visual aids and various uses of technology will be used to complement an interactive approach to learning. A few synchronous and asynchronous teaching methods will be employed during the semester. **As the teacher of this class, I am available for discussion and support during office hours, via phone and by e-mail. Let's keep in touch!!!**

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 standard up-to-date browsers. To get a list of Blackboard's supported browsers see: https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support#supported-browsers
To get a list of supported operation systems on different devices see: https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support#tested-devices-and-operating-systems
- Students must maintain consistent and reliable access to their GMU email and Blackboard, as these are the official methods of communication for this course.
- Students will need a headset microphone for use with the Blackboard Collaborate web conferencing tool.
- Students may be asked to create logins and passwords on supplemental websites and/or to download trial software to their computer or tablet as part of course requirements.
- The following software plug-ins for PCs and Macs, respectively, are available for free download:
 - Adobe Acrobat Reader: <https://get.adobe.com/reader/>
 - Windows Media Player: <https://support.microsoft.com/en-us/help/14209/get-windows-media-player>
 - Apple Quick Time Player: www.apple.com/quicktime/download/

Expectations

- **Course Week:** Our course week will begin on the day that our synchronous meetings take place 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 2 times** per week. In addition, students must log-in for all scheduled online synchronous meetings.
- **Participation:** Students are expected to actively engage in all course activities throughout the semester, which includes viewing all course materials, completing course activities and assignments, and participating in course discussions and group interactions.
- **Technical Competence:** Students are expected to demonstrate competence in the use of all course technology. Students who are struggling with technical components of the course are expected to seek assistance from the instructor and/or College or University technical services.
- **Technical Issues:** Students should anticipate some technical difficulties during the semester and should, therefore, budget their time accordingly. Late work will not be accepted based on individual technical issues.

- **Workload:** Please be aware that this course is **not** self-paced. Students are expected to meet *specific deadlines* and *due dates* listed in the **Class Schedule** section of this syllabus. It is the student's responsibility to keep track of the weekly course schedule of topics, readings, activities and assignments due.
- **Instructor Support:** Students may schedule a one-on-one meeting to discuss course requirements, content or other course-related issues. Those unable to come to a Mason campus can meet with the instructor via telephone or web conference. Students should email the instructor to schedule a one-on-one session, including their preferred meeting method and suggested dates/times.
- **Netiquette:** The course environment is a collaborative space. Experience shows that even an innocent remark typed in the online environment can be misconstrued. Students must always re-read their responses carefully before posting them, so as others do not consider them as personal offenses. *Be positive in your approach with others and diplomatic in selecting your words.* Remember that you are not competing with classmates but sharing information and learning from others. All faculty are similarly expected to be respectful in all communications.
- **Accommodations:** Online learners who require effective accommodations to ensure accessibility must be registered with George Mason University Disability Services.

Learner Outcomes/Objectives

Upon successful completion of this course, and the 1-credit accompaniment course, students will be expected to meet these course objectives:	Methods by which your acquisition of each objective are measured:
Demonstrate an understanding of the process and components used in teacher research by conducting and assessing a chosen scholarly inquiry project situated in their classroom and impact on students' learning	<ul style="list-style-type: none"> • Active Participation in class discussions • Textbook Reading, Article Readings, Video assignments • Draft Research Project Components • Constructive Peer Group Work • Action Research Project • Research Presentation
Prepare a research proposal which makes explicit links between theory and practice	<ul style="list-style-type: none"> • Draft Research Project Components • Constructive Peer Group Work • Action Research Project • Research Presentation
Examine ethical considerations when conducting teacher research	<ul style="list-style-type: none"> • Active Participation in class discussions • Textbook Reading, Article Readings, Video assignments • Written Responses
Conduct teacher research which includes research question(s), a research proposal, a review of related literature, methods/design, data collection/analysis, findings, and a discussion of impact on students, teachers, and the education field	<ul style="list-style-type: none"> • Active Participation in class discussions • Textbook Reading, Article Readings, Video assignments • Draft Research Project Components • Constructive Peer Group Work • Action Research Project • Research Presentation
Participate in critical and collaborative inquiries to gain multiple perspectives in interpreting research and for validation and peer review of research	<ul style="list-style-type: none"> • Active Participation in class discussions • Constructive Peer Group Work
Demonstrate integration of national and state standards for content and pedagogy as related to their research question(s) by reflecting on their own teaching practice and its impact on students' learning	<ul style="list-style-type: none"> • Active Participation in class discussions • Constructive Peer Group Work • Action Research Project
Demonstrate skills in the application of technology and use of resources in teacher research	<ul style="list-style-type: none"> • Action Research Project • Research Presentation

Professional Standards

By the end of this course students will demonstrate an understanding and application of subject area standards aligned with the National Content Standards and identified by their Specialized Professional Association (SPA):

- Social studies teachers: National Council for the Social Studies, <http://www.ncss.org>
- English teachers: National Council of Teachers of English, <http://www.ncte.org>
- Math teachers: National Council of Teachers of Mathematics, <http://www.nctm.org>
- Science teachers: National Science Teachers Association, <http://www.nsta.org>

Students should also have an understanding of and be able to apply the standards of the Interstate New Teacher Assistance and Support Consortium (INTASC): https://ccsso.org/sites/default/files/2017-12/2013_INTASC_Learning_Progressions_for_Teachers.pdf

Required Texts

Required Text

- Mertler, C. (2020). *Action research: Improving schools and empowering educators* (6th ed.). SAGE Publications.
- American Psychological Association (2020). *Publication manual* (7th ed.). American Psychological Association.

Additional Resources

Action Research

- Baily, S., Shahrokhi, F., & Carsillo, T. (2017). *Experiments in agency: A global partnership to transform teacher research*. Sense Publishers.
- Kemmis, S., McTaggart, R., & Nixon, R. (2013). *The action research planner: Doing critical participatory action research*. Springer Science & Business Media
- McNiff, J. & Whitehead, J. (2009). *You and your action research project*. Routledge.
- McNiff, J. (2016). *Writing up your action research project*. Routledge.
- Mills, G. E. (2018). *Action research: A guide for the teacher researcher* (6th ed.). Pearson.
- Noffke, S. E., & Somekh, B. (2009). *The SAGE handbook of educational action research*. SAGE Publications. *Qualitative Design and Analysis*
- Creamer, E.G. (2018). *An introduction to fully integrated mixed methods research*. Thousand Oaks, CA: SAGE Publishing
- Denzin, N. K., & Lincoln, Y. S. (Eds.). (2011). *The Sage handbook of qualitative research* (4th ed.). Thousand Oaks, CA: Sage.
- Maxwell, J.A. (2013). *Qualitative research design: An interactive approach* (3rd ed.). SAGE Publications.
- Patton, M. Q. (2015). *Qualitative research and evaluation methods* (4th ed.). Thousand Oaks, CA: Sage.
- Saldaña, J. (2016). *The coding manual for qualitative researchers* (3rd ed.). Thousand Oaks, CA: Sage.
- Stake, R. E. (2006). *Multiple case study analysis*. New York: Guilford Press.
- Ravitch, S. M., & Carl, N. M. (2021). *Qualitative research: Bridging the conceptual, theoretical, and methodological*. SAGE Publications
- Yin, R. K. (2014). *Case study research: Design and methods* (5th ed.). Thousand Oaks, CA: Sage.

There are teacher exemplar action research papers for each content area located on Blackboard in the course content folder.

Course Performance Evaluation

- Students are expected to submit all assignments in the appropriate Blackboard assignment or VIA online submission system. Assignments are due at 4:30 on the date indicated, unless otherwise indicated.
- Late work will not be accepted without a prior request.
- All submitted work must be typed unless otherwise indicated.
- See class protocol for additional information

Assignment	Points	Due Date
Active Participation/ Protocol Adherence	100	Ongoing
Methodology Draft	60	February 8
Results/Findings Draft	60	March 6
Discussion Draft	60	April 19
Action Research Project	500	May 3
Research Presentation	120	May 3
Constructive Peer Group Review	100	February 1, March 8, March 12
TOTAL	1000	

The 1000 points are converted to the 100-point grading scale below.

Graduate Grading Scale:

Grade	Standards	Grading	Graduate Courses
A	Meets Standard	95 – 100	Satisfactory / Passing
A-	Meets Standard	90 – 94	Satisfactory / Passing
B+	Approaches Standard	87 – 89	Satisfactory / Passing
B	Approaches Standard	83 – 86	Satisfactory / Passing
B-	Does Not Meet Standard	80 – 82	<i>B- is not a passing course grade for licensure</i>
C	Does Not Meet Standard	70 – 79	<i>C is not a passing course grade for licensure</i>
F	Does Not Meet Standard	Below 70	<i>F is not a passing course grade for licensure</i>

- "A" level score = Student work is well-organized, exceptionally thorough, thoughtful, candid, and completed in a professional and timely manner. Student followed all format and component guidelines, as well as including additional relevant component. Student supports assertions with multiple concrete examples and/or explanations. Significance and/or implications of observations are fully specified and extended to other contexts. Student work is exceptionally creative, includes additional artifacts, and/or intentionally supports peers' efforts.
- "B" level score = Student work is well organized, thorough, thoughtful, candid, and completed in a professional and timely manner. Student followed all format and component guidelines. Student supports assertions with concrete examples and/or explanations. Significance and/or implications of observations are fully specified.
- "C" level score = Student provides cursory responses to assignment requirements. Student did not follow all format and component guidelines. Development of ideas is somewhat vague, incomplete, or rudimentary. Compelling support for assertions is typically not provided.
- "F" level score = Student work is so brief that any reasonably accurate assessment is impossible.
- Incomplete (IN): This grade may be given to students who are passing a course but who may be unable to complete scheduled course work for a cause beyond reasonable control. The student must then complete all the requirements by the end of the ninth week of the next semester, not including summer term, and the instructor must turn in the final grade by the end of the 10th week. Faculty may grant an incomplete with a contract developed by the student with a reasonable time to complete the course at the discretion of the faculty member.

ASSIGNMENTS: CRITERIA FOR MEETING COURSE REQUIREMENTS

Assignment 1 Active Participation/ Protocol Adherence

DUE: Ongoing
POINTS: 100

PURPOSE: Continuous attendance, active participation, and adherence to protocol procedures are the attributes that allow our class sessions to be collaborative, maintain high standards, and encourage learning to take place. Students are expected to attend all class periods of courses for which they register. Class attendance and participation with the whole group, in constructive peer groups (CPG), and in 1-on-1 conferences are important - not only to the individual student, but to the class as whole. This course is designed to provide ongoing opportunities to learn through conversation. These conversations provide spaces for you to think out loud, to explore your conceptual understandings, to share uncertainties and successes, to ask questions, and to learn from each other. Like written assignments, class participation is both a central means of learning and an assessment tool. Your participation will be determined by your ACTIVE participation in class activities and discussions, your professional conduct in class, and clear evidence that you have completed course readings and tasks. Absences, tardiness, or early departures as de facto evidence of nonparticipation and as a result lower the grade.

PROCEDURE: Attendance is a prerequisite for class participation, **absences and tardiness will have a negative impact** on your participation grade. Attend each class session and actively participate in class discussions and activities without extraneous distractions and off-task activities (i.e., texting, reading email, etc....). This applies to in-person AND online classes. Active participation and protocol adherence is determined by the rubric below:

Rubric for Active Participation/ Protocol Adherence

	Acceptable	Unacceptable
ACTIVE PARTICIPATION /75	<ul style="list-style-type: none"> -participates actively in each class discussions and activities (asks questions, engages in topics conversation, partakes in hands-on activities, etc...). -participation is respectful and inclusive of others in the class. -spends time only on the tasks associated with this course and the instructor's directions. -comes to class with knowledge of prepared readings and pre-class assignments - clear evidence of competition of course tasks -online classes: Student maintains video "on" status -follows GMU's policies on attendance and code of conduct as indicated in the University Catalog 	<ul style="list-style-type: none"> -does not participate actively in each class discussions and activities -participation is not respectful and inclusive of others in the class. -does not spend time only on the tasks associated with this course and the instructor's directions. -did not come to class with knowledge of prepared readings and pre-class assignments - no evidence of competition of course tasks -online classes: Student maintains video "off" status -does not follow GMU's policies on attendance and code of conduct as indicated in the University Catalog -absent from ____ class session -tardy to ____ class sessions -departed ____ class sessions early

PROTOCOL POLICY /25	-attention is focused on activities and discussion while in class: does not engage in personal emails, instant messaging, texting, social media, games, and web surfing, etc... -electronic devices are off or in sleep mode unless using the device for notetaking -demonstrates ethical and responsible behavior in class and on the GMU network. -emergency telephone calls are taken outside of the classroom. -professional conduct in class by participating appropriately in conversation by using appropriate terms, being inclusive and respectful to the instructor and fellow classmates. -uses professional and ethical judgment when posting messages on social media networks. (NOTE: DO NOT post pictures of children or classmates on <u>any</u> social media platform.) -follows GMU's policies on attendance and code of conduct as indicated in the University Catalog	-attention is NOT focused on activities and discussion while in class by activities such as: engages in personal emails, instant messaging, texting, social media, games, and web surfing. -does not demonstrate ethical and responsible behavior in class and on the GMU network. -does use mobile telephone to call or text -does not use professional and ethical judgment when posting messages on social media networks. -is not professional conduct in class by participating appropriately in conversation by using appropriate terms, being inclusive and respectful to the instructor and fellow classmates. -does not follow GMU's policies on attendance and code of conduct as indicated in the University Catalog
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**Assignment 2
Rough Draft Research Project Components**

DUE:

Methodology	February 8
Results/Findings	March 16
Discussion	April 19

POINTS:

Methodology	60 points
Results/Findings	60 points
Discussion	60 points

PURPOSE: We have you complete various rough drafts of each section of your final project to confirm you carry out your research project in a thoughtful, paced, and monitored process to ensure you are conducting your research in a timely manner and in a way that safeguards the process for you and your participants. Merriam Webster's defines rough draft as "a first version of something (such as a document) that needs a lot of editing and rewriting". Each draft you submit is a first version of your final Action Research Project focused on the Setting, Introduction, and Literature Review sections of the Action Research Project. Please see "Research Project Details" located at the end of this syllabus and on Blackboard for specific descriptions of each section.

PROCEDURE:

- Draft:** You will submit ONE Microsoft word document on Blackboard through the template you create. The document will contain the five research project sections: the introduction, literature review, methodology, findings/Results/Findings, discussion along with the title page, appendices, and references. You will add to the document as you progress through each graded component. This ONE document will be added to each time you complete a component of the research project and uploaded to Blackboard. The below rubric is used **each time** one of the draft components is submitted to the instructor. You have already submitted the introduction, literature review, and reference drafts in your previous course.
- There will be 3 assignments on Blackboard: Draft Methodology, Draft Findings/Results, Draft Discussion. You will upload your ONE Microsoft word document to each of these assignments. The below rubric is used **each time** one of the rough draft components is submitted to the instructor

Rubric for component marked:	Methodology: _____	Results/Findings: _____	Discussion: _____
	Excellent	Adequate	Unacceptable
Draft submitted for completion to instructor /60 per draft	-draft component was uploaded to Blackboard by due date/time -draft includes much detail for all items for the component as described in the "Research Project Outline" -Format and writing are of professional quality (double spaced, error free, well composed and articulated, overall quality work, organized)	-draft component was uploaded to Blackboard by due date/time -draft includes some detail for all items for the component as described in the "Research Project Outline" --format and writing flow well and are easy to read with only minor typos and mistakes. -somewhat professional -some unorganized areas -draft component is missing _____ as described in the "Research Project Outline"	--draft component was not uploaded to Blackboard by due date/time -draft lacks detail and is difficult to understand for the component as described in the "Research Project Outline" -format and writing are incomplete, disorganized, unedited, and/or difficult to follow. -not professional looking, sloppy -not organized -sloppy

**Assignment 3
Constructive Peer Group Reviews**

DUE:

Methodology	February 1
Results/Findings	March 8
Discussion	April 12

POINTS: 100

PURPOSE: Constructive Peer Groups contribute to each other's learning by actively listening, exchanging ideas, and supporting each other's process.

PROCEDURE: You will be placed in Constructive Peer Groups. You will share your ONE Microsoft word document with your Constructive Peer Group for your peer to provide **feedback to you** using the "Constructive Peer Group Review of Research Project Form" (located on Blackboard). You will upload this form to the blackboard assignment for constructive peer group review EACH time you provide feedback. You should have a total of three (3) uploads: methodology, results/findings, discussion. You are uploading the form YOU completed for your peer. **Please note:** there is a steep penalty for not providing feedback within a week of receiving your peer's work.

Rubric for constructive peer group

Constructive Peer Group Feedback /100	-Embraces peer review process -Met with Constructive Peer Group face-to-face or virtual during assigned time -peer completes Constructive Peer Group Review of Research Project Form with detailed advice for each section and returns the form back to peer in a timely manner. -peer review is thoughtful, constructive, and complete. -glow/grow statements are used	--peer completes Constructive Peer Group Review of Research Project Form with advice. -peer review does not provide detailed guidance for improvement, is not thoughtful or constructive, incomplete -somewhat uses glow/grow statements to support peer	-Does not meet with Constructive Peer Group face-to-face or virtual -Does not complete Constructive Peer Group Review from for peer - Constructive Peer Group Review of Research Project Form is ; not complete -does not provide peer feedback in a timely manner; more than 1 week past the share date -peer review is not thoughtful -feedback is very critical and not constructive. -does not use glow/grow statements to support peer -shows little concern for peers' learning/input/ peer review

**Assignment 4
Action Research Project**

DUE: May 3
POINTS: 500

PURPOSE: The purpose of this course is to link evidence of student learning to make informed instructional decisions. This assignment aims to engage students in creating an action research project with the intention of engaging students in critiquing various research paradigms, reviewing literature, and systematically collecting and interpreting evidence to improve practice.

PROCEDURE: You will design and conduct a teacher action research project that is relevant to your present teaching position. Outlines, examples, descriptions, and rubrics of these projects will be provided. The project will entail that you collect and analyze data and share the results of your study with our class. With special permission from the instructor, it is possible to partner with another student for the purpose of sharing data and researching different aspects of a common topic; each partner, however, must submit an original, stand-alone report. This final action research project contains 5 chapters (Introduction, Literature Review, Methodology, Results/Findings, and Discussion) with a title page, abstract, references, and appendices. You may use an updated, complete Introduction, Literature Review, and References sections from your previous 1-credit research course for this final action research project. **Final paper must be submitted to SafeAssign and copy of report submitted to blackboard with assignment. Please note that B- is not a passing grade for this assignment.**

Special note: Human Subjects in Research: Any research or action research that will be disseminated publicly must have prior approval of the GMU Research Development, Integrity, and Assurance (RDIA) office or the Institutional Review Board (IRB). Human Subjects Training must be completed prior to seeking RDIA/IRB approval. **Inquiry/action research that is used solely for the purpose of studying pedagogical aspects may be conducted without additional permission but cannot be disseminated.** Detailed information on what is involved in submitting a proposal to the RDIA/IRB: [Human Subjects - Office of Research Integrity and Assurance \(https://oria.gmu.edu/topics/human-subjects/\)](https://oria.gmu.edu/topics/human-subjects/)

Please note that projects or papers submitted for credit in another course cannot be used for a grade in this course, except from your previous 1-credit research course. When considering research topics, you should identify a research question that really matters to you. It should be something about which you are curious and with which you are willing to spend time researching and learning.

Please note that the below rubric creates a total point value that will be multiplied by 5 to create a point value for the final Action Research Project.

	BELOW EXPECTATIONS	APPROACHES EXPECTATIONS	MEETS EXPECTATIONS	EXCEEDS EXPECTATIONS
	0-3.5 points / F	3.5-4 points / C	4-4.5 points / B	4.5-5 points / A
Title Page and Abstract 1 page each 5 points	Abstract is so brief, incomplete, or off-topic that accurate assessment is impossible. Title page is missing	Includes only general statements about the study. Information on methods and procedures to be followed is sketchy or missing. Outside of required length. Title page includes few of the required information.	Includes an identifiable summary that addresses the purpose of the study. Mentions methods and procedures to be followed but not sharply focused. Title page includes most of the required information.	Project includes a concise summary that reports factually on the purpose of the study and the methods and procedures to be followed. Title page includes Research Project Title, author's Name, George Mason University, Course Number, instructor's name, Submission Date
	0-6.9 points / F	7-7.9 points / C	8-8.9 points / B	9-10 points / A

Introduction, Area of Focus, Rationale, and Research Questions 3-4 pages, 10 points	Section is so brief, incomplete, or off-topic that accurate assessment is impossible. Does not clearly explain the context or state study setting, operationally defines the study terms, the research purpose or questions.	Project includes minimal information on the context framework for the study. Does not offer a rationale for the study or does so only superficially. States study setting, operationally defines the study terms, the research question and purpose of the study but may be unclear or lack specificity.	Project includes an adequate context/theoretical framework for the study and a defensible rationale for its execution, though one or both may be weakly developed. Explicitly states study setting, operationally defines the study terms, the research question and purpose of the study.	Project includes a sound context/theoretical framework for the study and a compelling rationale for its execution. Clearly and explicitly states the study setting, operationally defines the study terms, research question, and purpose of the study.
	0-10.5 points / F	10.5-12 points / C	12-13.5 points / B	13.5-15 points / A
Literature Review 4-6 pages 15 points	Literature review is so brief, incomplete, or off-topic that accurate assessment is impossible.	Includes fewer than 4 peer-reviewed empirical research sources. Does not make a clear case for the project focus. Summarizes cited works sequentially, rather than synthesizing and organizing them thematically. Relies heavily on direct quotes.	Includes at least 4 peer-reviewed empirical research sources. Makes a reasonable case for the project focus. Organizes the literature by identifiable themes, although organization within themes may be unclear. Attempts to synthesize referenced sources. Uses few direct quotes.	Includes at least 5 peer-reviewed empirical research sources. Identifies gaps in the literature to which the study responds and makes a clear case for the project focus. Organizes the literature by clearly identifiable themes, proceeding from general to more specific within each theme. Effectively synthesizes referenced sources, using few, if any, direct quotes.
	0-13.9 points / F	14-15.9 points / C	16-17.9 points / B	18-20 points / A
Method 4-6 pages 20 points	Methods section is so brief, incomplete, or off-topic that accurate assessment is impossible. Does not clearly describe how the study was conducted, what data sources were used, or how data were analyzed.	Includes explanation of the study design, procedures followed, sampling methods, and analytical tools (including any statistical tests), given the stated purpose of the study; explanations, however, are not fully developed. Mentions ethical issues raised by the study but addresses them only superficially.	Includes explanation of the study design, procedures followed, sampling methods, and analytical tools (including any statistical tests), given the stated purpose of the study. Discusses ethical issues raised by the study and how they were addressed.	Includes explanation and justification of the appropriateness of the study design, procedures followed, sampling methods, data collection and analytical tools (including any statistical tests), given the stated purpose of the study. Discusses ethical issues raised by study and explains how they were addressed.
	0-13.9 points / F	14-15.9 points / C	16-17.9 points / B	18-20 points / A
Results/ Findings 8-12 pages 20 points	Results/findings section is so brief, incomplete, or off-topic that accurate assessment is impossible. Does not clearly explain what was discovered through analysis of the data.	Includes reporting and interpretation of narrative and/or numerical data with little apparent concern for accuracy and objectivity. Analytical tools are inappropriate to the methodology. Provides, at best, tenuous links between study outcomes, hypotheses (if stated), and the original research question(s).	Includes reporting and interpretation of narrative and/or numerical data accurately, objectively, and concisely. Analytical tools are mostly appropriate to the methodology. Does not highlight links between study outcomes, hypotheses (if stated), and the original research question; however, such links may be implied.	Includes reporting and interpretation of narrative and/or numerical data accurately, objectively, and concisely using analytical tools appropriate to the methodology. Highlights explicit links between study outcomes, hypotheses (if stated), and the original research question.
	0-13.9 points / F	14-15.9 points / C	16-17.9 points / B	18-20 points / A
Discussion, Reflection, Implications, Recommendations, Impact Presentation, and Action Plan 4-6 pages 20 points	Section is so brief, incomplete, or off-topic that accurate assessment is impossible. Does not meaningfully discuss the implications of the study or describe a plan for future application or action.	Addresses practical implications of study findings including how they will be shared with others. Does not consistently support assertions or interpretations using sound arguments consistent with study findings. Does not describe recommendations for future research or how results will be applied in practice.	Addresses theoretical/practical implications of study findings including how they will be shared with others. Supports assertions and interpretations using sound arguments consistent with study findings. Does not describe recommendations for future research or how results will be applied.	Includes evaluation of the study's strengths and weaknesses. Addresses theoretical/practical implications of study findings, including how they will be shared with others. Highlights threats to validity, reporting on how they were addressed. Supports assertions and interpretations using sound arguments consistent with study findings. Describes recommendations for future research and how results will be applied in practice.
	0-6.9 points / F	7-7.9 points / C	8-8.9 points / B	9-10 points / A
References, Appendices, Writing Styles, Mechanics, and General Notes 10 points	Paper is so brief, incomplete, or off-topic that accurate assessment is impossible.	Paper falls short of accepted standards for master's level composition. Rough drafting errors and error patterns are widespread. Voice, verb tense, and writing style vary from section to section. Technical terms are used incorrectly and/or imprecisely, reflecting only a rudimentary understanding of the underlying concepts. Text is formulaic, relying heavily on paraphrases and "borrowed" materials not formally cited. Transitions are weak, contributing to an apparent lack of direction or cohesion. Paper does not adhere to formatting specifications provided in course text and materials. Writing mechanics, citations and references page do not follow APA style.	Paper is well written with few notable rough drafting errors. Voice, verb tense, and writing style are generally consistent with few exceptions that do not substantially diminish readability. Most technical terms are used correctly, reflecting adequate understanding of the underlying concepts. Text is original, but opinions and propositions are not consistently supported by logic and references to published research. Transitions do not connect sections seamlessly but do not substantially diminish readability. Paper does adhere to formatting specifications provided in course text and materials. Writing mechanics, citations and reference page mostly follow APA style.	Paper is well written with no notable rough drafting errors. Voice, verb tense, and writing style are consistent throughout. Technical terms are used precisely and accurately, reflecting a firm understanding of underlying concepts. Text is original; opinions and propositions are supported by strong logic and formal references to published research. Sections are linked with unifying transitions, giving the report a clear sense of direction and cohesion. Paper adheres to formatting specifications provided in course text and materials. Writing mechanics, citations and reference page follow APA style.
Total points _____ x 5 = _____ total for assignment				

**Assignment 5
Research Presentation**

DUE: May 3

POINTS: 120

PURPOSE: research is not conducted just for the research to learn from...it is conducted so that others can learn and improve their own practice as well. It is important that you as a researcher share your project and findings with an audience. The peers in your class care about your research and are excited to see what you found out because of this month's long process.

PROCEDURE: You will make an in-class presentation of your project. The presentation should present the research project and findings in an interactive manner that engages classmates in the presentation. You will present your research project and findings using a poster presentation using a tri-fold board. See the Poster Presentation Guidelines, located on Blackboard for specific instructions.

	Excellent	Adequate	Unacceptable
Presentation /120	-presents using: poster presentation using a tri-fold board -followed requirements from poster presentation guidelines - findings clearly documented, good visual design -arrived on time for presentation -articulated research data and findings in a poised, articulate manner -responded to questions well; engaged with peers in a positive manner -prepared for presentation -student is professional in appearance	-mostly followed requirements from poster presentation guidelines - findings were mostly documented, mostly a good visual design --articulated research data and findings in a mostly poised, articulate manner -mostly responded to questions well; mostly engaged with peers in a positive manner -mostly prepared for presentation	Does not present. -Does not present using a tri-fold board -does not follow requirements from poster presentation guidelines - findings were not documented, visual design is difficult to follow --had a difficult time articulating research data -was not poised -did not respond to questions -did not engage with peers in a positive manner -was not prepared for presentation -student is NOT professional in appearance

Professional Dispositions

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

Class schedule

Note: The course schedule provides a tentative outline for the course. Faculty reserves the right to alter the schedule as necessary, with notification to students. All readings are posted to Blackboard (Bb). Other smaller tasks may be assigned in addition to what is noted.

Class Date	Class Topic and Activities	Reading/Assignment Due
		Methodology DRAFT Due February 1st Methodology DRAFT section due to Constructive Peer group for feedback
Session 1 Wednesday In person 7:20-10:00 February 8	Finalizing Research Methodology Learning How to Code Data Creating Themes Data Analysis: Quantitative and Qualitative Writing the Results/Findings section	Methodology DRAFT Due February 8th Methodology DRAFT section. Add to previously created template. Upload to Blackboard in assignments.
FIELD WORK: Data collection		
Session 2 Wednesday Synchronous 7:20-10:00 March 8	Learning How to Code Data Reviewed Creating Themes Reviewed Writing the Discussion Section: action planning Presentation expectations discussed	Results/Findings DRAFT Due March 8th Results/Findings DRAFT section due to Constructive Peer group for feedback
		Results/Findings DRAFT Due March 16th Results/Findings DRAFT section. Add to previously created template. Upload to Blackboard in assignments
FIELD WORK: Data Analysis		
Session 3 Wednesday Asynchronous 7:20-10:00 March 29	Wrapping up the paper Final points	
		Discussion DRAFT Due April 12 Discussion DRAFT section due to Constructive Peer group for feedback
Session 4 Wednesday Synchronous 7:20-10:00 April 19	Individual conferences - sign up for timeslot via OneDrive form Meet with Constructive Peer Group	Discussion DRAFT Due April 19 Discussion DRAFT section. Add to previously created template. Upload to Blackboard in assignments
		Update Introduction section on your template Reread your entire paper, ensuring all components are updated to your current placement.
Session 5 Wednesday In person 4pm-5pm May 3	Presentations Course wrap-up Course Evaluations BRING LAPTOP	Action Research Project Presentations Due Hardcopy Action Research Paper brought to presentation Final project paper due: Upload to Blackboard in assignments.

Core Values Commitment

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

GMU Policies and Resources for Students

Policies

- Students must adhere to the guidelines of the Mason Honor Code (see <https://catalog.gmu.edu/policies/honor-code-system/>).

- Students must follow the university policy for Responsible Use of Computing (see <https://universitypolicy.gmu.edu/policies/responsible-use-of-computing/>).
- Students are responsible for the content of university communications sent to their Mason email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students **solely** through their Mason email account.
- Students with disabilities who seek accommodations in a course must be registered with George Mason University Disability Services. Approved accommodations will begin at the time the written letter from Disability Services is received by the instructor (see <https://ds.gmu.edu/>).
- Students must silence all sound emitting devices during class unless otherwise authorized by the instructor.

Campus Resources

- Support for submission of assignments to VIA should be directed to viahelp@gmu.edu or <https://cehd.gmu.edu/aero/assessments>. Questions or concerns regarding use of Blackboard should be directed to <https://its.gmu.edu/knowledge-base/blackboard-instructional-technology-support-for-students/>.
- For information on student support resources on campus, see <https://ctfe.gmu.edu/teaching/student-support-resources-on-campus>

Notice of mandatory reporting of sexual assault, sexual harassment, interpersonal violence, and stalking:

As a faculty member, I am designated as a “Non-Confidential Employee,” and must report all disclosures of sexual assault, sexual harassment, 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 or support measures from Mason’s Title IX Coordinator by calling 703-993-8730, or emailing titleix@gmu.edu. **For additional information on the College of Education and Human Development, please visit our website <https://cehd.gmu.edu/students/>.**

Expectations and Protocols

Below are class protocols which govern our time together, whether during in person or during online instruction.

Written Assignments:

- Written assignments are to be submitted on Blackboard by the due date at the start of class. Blackboard time stamps all submitted work.
- Written assignment rubrics indicate “format and writing are of professional quality”. This refers to the assignment being an overall piece of quality work that is: grammatically correct with no errors; well composed and articulated; typed with 12-point font, double-spaced, and one-inch margins; contains appropriate diction and usage such as “students” instead of “kids”; appropriate usage of homonyms (i.e. there/their/they’re); and is PROOFREAD. Work not proofread, or that has extensive grammatical errors, will not be graded and you will be advised to revise the assignment.
- All work should be your own and original. Copyright law is to be respected in all assignments. **Any item taken from another source (the internet, classroom teacher, or a curriculum guide) must be noted and cited.** Incorporating an idea or using another’s material and not indicating the source is PLAGIARISM. GMU and I support strong academic integrity. Please note that: “Plagiarism encompasses the following:
 - 1) Presenting as one’s own the words, the work, or the opinions of someone else without proper acknowledgment.
 - 2) Borrowing the sequence of ideas, the arrangement of material, or the pattern of thought of someone else without proper acknowledgment.” (from Mason Honor Code online at <https://catalog.gmu.edu/policies/honor-code-system/>)
 - 3) Paraphrasing involves taking someone else’s ideas and putting them in your own words. When you paraphrase, you need to cite the source using APA format.
 - 4) When material is copied word for word from a source, it is a direct quotation. You must use quotation marks (or block indent the text) and cite the source.
 - 5) Electronic tools (e.g., SafeAssign) may be used to detect plagiarism if necessary.
 - 6) Plagiarism and other forms of academic misconduct are treated seriously and may result in disciplinary actions.
- **Assignments will not be accepted after the due date. Any assignment, except the final Unit Plan, may be RESUBMITTED for an improved grade WITH PRIOR PERMISSION. All re-written assignments MUST be submitted by _____ – without exception.**

Protocol and Expectations:

- Internet, mobile devices, and social media: While in class your attention should be focused on class related activities and discussion. The legitimate educational purpose of our class is to help prepare you for your professional career. This includes demonstrating courtesy and respect for your peers and myself by practicing and modeling the effective use of technology. Your attention in class is important for your learning. Your participation grade will be reduced accordingly for failing to follow these guidelines:
- Laptop Computers, Netbooks, Handheld Tablets Use
 - Engaging in personal emails, instant messaging, texting, social media, games, and web surfing are not appropriate during class time.
 - Unless you are using your device for notetaking, your laptops or other device should be off or in sleep mode until we are ready to use them.
 - Demonstrate ethical and responsible behavior during class and on the GMU network.
 - When in class, spend time only on the tasks associated with this course and the instructor’s directions.
 - In general, use your laptops and other devices in class as you would expect your students to use theirs.
 - **Online synchronous classes: Students must maintain webcam “on” status**

SEED Program “Seeds”

As illustrated by the model above, the SEED program is guided by five “Seeds” or principles that students are expected to understand and learn to apply in their teaching and professional lives: Social Justice, Inquiry and Reflection, Advocacy and Agency, Partnership and Collaboration, and Respect and Relationship. SEED students address each Seed in a developmental fashion, twice during their licensure program and once again during the master’s teacher research capstone experience:

- Each Seed is introduced and students demonstrate initial understandings and consider initial applications to teaching of the Seeds (as determined by the program and course instructor) during one of the five pre-licensure courses (Foundations, Methods I, Human Development, Methods II, Content Literacy)
- All five Seeds are revisited and students demonstrate deeper conceptual understandings of and identify applications to their teaching of the Seeds (in a manner they determine) during internship and internship seminar
- All five Seeds are explored more deeply, and students demonstrate mastery understandings of, applications to their teaching and teaching inquiries (via their teacher research Methodologies), and future integrations of the Seeds into their teaching and teaching inquiries (via their teacher research Discussions)



Course	Seed/Definition	Key Assignment Description
Foundations of Secondary Education	Advocacy and Agency The SEED program educates teachers to develop a commitment to advocating for and developing agency in every young person. Teachers’ advocacy activities begin with pedagogical interactions and extend into school and community contexts. Similarly, teachers’ consideration of youths’ agency begins with enabling them to act independently and make choices in their own best interests—in the classroom and beyond.	Teacher Candidate Digital Portfolio This digital portfolio is a website the teacher candidate creates to begin assembling products and artifacts that illustrate their emerging philosophy of teaching, experiences designing instructional materials, interviews and reflections from clinical experiences, and professional documents such as resumes and work experience. Pieces that teacher candidates add to the digital portfolio demonstrate their agency as educators inside and outside of classrooms, candidates’ advocacy of critical issues relevant to secondary education, and candidates’ thinking on how educators, their learners, policy makers, and community members all have different agency in making choices related to secondary education.
	Social Justice The SEED program educates teachers to develop a commitment to social justice. Such a commitment encompasses the belief that all members of our school, university, and broader communities can contribute to disrupting inequitable interactions, practices, and structures, with a focus on enhancing each individual’s opportunity to learn and succeed. Social justice is also closely aligned with “equity,” which involves the implementation of anti-oppressive and antiracist interactions, practices, and structures that ensure that every individual has an unbiased, impartial, responsive, and appropriately-scaffolded opportunity for academic and professional success.	Lesson Plan Using a provided format, the lesson plan must include objectives, standards, instructional plans, assessments, classroom layout(s), a teacher script, and all materials that would be given to students as part of the lesson. The lesson must demonstrate the teacher candidate’s ability integrate justice concepts/content into their instruction.

Human Development and Learning	<p align="center">Relationships with and Respect for Youth</p> <p>The SEED program educates teachers to develop relationships with and respect for youths. When a school culture promotes respect, support for students' identities, senses of belonging, and tolerance, students are able to work as active participants in the classroom and the community. Secondary teachers who create a welcoming environment in their classrooms; who strive to know and honor students' backgrounds, preferences, and perspectives; who build relationships with young people based on trust and mutual understanding; and who connect curriculum to students' cultures hold key to effective instruction. Their instruction will contribute to developing unique individuals who will be able to connect their life experiences to learning.</p>	<p align="center">Case Study/Student Application Project</p> <p>The case study/student application project is a summative assessment of the teacher candidate's ability to use psychological theory to analyze problems in a classroom and practice approaches a thoughtful, ethically principled teacher would use to solve problems. The case study/student applicant project must demonstrate the teacher candidate's understanding of how and why teachers can use psychological theories and principles to develop relationships with and demonstrate respect for youths, with an ultimate goal of enhancing adolescents' school and life success.</p>
Methods II	<p align="center">Inquiry and Reflection</p> <p>The SEED program educates teachers who appreciate and know how to ask questions about their practices and who are critically reflective of their pedagogies, empowered by evidence. The ability to inquire and reflect on one's teaching practice is foundational to educators' ongoing and self-directed professional growth across their professional lifespans. Educators who can inquire into and consistently implement effective instructional practices--and who can critically reflect on and evaluate their pedagogies--will be the most responsive teachers and will best inspire students to learn.</p>	<p align="center">Unit Plan/Lesson Implementation</p> <p>Teacher candidates will use the "backwards design" process to develop a plan for teaching a unit which actively involves students in meaningful learning; individualizes learning to accommodate the strengths and needs of students; and provides authentic assessments. Unit plans will include objectives, a calendar, and an outline of each day in the unit. One lesson of the unit must be taught/co-taught in the teacher candidate's clinical experience classroom, and the unit plan and lesson implementation must demonstrate the candidate's understanding of how and why teachers use inquiry and reflection to improve their pedagogical practices and enhance student learning.</p>
Content Literacy	<p align="center">Collaboration and Partnership</p> <p>The SEED program educates teachers who value collaborative engagement in learning and teaching and supporting collaboration through different forms of partnership. Collaboration takes on many forms, including collaboration amongst teacher candidates and their peers, course instructors and faculty advisors, mentor teachers in schools, their students and their students' families and caregivers, and amongst experts in their fields of teaching. These collaborations occur through a shared understanding of partnership. By spanning multiple boundaries, the SEED program supports partnerships with local schools and their divisions, with state and national professional associations, and with international experiences in other countries.</p>	<p align="center">Disciplinary Literacy Inquiry Project</p> <p>Teacher candidates complete an inquiry into methods of supporting students' comprehension in their respective content areas. Using resources from class and peer-reviewed articles, candidates develop an understanding of how to guide and deepen students' comprehension, addressing questions including "Why is it important to be literate in our respective subject areas?". The inquiry project must demonstrate the candidate's understanding of how why teachers collaborate with other education professionals, students, families and caregivers and others to support students' subject area comprehension and literacy learning.</p>
Internship and Internship Seminar	<p align="center">All SEED Seeds: Applications to Teaching</p> <p>All five Seeds are revisited and students demonstrate deeper conceptual understandings of and identify applications to their teaching of the Seeds during internship and internship seminar.</p>	
Teacher Research (for Master's students only)	<p align="center">All SEED Seeds: Applications to Teaching and Teaching Inquiries</p> <p>All five Seeds are explored more deeply, and students demonstrate mastery understandings of, applications to their teaching and teaching inquiries (via their teacher research Methodologies), and future integrations of the Seeds into their teaching and teaching inquiries (via their teacher research Discussions)</p>	

Research Project Details

This document is a compilation of information from the various work of Dr. Kristien Zenkov, Dr. Melissa Hauber, and Dr. Lynda Herrera. George Mason University, May 2022

Your project must focus on **student engagement, efficacy, and achievement** in/with your subject matter.

Sections of the Research Project Sections of the Research Project

1. Title page
2. Abstract (125-150 words)
3. Introduction (3-4 pages)
 - a. Setting and demographics of school division, community, and school
 - b. Area of focus you are addressing
 - c. Rationale: the reason for or purpose of your project
 - d. Research question(s)
 - e. Hypothesis (optional)
4. Literature Review (4-6 pages)
 - a. Synthesizing 10+ sources – minimum of 5 peer reviewed research-based journal articles.
 - b. Summary of relevant research related to the study's main topic
 - c. Synthesis and analysis of research
 - d. Paucity of research explored
 - e. Connection to research question(s)
5. Methodology (4-6 pages)
 - a. Participant/Setting description and selection criteria
 - b. Context of the research
 - c. Research question(s) framed in relationship to methodology
 - d. Strategies/design implemented
 - e. Materials used (referred to appendix)
 - f. Detail scope and sequence of implementation
 - g. Data sources and types (examples in table)
 - h. Triangulation explained
 - i. Explain validity and reliability of data collection
 - j. Consider ethical considerations
6. Results/Findings (8-12 pages)
 - a. Introduction/overview of findings
 - b. Data analysis method explained
 - c. Description of findings and patterns (organize by theme/student/data source, etc.)
 - d. Connections to research question(s)
 - e. Interpretations: what findings mean
7. Discussion (4-6 pages)
 - a. Relation of your findings to the literature/theory on the topic
 - b. Reflection on teacher-teacher learning and what findings mean
 - c. Implications for teaching and future research
 - d. Limitations
 - e. Recommendations for future research
 - f. Impact presentation
 - g. Action Plan for teaching and learning
8. References
9. Appendices

Each section is explained in detailed below

Title Page

This section is one page.

Your paper will begin with a title page, numbered page 1.

The title should summarize your research and should be limited to 12 words.

All items on the title page must be centered.

The running head is included on the title page and all pages in the paper.

The title page must include the following, in this order:

- Research Project Title

- Your Name
- George Mason University
- Appropriate Course Number: Research in Secondary Education
- Dr. Lynda Herrera
- Submission Date

Abstract

This section is one page, 125-150 words

The abstract begins on page number 2.

Center the word 'Abstract' and continue typing on the very next double-spaced line.

Type the abstract as a single paragraph in block format (i.e., no paragraph indentations)

Type all numbers, except those that begin a sentence, as digits.

The abstract is a succinct description of the problem which the research addresses and the method used in the study.

An abstract writing strategy: take 1-2 sentences from each section of your final project (introduction, literature review, methodology, findings, and discussion) to craft the abstract.

Questions to help guide you:

- What was your study about?
- What was your major finding?
- What was your purpose and the context, method, key findings, and significance of your research?

Introduction

The introduction begins on page 3.

This section should be approximately 3-4 pages in length.

Center the word 'Introduction' and continue typing on the very next double-spaced line.

It is recommended that you have subheading within this section to assist with organization.

USE the "Writing the Introduction" handout for additional guidance

The purpose is to set the stage for research and provide an overview of the research project.

This section of the research report tells the reader what you did in the research. (The purpose of this study was.....).

A helpful tactic is to begin this section with a story that highlights the classroom issue/problem/ topic of the study you are attempting to address. This will pull the reader into your paper.

Then **briefly** describe the setting, including the community, school division, school, classroom, and students. You may use graphics, charts, etc....to visually share demographic information.

Demographic information in your introduction should focus on your school, while demographic information in your methods section should focus specifically on the students you worked with in your study.

Important: Be sure to add a footnote regarding pseudonyms at the first mention of a teacher name or school: "All names in this paper are pseudonyms".

Explain **your role** in the classroom and any other relevant information. Use the term "teacher-researcher".

You will have subheadings of: **Area of Focus, Rationale, and Research Questions**

In the **Area of Focus section:**

- you should describe the context of your research (what are you examining in this paper?)
- define any of your terms (known as operationally defining your terms) such as cooperative learning groups, MLL, primary sources, or concept mapping.
- Address why this research is important to you, your teaching, and the larger teaching community

In the **Rationale Section:**

- you should focus on the purpose of your study
- what problem/issue you are addressing
- why these concerns are important to you
- what your research might help you learn
- Be sure that your research questions steer you toward a descriptive response.

In the **Research Question section:**

- you should state your research question(s) and any sub-questions
- explain any hypothesis you might have (what do you think will be the results of this study?)
- explain how you formulated your hypothesis.
- Briefly explain HOW you will examine this research question
- Briefly explain what intervention you will use

A good introduction answers the following questions:

- What is the problem you are addressing?
- How did you discover this problem?
- What is the purpose of the study?
- How is your research problem of interest to the professional community?
- What are your methods of data collection?
- What is the intervention you used?
- Why is this topic important?

Literature Review

This section should be approximately 4-6 pages in length.

Do not purposely start a new page for this section.

Center the words 'Literature Review' and continue typing on the very next double-spaced line.

It is recommended that you have subheading within this section to assist with organization.

Use the Graphic Organizer handout for the Literature Review and How to Write a Literature Review

handout for additional guidance

You must have a minimum of **5 references** in which you cite and synthesize in this section. References can be from refereed journals, books (generally not textbooks), curriculum resources, and scholarly compilations.

Your references must be from peer-reviewed, academic, research-based journals from the past ten years.

Teacher research appeals to a broad range of research resources, including reports of teachers' experiences.

You need to be familiar with previous investigations of your topic and discuss how these investigations informed your design to properly address your research question. The review of the literature should consist of a summary of relevant research related to the study's main topic.

The literature review forms a context in which the reader can view and understand your study.

You establish what the current literature in the field of education is in relationship to your problem or intervention.

You summarize and analyze the literature in this section. The **emphasis is on synthesis and analysis** (Bloom, 1956, 1984).

This is the concrete foundation for your research – without this section your research would exist alone, in a black hole.

After you have read your sources: ask yourself...what are the 3 things I learned from these sources that inform my thoughts about my question or my methodology? These three "things" become your subheadings.

Open your literature review with a "road map": tell us the themes and topics you will address in the body of your review.

Use **direct quotes very sparingly**. Craft your literature review as a story of the study of your topic, as a dialogue between you and these other scholars.

At the end of the literature review, include a one-paragraph summary of the major discoveries in your review, connecting these to the focus of your study.

Transitions should connect one theme with the next.

A good literature review answers the following questions:

- What are the 2 (or 3) main themes, or categories, that emerged after you read the articles?
- What is missing in the literature ("There is a paucity of research ...")?
- In what ways is your research design based on other's research?

The literature review tends to be the section that students encounter the most struggle. To better assist you in the process the following pages offer helpful advice.

How to Write a Literature Review <i>By Dr. Zenkov</i> The purpose of a literature review is to offer an overview of significant literature published on a topic.	
What is a review of literature? The format of a review of literature may vary from discipline to discipline and from assignment to assignment. A review may be a self-contained unit -- an end in itself -- or a preface to and rationale for engaging in primary research. A review is a required part of grant and research proposals and often a chapter in theses and dissertations. Generally, the purpose of a review is to analyze critically a segment of a published body of knowledge through summary, classification, and comparison of prior research studies, reviews of literature, and theoretical articles.	
Elements of a literature review	A literature review should include: <ul style="list-style-type: none"> • An overview of the subject, issue or theory under consideration, along with the objectives of the literature review • Division of works under review into categories (e.g., those in support of a particular position, those against, and those offering alternative theses entirely) • Explanation of how each work is similar to and how it varies from the others • Conclusions as to which pieces are best considered in their argument, are most convincing of their opinions, and make the greatest contribution to the understanding and development of their area of research In the introduction, you should: <ul style="list-style-type: none"> • Define or identify the general topic, issue, or area of concern, thus providing an appropriate context for reviewing the literature. • Point out overall trends in what has been published about the topic; or conflicts in theory, methodology, evidence, and conclusions; or gaps in research and scholarship; or a single problem or new perspective of immediate interest. • Establish the writer's reason (point of view) for reviewing the literature; explain the criteria to be used in analyzing and comparing literature and the organization of the review (sequence); and, when necessary, state why certain literature is or is not included (scope). In the body, you should: <ul style="list-style-type: none"> • Group research studies and other types of literature (reviews, theoretical articles, case studies, etc.) according to common denominators such as qualitative versus quantitative approaches, conclusions of authors, specific purpose or objective, chronology, etc. • Summarize individual studies or articles with as much or as little detail as each merits according to its comparative importance in the literature, remembering that space (length) denotes significance. • Provide the reader with strong "umbrella" sentences at beginnings of paragraphs, "signposts" throughout, and brief "so what" summary sentences at intermediate points in the review to aid in understanding comparisons and analyses. In the conclusion, you should: <ul style="list-style-type: none"> • Summarize major contributions of significant studies and articles to the body of knowledge under review, maintaining the focus established in the introduction. • Evaluate the current "state of the art" for the body of knowledge reviewed, pointing out major methodological flaws or gaps in research, inconsistencies in theory and findings, and areas or issues pertinent to future study. • Conclude by providing some insight into the relationship between the central topic of the literature review and a larger area of study such as a discipline, a scientific endeavor, or a profession.
Steps to prepare a literature review	Preparation of a literature review may be divided into four broad stages: <ol style="list-style-type: none"> 1. Define your topic: you must define your topic and components of your topic 2. Search for materials: use search tools (such as the library catalogue, databases, bibliographies) to find materials about your topic 3. Evaluate what you have found: read and evaluate what you have found in order to determine which material makes a significant contribution to the understanding of the topic 4. Analysis and interpretation: provide a discussion of the findings and conclusions of the pertinent literature.
Evaluating material	In assessing each piece, consideration should be given to: <ul style="list-style-type: none"> • Provenance: What are the author's credentials? Are the author's arguments supported by evidence (e.g. primary historical material, case studies, narratives, statistics, recent scientific findings)? • Objectivity: Is the author's perspective even-handed or prejudicial? Is contrary data considered or is certain pertinent information ignored to prove the author's point? • Persuasiveness: Which of the author's theses are most/least convincing?

	<ul style="list-style-type: none"> Value: Are the author's arguments and conclusions convincing? Does the work ultimately contribute in any significant way to an understanding of the subject?
Uses and purpose of a literature review	<p>A literature review may constitute an essential chapter of a thesis or dissertation, or may be a self-contained review of writings on a subject (such as a journal article). In either case, its purpose is to:</p> <ul style="list-style-type: none"> Place each work in the context of its contribution to the understanding of the subject under review Describe the relationship of each work to the others under consideration Identify new ways to interpret, and shed light on any gaps in, previous research Resolve conflicts amongst seemingly contradictory previous studies Identify areas of prior scholarship to prevent duplication of effort Point the way forward for further research Place one's original work (in the case of theses or dissertations) in the context of existing literature

Elements of an Effective Literature Review

<ul style="list-style-type: none"> You might open your review with a quote from one of the articles to which you are appealing You write brief summaries of each of the articles you reviewed, focusing on a summary of the research findings You include transition sentences to explain how each successive article relates to the previous and to the theme you are describing—use words like “echo” and “similarly” Your reviews are theme-driven—you focus on themes you've identified across all or some of the articles that relate to your research Your resources should generally be less than ten years old From your collection of at least ten sources, you can include approximately half research articles and half other types of literature (books, curricula, etc.) Writing a review is a personal and artistic endeavor and the review should be well-written and interesting to read You want your review to be “tight”—that is, very few extra words You want your review to be well organized and flow logically—but you determine the logic of this flow You can create headings within your review to identify the themes on which you are focusing You want to open your review with an introduction to the themes on which you are focusing—or a description of the way you are organizing your review—and a conclusion that also transitions into your research Tell us the STORY of the research—and engage in a discussion of the research with these other scholars, as the scholar you are You should only use the last names of researchers 	<ul style="list-style-type: none"> You can focus in your review on the methods the researchers have used, especially those that relate to your research You should focus in your review on how these articles addressed or answered YOUR research questions Try to write using “considerate” text—try to use “regular” English that is not overly scientific You are working to provide an overview of the research literature that relates to the topics of your own research You should NOT use article/book titles in the body of your literature review You should use quotes very sparingly—paraphrase what authors are saying as much as possible Try to use sentence starters like “Recent research finds that...” and “Other important studies reveal...” and “Based on the results of this study...” and “According to the research I reviewed...” In general, you want to discuss findings from ACROSS articles/reports/books, rather than just so much detail about one article, unless it really is a seminal piece You are NOT writing an annotated bibliography—you want to look broadly across publications rather than too deeply at individual ones Be sure to offer the reader a transition from your introduction into your literature review and then provide summary/transition into your method section Be sure to provide an introductory paragraph for lit review, telling the reader how you organized your literature review (e.g., by theme, chronologically, etc.) Write in the past tense Be sure to follow APA formatting Please read the example projects provided you—for example, for information about how to cite articles Look at reference lists of really good articles to find additional resources
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Methodology

This section is 4-6 pages

Do not purposely start a new page for this section.

Center the word 'Methodology' and continue typing on the very next double-spaced line.

It is recommended that you have subheading within this section to assist with organization.

This section includes a narrative explaining the research design and the procedure (method) by which the study is implemented. **Describe how you implemented your research**, including the type of research approach you used (i.e., qualitative case study).

Be sure to place sample material in an appendix (interview questions, journaling prompts, surveys, lesson plans, etc...)

Each step should be **described in detail**, so the reader knows exactly how the research was conducted...think very detailed lesson plan here. A reader should be able to replicate your research, based on what you explain in this section. **BE EXACT – PROVIDE DETAILS!**

Begin by describing your immediate setting - your classroom. You may incorporate a chart to highlight the demographics of the class. Demographic information in your methods section should focus specifically on the students you worked with in your study.

Describe the physical room. How is the room organized? How does the room highlight the content taught? Describe the lighting, space, location in the school.

Describe the teacher-researcher – this is YOU (your length of tenure in education and at the school, your philosophy of education, your teaching style, etc...). Include your role in the classroom as the researcher.

Describe your mentor, if applicable.

Highlight 3-4 students in the classroom as examples of students you want to improve academically through your intervention.

- Why did you choose these individuals?
- Who are they in terms of gender, ethnicity, age, grade level, language/culture, and educational achievement?
- How many years in the school?
- How many years in the district, family life, academic ability, standardized data collected, peer relations, personality, physical description, etc...? (OR describe your class using the same parameters?)

Explain why you chose to do what you did in this section.

Describe the challenge the students/class faces. **This is your problem you are trying to improve.**

Repeat your question(s) to remind the reader what you are studying.

Describe, in detail, your intervention Your intervention is what you are doing to fix the problem.

(How you implemented Mindfulness? How you used VTS? How you implemented icebreakers to create engagement? How you implemented literature circles?)

- How many sessions and/or total time did it take to implement the intervention?
- How will it be completed?

Describe the length of the intervention. You must describe how you are logistically incorporating the intervention into your classroom setting. If you are trying a different instructional method, describe it thoroughly and explain how the students will be instructed. If you are implementing a new program, describe what the program does and step by step how you implemented the program.

You must have 3 methods of data collection to ensure triangulation. Describe, in detail, your three methods of data collection (student check-ins, surveys, assessments, teacher interviews, reflective journal, tally sheets, observations, student records, written responses, etc....). You can include a triangulation matrix to assist with this section.

BE SURE TO INCLUDE lesson plans for implementation in your appendix

Describe your data collection. You must be specific:

- What are the three ways you will collect your data? (teacher interviews, data tally sheets, observations, student check-ins, tests scores, student records, etc....).
- Where do you conduct the teacher interviews?
- Where and how do you take the notes?
- What are the questions you will ask (be sure to place these in an appendix)?
- How will you observe the students? What do the tally sheets look like (these should be in an appendix)?
- How will these be teacher interviews conducted?
- How will you examine student records?
- What kind of records? Which tests?
- Are there other documents you will use?
- How will you triangulate the data?
- What measures you took to assure the validity of your study?

Be sure to include a table and timeline of your methods:

- What you collected and when?
- How do the data relate to your research question?

Be sure to include a table detailing how your research questions align with your data sources, with a focus on triangulation (i.e., at least three data sources for each research question).

Describe how you will analyze your results.

Describe how you planned to make sense of (analyze) your data considering your research question(s).

What are you looking for in your results?

Explain how your data collection ensures validity and reliability of your data?

Lastly, address ethical issues raised by study and explains how they were addressed

DETAILS, DETAILS, AND MORE DETAILS!!!!

Results/Findings

This section is 8-12 pages

Do not purposely start a new page for this section.

Center the word 'Results' and continue typing on the very next double-spaced line.

It is recommended that you have subheading within this section to assist with organization.

In this section, indicate what you discovered or found because of your data gathering.

Focus on results that are related to your research topic and answer your research questions or shed light on your research hypotheses.

This section focuses on your results of your project in which you take all the data you collected and analyze it. You will provide rich descriptions of **how** you reviewed your data, **the themes** that became apparent in your reviews, and your ultimate findings.

Introduce your findings before you begin to describe them, and clearly link them to your research question(s).

First:

Give a general description of your findings.

Explain how you analyzed your data.

- What was the process you went through to analyze your data?
- Nothing is too mundane here! You may literally write, "I sat at my kitchen table and..."
- How did you make sense of your data?

Briefly repeat the 3 data collection methods you used to create triangulation.

Details are important in this section.

You want to explain, step by step, how you analyzed your data

Second:

What are the 2-3 main THEMES that emerged from the data?

After deciding on these themes (creating a subheading for each) you will give specific examples of the theme as demonstrated in your data collection.

For example:

Theme 1: Plants like water

Daisy: My data

Hosta:

Tomatoes:

Theme 2: The sun is not always a benefit

Daisy:

Hosta: My data demonstrated that Hosta are not sun tolerant. This was supported by...

Tomatoes:
Theme 3: Chipmunks can erode all efforts
Daisy: My data
Hosta:
Tomatoes: Chipmunks ate the tomato plants. My evidence of this...I concluded that...based on..

Organize this section in a way that makes sense for your data/findings (e.g., by student, by theme, by data source, etc.).

Use illustrative examples from your data to summarize and SHOW us your findings - these can include student samples

YES...you can add charts/graphs/tables

Feel free to use mini case studies to illustrate your findings, considering your research outcomes through the lens of the experiences of a few students.

Be sure to report on student achievement, efficacy, and engagement.

Note that you are **primarily reporting on data patterns in this section**; you will make sense of these results in your discussion section.

You do not want to discuss implications for your research here – that is done in the next section.

Discussion

This section is 4-6 pages.

Do not purposely start a new page for this section.

Center the word 'Discussion' and continue typing on the very next double-spaced line.

It is recommended that you have subheading within this section to assist with organization: **Reflection, Implications, Limitations, Recommendations, Impact Presentation, and Action Plan**

This section includes what conclusions you draw from the study, the implications for current research findings, the limitations of the study, the recommendations for further research in the study area, how you will present this data in an impact presentation, and an action plan for your classroom.

Reflection: You should focus on what you think your results mean. In this section reflect on the findings of your data collection and discuss what they might mean to you as a teacher and teacher researcher.

This section should explain any inconsistencies between your research findings and literature review.

You should also include what you THINK! What you thought of the process, what you learned from the research, and what you learned from the process.

Remember that the goal is to share what you learned about your teaching for yourself first; our goal is not NECESSARILY to extract findings that will be generalizable across EVERY teaching setting.

Interpret your data in as much detail as possible, describing whether, and in what ways, your findings corroborated your expectations.

How did your data answer your research questions?

Implications: Future research possibilities should be identified, and generalizability of conclusions discussed.

Be careful: Do not use the word 'prove'...your research is too limited to imply that it can prove your hypothesis or be applied to a larger population.

Limitations: Describe the limitations of your study. Reflect on weaknesses to the research.

- o Was your intervention flawed?
- o Did you do something as a researcher that impacted the study negatively?
- o Were there extenuating circumstances?

Recommendations: Focus on what's truly interesting in your data/findings, even if you have limited information to support this. Make some bold recommendations for how we might serve students better. Be sure to describe what all of this information – the teacher research process, your data, your findings. What does it mean to you as a professional and a person.

Impact presentation: Describe how you might share the findings of your paper. Here highlight that you will presenting a poster presentation to our class.

Action Plan: How you might incorporate the teacher research process into your future professional life? How might you change **your** teaching practice based on your findings?

Answer questions such as:

- a.) What did I learn from this research?
- b.) What can further research do to further my research?
- c.) What do my results mean?
- d.) What inconsistencies exist between my research and the literature that already exists?
- e.) What generalizability can I conclude?
- f.) What are the limitations of this study?
- g.) What do I think about my research? About my student?
- h.) Based on the results and themes that emerged from the study, what changes will you make in your teaching?
- i.) How will you share these findings with others?
- j.) What are the implications for future research?
- k.) How does your study add to or relate to the literature on the topic?

References

Start on a new page.

Center the word 'References' at the top.

Double-space all reference entries.

The reference list is an alphabetical list (by author's last name) of all the sources cited in the text.

Indent the first line of each entry.

See examples or the Publication Manual of the American Psychological Association for specific formats.

Include a complete list of references **in APA format.**

You must include any reference you read but did not use within the paper.

Appendices

Start on a new page.

Center the word 'Appendix' at the top of each new Appendix.

Be sure to add a letter to each new Appendix (Appendix A, Appendix B, etc....).

Each appendix should begin on a new page.

Ensure each Appendix in this section is referenced in the body of the paper.

This section is where all relevant materials, including any questionnaires, inventories, assessments, graphs, charts, interview questions, sample student work, behavioral chart, etc. are appended.

Include at least one example of each tool you use: it's ideal to include one blank version and one version completed by one of your research subjects.

Please refer to the examples or the Publication Manual of the American Psychological Association for further information on this section.

This should be where the things that do not fit in the text go.

If something will interrupt the flow of the paper, it should be placed here.

Checklist

The appearance of your paper and the arrangement of its parts are important to the final presentation.

Consider the following questions for each section to help ensure that you met the above criteria.

Writing Styles, Mechanics, and General Notes

- Did you follow the APA style for the report for a running head, page numbering, references, citations, and the appendix?
- Is the original manuscript typed or printed on 8.5 x 11-inch white paper?
- Is the entire manuscript double-spaced?
- Is the manuscript neatly prepared and clean?
- Have you used a 12 font for type style?
- Are the margins at least 1 inch?
- Is the title page, abstract, references, tables, etc. on separate pages?
- Are the pages ordered in the stated sequence?
- Are all pages numbered in sequence, starting with the title page?
- Does the running head appear on each page?
- Is each paragraph longer than a single sentence but not longer than one manuscript page?
- **Are ALL names pseudonyms?** Pseudonyms are only to be used (for the district, the school, the teachers, the participant(s), and any other name). The very first time you use a name (whether in the abstract, introduction or method section) place a footnote. In the footnote write "All names in this paper are pseudonyms". You do not need to write such a disclaimer for any later mentioned names.
- Did you spell out acronyms when you note them the first time. e.g., English Language Learners (ELL)?
- Does the report include a title page with required information?
- Is the report coherent, concise, and well-structured with a clear purpose?
- Is the report grammatically correct with proper usage of language?
- Does the report have your distinctive focus and voice? Have you used professional language (i.e., no jargon) but written in an accessible style and presentation?
- In addition, follow these general guidelines:
 - Your study report is not a master's thesis nor traditional class research paper but rather focuses on putting theory into practice in your real-world, local context.
 - The entire project should be described in a 25-30-page paper (not including appendices).
 - Write in the past tense as much as it makes sense to do so.
 - Be sure to make a personal and professional connection to your topic and project.
 - Feel free to revise your questions based on your data to make these questions more focused.
 - **Grading Scale for Research Project:** *Please note that B- is not a passing grade.*
 - ***This report strictly adheres to GMU's integrity policy.***

Abstract:

- Have you provided a single, articulate, concise paragraph of no more than 150 words?
- Does your abstract concisely describe your purpose and the context, method, key findings, and significance of your research?

Introduction:

- Did you start with a personal story?
- What is the purpose of your study?
- What problem or issue are you addressing?
- Describe why the concerns are important to you and what your research might help you learn.
- What is its background and significance?
- Have you describe the setting? (e.g., school division, school, classroom)
- What is (are) your research question(s)?
- Do you have a hypothesis? If so, what is it and how did you formulate it?
- Have you explained the outgrowth of your study?
- Have you offered perspectives that shaped this question for you?
- Have you clearly and concisely explained why this research is important? Have you addressed the broader educational and social significance?
- Have you clearly and concisely stated the research problem?
- Have you clearly and concisely stated your main research question and any sub-questions?
- Have you provided a transition into your literature review?

Literature Review:

- Did you conduct an ongoing literature review which informed your research?
- Is the review relevant and connected to your study?
- Is the review adequate, coherent, and analytical?
- Does the review include references from a variety of sources?
- Is the review integrated into a conceptual framework with a mapping of the theories, literature, and phenomena that help to inform your study?
- Do you make connections between the studies, their methods, and their findings and your own study?
- Did you provide a transition into your methodology section?

Methodology:

- Have you described your research context, including your classroom, students and you?
- Have you included demographic information of participants?
- Did you include your reflection of the problem (e.g., behaviors observations, possible causes)?
- Have you explained the reasons for your pedagogies based on your observations of your classroom and the literature reviewed?
- Have you described in detail what data you collected and how and when you collected it, including data generated from your pedagogies and strategies?
- Are your data from 3 sources?
- Did you include a description of the pedagogical strategies you enacted?
- Did you explain how you analyzed your data?
- Have you included and explained the role of your peers in your data interpretations and validation?
- Did you explore using visuals and technologies for analyzing and displaying your findings in a coherent manner?
- Did you detail your research method and timeline?
- Did you provide a transition into your findings section?
- Did you address the ethical considerations of your study?

Results:

- Did you link findings to your research question(s) and what you learned/discovered through your research?
- Are the findings thoroughly and adequately presented?
- Is there convincing evidence to support your themes?
- Is there connection and coherence among the separate themes?
- Did you explain your findings to peers and colleagues to gain their perspectives on your interpretations?
- Did you provide a transition into your discussion section?

Discussion:

- Have you adequately explained the implications of your study for your students' learning and your professional development?
- Have you adequately explained the implications of your study for your teaching and others' teaching?
- Have you adequately explained the implications of your study for the education field, teacher education, and education policy?
- Did you address the studies limitations?
- How will you share your results with others?
- Have you explained your action plan?

References and Appendices:

- Are references current and from different sources?
- Are all references cited in the research report included in the references?