



Promoting Learning  Development Across the Lifespan

**George Mason University
College of Education and Human Development
Secondary Education Program
Spring 2015**

EDUC 675: RESEARCH IN SECONDARY EDUCATION

Section 001 (3 credits)

Meeting Day/time: Mondays 4:30 p.m.–7:10 p.m. Class Location: Aquia Building 219

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COURSE DESCRIPTION

EDUC 675 Research in Secondary Education (3:3:0). Designed to help beginning teachers understand various research paradigms for using research literature and systematic evidence to improve practice. Emphasis is placed on linking research and practice and making informed instructional decisions.

Pre-requisites: Teacher Licensure. To be taken as the last course in the M.Ed.

Co-requisite: M.Ed. Exit Requirement

Note: The course requires that you have access to a classroom to conduct your research. If you do not have your own classroom, you will need to let the instructor know during the first class. Alternative arrangements used successfully in the past will be offered.

COURSE LEARNING OUTCOMES

This course is designed to enable students to:

1. demonstrate an understanding of the process and components used in teacher research by conducting and assessing a chosen scholarly inquiry situated in their classroom and its impact on students' learning;
2. craft a research design which makes explicit links between theory and practice;

3. examine ethical considerations when conducting teacher research; conduct teacher research which includes: research question(s), research proposal; review of related literature, methods, data collection/analysis, findings, discussion of impact on students, teacher, and education field; and abstract;
4. participate in “critical collaborative inquiries” to gain multiple perspectives in interpreting research and for validation and peer review of research;
5. demonstrate integration of national and state standards for content and pedagogy as related to the research question by reflecting on their own teaching practice and its impact on students’ learning respective to students’ discipline;
6. demonstrate skills and applications of visual and digital literacies in teacher research project and teacher research impact collaborative presentation.

RELATIONSHIP TO PROFESSIONAL STANDARDS

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); and an understanding and application of teaching and learning standards as outlined by *INTASC*. National Content Standards for respective discipline: NCSS, NCTE, NCTM, NSTA

National Council for the Social Studies <http://www.ncss.org/>

National Council of Teachers of English <http://www.ncte.org/>

National Council of Teachers of Mathematics <http://www.nctm.org/>

National Science Teachers Association <http://www.nsta.org/>

<http://books.nap.edu/readingroom/books/nses/>

INTASC: Interstate New Teacher Assistance and Support Consortium

<http://www.ccsso.org/content/pdfs/corestrd.pdf>

Virginia State Standards

- Virginia Department of Education <http://www.pen.k12.va.us/>
- State of Virginia, SOL Resources <http://www.pen.k12.va.us/VDOE/Instruction/sol.html>
- State of Virginia Standards of Learning Test Information <http://www.pen.k12.va.us/VDOE/src/SOLassessments.shtml>

CEHD CORE VALUES COMMITMENT

The College of Education & Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles. <http://cehd.gmu.edu/values/> For additional information on the College of Education and Human Development, visit our website [See <http://gse.gmu.edu/>].

CEHD PROFESSIONAL DISPOSITIONS

Students are expected to exhibit professional behaviors and dispositions at all times.

http://cehd.gmu.edu/assets/docs/forms/secondary_ed/sec_ed_handbook.pdf

The Graduate School of Education (GSE) expects that all students abide by the following:

Students are expected to exhibit professional behavior and dispositions.

Commitment to the profession

Promoting exemplary practice

Excellence in teaching and learning

Advancing the profession

Engagement in partnerships

Commitment to honoring professional ethical standards

Fairness

Honesty

Integrity

Trustworthiness

Confidentiality

Respect for colleagues and students

Commitment to key elements of professional practice

Belief that all individuals have the potential for growth and learning

Persistence in helping individuals succeed

High standards

Safe and supportive learning environments

Systematic planning

Intrinsic motivation

Reciprocal, active learning

Continuous, integrated assessment

Critical thinking

Thoughtful, responsive listening

Active, supportive interactions

Technology-supported learning

Research-based practice

Respect for diverse talents, abilities, and perspectives

Authentic and relevant learning

Commitment to being a member of a learning community

Professional dialogue

Self-improvement

Collective improvement

Reflective practice

Responsibility

Flexibility

Collaboration

Continuous, lifelong learning

Commitment to democratic values and social justice

Understanding systemic issues that prevent full participation

Awareness of practices that sustain unequal treatment or unequal voice

Advocate for practices that promote equity and access

Respects the opinion and dignity of others

Sensitive to community and cultural norms

Appreciates and integrates multiple perspectives

GMU Policies and Resources for Students

1. GMU Policies and Resources for students
 - a. Students must adhere to the guidelines of the George Mason University Honor Code [See <http://academicintegrity.gmu.edu/honorcode/>].
 - b. Students must follow the university policy for Responsible Use of Computing [See <http://universitypolicy.gmu.edu/1301gen.html>].
 - c. Students are responsible for the content of university communications sent to their George Mason University email account and are required to activate their account and check it regularly. **All communication from the university, college, school, and program will be sent to students solely through their Mason email account.**
 - d. The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social

- workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance [See <http://caps.gmu.edu/>].
- e. Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester [See <http://ods.gmu.edu/>].
 - f. Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.
 - g. The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing [See <http://writingcenter.gmu.edu/>].
2. Professional Dispositions: Students are expected to exhibit professional behaviors and dispositions at all times.
http://cehd.gmu.edu/assets/docs/forms/secondary_ed/sec_ed_handbook.pdf
 3. Core Values Commitment:
The College of Education & Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles. <http://cehd.gmu.edu/values/>

Emergency Procedures

You are encouraged to sign up for emergency alerts by visiting the website <https://alert.gmu.edu>. There are emergency posters in each classroom explaining what to do in the event of crises. Further information about emergency procedures exists on <http://www.gmu.edu/service/cert>

Sustainability at GMU

George Mason University is focusing on making our community “greener” and reducing the impact on the environment. This course will contribute to this effort in the following ways. I hope that you will create other ways to contribute to contribute to this effort.

- Handouts will be available electronically through the Blackboard platform.
- All assignments will be submitted through the Blackboard at MyMason.
- Please consider reducing waste in your teaching practice.
- Incorporate teaching sustainability in the content of your lesson plans (for example, human’s role in reducing their impact on the environment.) Think about what the next generation needs to know about “greening.”

NATURE OF COURSE DELIVERY

The major purpose of this course is for you to learn how to design and conduct a teacher research project and apply it in your classroom in order to improve your teaching and students’ learning. The course is designed to promote a professional teaching and learning community with peer review critical friend support. Throughout the course, you are completing a step informally that you will later insert into your final paper. As you build your project with a commitment to each step in the process, it comes together. The course will be taught through a variety of activities to support the development of your teacher research projects involving: whole class and small group discussions, group, pair and group work, online work, and through dialogue and reflections of/in practice. Individual consultations are also built into class time.

REQUIRED READINGS

Samaras, A. P. (2011). *Self-study teacher research: Improving your practice through collaborative inquiry*. Thousand Oaks, CA: Sage. ONLINE STUDENT STUDY GUIDES : <http://www.sagepub.com/samaras/>

GMU Alumni Teacher Research Exemplars:

Mautz, M. (2014). *Promoting motivation in the classroom through goal-setting*. Paper submitted to the Secondary Education Program, Graduate School of Education, George Mason University, Virginia, in partial fulfillment of the requirements for the degree of master of education.

Mayden, K. H. (2014). *Making classroom conversation count: Improving participation in discussion to enhance learning*. Paper submitted to the Secondary Education Program, Graduate School of Education, George Mason University, Virginia, in partial fulfillment of the requirements for the degree of master of education.

Payden, J. (2014). *Using journal writing to develop students' mathematical communication skills*. Paper submitted to the Secondary Education Program, Graduate School of Education, George Mason University, Virginia, in partial fulfillment of the requirements for the degree of master of education.

Saxena, B. (2014). *Using discourse strategies to develop critical and creative thinking in science*. Paper submitted to the Secondary Education Program, Graduate School of Education, George Mason University, Virginia, in partial fulfillment of the requirements for the degree of master of education.

Sprague, L. (2014). *Management & madness: Discovering the balance between effective management and classroom morale*. Paper submitted to the Secondary Education Program, Graduate School of Education, George Mason University, Virginia, in partial fulfillment of the requirements for the degree of master of education.

Walsh, L. (2014). *Differentiation in an honors mathematics classroom: How to help each student individually reach their potential*. Paper submitted to the Secondary Education Program, Graduate School of Education, George Mason University, Virginia, in partial fulfillment of the requirements for the degree of master of education.

COURSE REQUIREMENTS:

1. Attendance and Class and Online Participation (10%)
2. Research Draft Components; includes Online Participation (30%) 5 pts each
*Descriptions of assignments are located in text with student examples.
 - 1) Discussion Thread #1: Research Artifact & Memo
 - 2) Discussion Thread #2: Rationale and Research Question & Peer Review
 - 3) Discussion Thread #3: Literature Review
 - 4) Discussion Thread #4: Methods: Data Chart, Pedagogies, & Peer Review
 - 5) Discussion Thread #5: Draft 1 for peer review
 - 6) Discussion Thread #6: Peer Review of Draft 1
 - 7) Discussion Thread #7: Draft 2 for Professor Formative Assessment only
Includes Results & Discussion Sections (no points)
3. Teacher Research Project and Presentation (60%)

5 pt. Assignments	Rubric Description for Discussion Threads #1-6
A+ Exemplary 5+ points	Presents an exemplary narrative in the assignment to build her/his self-study action research project with thoughtful and relevant detail. Demonstrates a very high level of understanding and application from assigned readings. Submission reflects outstanding participation in f-t-f and online discussions and class activities and active listening and serious feedback with peers. Submitted on time. Provides exemplary peer response to assignment where relevant.
A Excellent 5 – 4.7 points	Provides a very adequate narrative in the assignment to build her/his self-study action research project with thoughtful and relevant detail which demonstrates a high level of understanding and application from assigned readings. Submission reflects excellent participation in f-t-f and online discussions and class activities and active listening and a high level feedback with peers. Submitted on time. Provides very adequate peer response to assignment where relevant.
A- Approaching Excellence 4.65-4.5 points	Provides an adequate narrative in the assignment to build her/his self-study action research project with thoughtful and relevant detail which demonstrates a good level of understanding and application from assigned readings. Submission reflects good participation in f-t-f and online discussions and class activities and active listening and serious feedback with peers. Submitted on time. Provides adequate peer response to assignment where relevant.
B+ Developing Less than 4.5 points	Provides a fair narrative in the assignment to build her/his self-study action research project with thoughtful and relevant detail which demonstrates an average level of understanding and application from assigned readings. Submission reflects average level of participation in f-t-f and online discussions and class activities and active listening and serious feedback with peers. Needs more work. Submitted late. Does not provide adequate peer response to assignment where relevant.

Attendance and Participation

Attendance and participation at all classes, for the entire class period is a course expectation and absence will affect your grade. Arriving late twice equals one absence. Successful completion of this course requires attendance at all Face-to-Face classes and active participation in the online critical friend work. Being on time is also essential and lateness will affect your grade. **Please notify instructor ahead of time if you will arrive late or if you must miss class.** You are responsible in working with your Critical Friend Team (CFT) for missed material. Come to class prepared to contribute your critical reflections of readings.

Peer Review

Your in-class activity involves sharing weekly updates, brainstorming ideas as a teacher about the classroom dilemma you are researching, exchanging ideas for strategies and lessons, and sharing how you are integrating standards in meaningful ways. As part of your course participation, you will have the opportunity to collaborate with critical friends as you develop your teacher research project. Critical Friend Inquiries (CFI) are designed for peer review with support and to provide alternative perspectives on interpretation to increase the validity of your research. **It is your responsibility to respond to at least one CF for Discussion Threads #2, 4, & 6. Please be sure that each member receives a peer review. This is part of your participation grade.**

Critical friends provide support as well as a feedback loop to improve your practice. It is *critical* to have friends in research but critical friends are *not critical* in their approach with each other

(Samaras, 2011). Establish ground rules with “critical friends” and visit them often. Demonstrate positive professional dispositions. Professionals are responsible, ethical, and accountable.

Participation Rubric

Category	Exemplary 10 pts.	Accomplished 9pts	Developing 8pts	Undeveloped Below 8 pts
Assignments are central to the development of your project. Attendance and participation are critical components of this course. It gives you the opportunity to learn from and contribute to building a positive classroom experience and learning community. Participants contribute to each other’s learning by actively listening, exchanging ideas, sharing learning from reading and websites, peer view, and supporting each other’s efforts by providing feedback on Discussion Thread	Successfully completes all assignments. Outstanding and consistent participation in discussions and class activities. Promotes conversation focused on the topic. Comments demonstrate a high level of understanding from assigned readings. Listens actively to peers. Embraces peer review; Prompts peer feedback and input. Purposely shares leadership roles in group work.	Completes all assignments. Participates in discussions and activities on a regular basis; questions and comments reveal thought and reflection and contribution from assigned readings. Frequently involves peers in discussion. Conducts peer review; Shares leadership roles in group work.	Does not complete some assignments. Does not contribute to discussions or activities very often, but generally reveals some thought and reflection and some contribution from assigned readings. Follows rather than leads group activities. Solicits some peer discussion and peer review. Misses classes. Is late for class. Somewhat shares leadership roles in group work.	Few assignments completed. Few contributions to class discussions. Little evidence of participation and contribution. Shows little concern for peers’ learning or input or peer review. Misses many classes and is late often. Does not share leadership roles in group work.

ASSIGNMENTS AND EVALUATION (see text for assignment descriptions)

You are expected to complete all readings and participate in class and in online discussions with openness, consideration, and effort to “hear for” and “listen to” others as you also seek to be understood. **Each assignment helps you build your final paper.** Since this is a professional development course (post licensure), high quality work (i.e., “A” work) is expected on all assignments and in class participation. All written assignments are to be submitted as a file and submitted electronically under the respective Class Discussion Thread on Bb for the day that it notes POST. Title each assignment with your last name and the name of the project/assignment, e.g., Smith.ResProp.09.08.15. Use Times Roman 12 pt. font, double-spaced for all assignments. For full consideration, all assignments are due and **posted electronically on Bb prior to the beginning of class on the day and time they are due**, unless otherwise announced.

Visit the Discussion Thread to check updates each week: I post comments to you on the discussion thread but I individually email you your grade. Please check Bb for the comments.

Highly Recommended (not required) Weekly Researcher Log:

See exemplars with logs. It is highly recommended that you keep a researcher log of progress of your teacher research project each week and include it in the appendix of your final report. See Self-Study Research Project Timeline Log in Chapter 2. Table 2.2, pp. 28-29). This is your tentative timeline and tool to self-regulate your progress and the research process.

MAKE IT A HABIT TO WRITE REGULARLY AND SAVE YOUR WORK IN MULTIPLE PLACES

Teacher Research Project Description and Assessment Rubric (60 points)

(PBA for EDUC 675, "Research in Secondary Education")

All teacher research reports must adhere to APA format. Your project should be useful to you and your students. A written report that includes the specific headings and subheading are posted on Bb under "Assignment Guidelines" "[Research Project Headings Template](#)" Look at the headings at the beginning of the semester so you can see where you are headed.

Please use this checklist for common errors before submitting your final paper:

1. Use Times Roman 12 pt. font, double-spaced throughout paper including between paragraphs.
2. Do not use right justification for formatting.
3. Do not use any identifying information of students, staff, school, or school system.
4. Cite all works properly. Need at least 10 references.
5. Spell out acronyms when you note them the first time. e.g., English Language Learners (ELL)
6. Include your data chart within the text of your paper.
7. Change everything to past tense, e.g., "I collected" instead of "I will collect."
8. Include an appendix electronically only.
9. Check that your abstract is written in third person and includes an implications sentence.
10. Just clip report at the top; no report binders or plastic sleeves are necessary.

The points on Taskstream are 1-3. Your score will be converted into the Taskstream scoring once your final paper is posted.

Title and Abstract (2 points possible)

Your title can be as creative as you like—take researcher/artistic license with this. In 125 to 150 words, what was your study about? What was your major finding? Consider the following questions as you draft your title and abstract:

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

Grade/Points	Rubric Description
A- to A Exemplary 1.8 – 2 points	Provides a concise (125-150 words) summary that reports factually on the purpose of the study and the methods and procedures to be followed.
B to B+ Proficient 1.6 – 1.7 points	Provides an identifiable summary (125-150 words) that addresses the purpose of the study. Touches on methods and procedures to be followed, but is not sharply focused.
C Approaching Proficiency 1.4 – 1.5 points	Provides only general statements about the study. Information on methods and procedures to be followed is sketchy or missing. Falls short of 125 words or greatly exceeds the 150-word limit.
F Unsatisfactory Less than 1.4 points	Student work is so brief, incomplete, or off-topic that any reasonably accurate assessment is impossible.

Assessment/Feedback: X/2

Introduction, Rationale, Area of Focus, and Research Questions (5 points possible)

Describe the setting, including the community, school, students, and other relevant information. 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 as a result of its conduct. What is its background and significance? How does it relate to your masters curriculum? What is (are) your research question(s)? Do you have a hypothesis? If so, what is it and how did you formulate it? Be sure that your research questions steer you toward a descriptive response. Consider the following questions as you draft your introduction, rationale, area of focus, and research questions:

- 1) Have you explained the outgrowth of your study?
- 2) Have you offered perspectives that shaped this question for you?
- 3) Have you situated the study in terms of explaining the outgrowth of this puzzlement in the context of your work? e.g., your students, classroom, school, district?
- 4) Have you clearly and concisely explained why this research is important? Have you addressed the broader educational and social significance of this research?
- 5) Have you clearly and concisely stated the research problem?
- 6) Have you clearly and concisely stated your main research question and any sub-questions?

Grade/Points	Rubric Description
A- to A Exemplary 4.5 – 5 points	Establishes a sound context/theoretical framework for the study and a compelling rationale for its execution. Clearly and explicitly states the research question and purpose of the study.
B to B+ Proficient 4 – 4.4 points	Provides 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 the research question and purpose of the study.
C Approaching Proficiency 3.5 – 3.9 points	Provides minimal information on the context/theoretical framework for the study. Does not offer a rationale for the study's execution, or does so only superficially. Explicitly states the research question and purpose of the study.
F Unsatisfactory Less than 3.5 points	Student work is so brief, incomplete, or off topic that any reasonably accurate assessment is impossible.

Assessment/Feedback: X/5

Literature Review (8 points possible)

In order to properly address a research question you need to be familiar with previous investigations of your topic. You should conduct a literature review in which you cite and synthesize approximately 8-10 sources and discuss how they informed your design. Teacher research appeals to a broad range of research resources, including reports of teachers' experiences. Transitions should connect one annotated source with the next. 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. References must be from refereed journals, books (generally not textbooks), curriculum resources, and scholarly compilations. NOTE: The literature review should emphasize synthesis and analysis (Bloom, 1956, 1984). Use direct quotes sparingly. Craft your literature review as a story of the study of your topic. Consider the following questions as you draft your literature review:

- 1) Did you conduct an ongoing literature review which informed your research?
- 2) Is the review relevant and connected to your study?
- 3) Is the review adequate, coherent, and analytical?
- 4) Does the review include references from a variety of sources?
- 5) Is the review integrated into a conceptual framework with a mapping of the theories, literature, and phenomena that help to inform your study?

Grade/Points	Rubric Description
A- to A Exemplary 7.2 – 8 points	Cites at least 10 peer-reviewed, published reports of empirical research. Highlights gaps in the literature to which the proposed study will respond. 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.
B to B+ Proficient 6.4 – 7.1 points	Cites at least 8 peer-reviewed, published reports of empirical research. Highlights gaps in the literature to which the proposed study will respond. Organizes the literature by identifiable themes, although organization within themes may follow no clear or consistent pattern of presentation. Attempts to synthesize referenced sources. Uses few direct quotes.
C Approaching Proficiency 5.6 – 6.3 points	Cites fewer than 8 peer-reviewed, published reports of empirical research. Does not explicitly highlight gaps in the literature to which the proposed study will respond. Summarizes cited works sequentially, rather than synthesizes and organizes them thematically. Relies heavily on direct quotes.
F Unsatisfactory Less than 5.6 points	Student work is so brief, incomplete, or off-topic that any reasonably accurate assessment is impossible.

Assessment/Feedback: X/8

Description of the Method (15 points possible)

In this section describe how you implemented your research. Include a description of subjects (i.e., students, teachers, administrators), the context of the research, the strategies and materials (put sample material in an appendix), the number and total time of each research session, and a complete description of the methodologies. Repeat your question in this section—remind us often what you are studying. Describe how you selected your subject sample—why did you choose these individuals and who are they, in terms of gender, ethnicity, age, grade level, language/culture, and educational achievement? Describe ALL of your methods, including what influenced the selection of your methodology and design, what measures you took to assure the validity of your study, and how you triangulated your data. Be sure to include a table and timeline of your methods—what you collected and when. Be sure to describe what type of data you collected—for example, did you do a needs assessment (via a test) to address student achievement, and then design and implement a new instructional strategy? Or did you observe a group of students to see how they behaved in a particular context, and then interview them to ascertain their reasons? Did you do a series of in-depth interviews with students or teachers? How do the data relate to your research question? How do they relate to your masters curriculum? Finally, describe how you planned to make sense of—analyze—your data in light of your research question(s). Provide rich descriptions of HOW you reviewed your data, the themes that became apparent in your reviews, and your ultimate findings. Consider the following questions as you draft your literature review:

- 1) Have you described your research context; community, school, and classroom context?

- 2) Have you included demographic information of participants?
- 3) Did you include your reflection of the problem? e.g., behaviors observations, possible causes?
- 4) Have you explained the reasons for your pedagogies based on your noticing of your classroom and the literature reviewed?
- 5) Have you described in detail what data you collected, how you collected it, and when you collected it, including data generated from your pedagogies and strategies?
- 6) Are your data from multiple sources?
- 7) Did you include a description of the pedagogical strategies you enacted?
- 8) Did you explain how you analyzed your data and include a data audit trail?
- 9) Have you included and explained the role of your critical friends in your data interpretations and validation?
- 10) Did you explore using visuals and technologies for analyzing and displaying your findings in a coherent manner?

Grade/Points	Rubric Description
A- to A Exemplary 13.5 – 15 points	Explains, and justifies 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.
B to B+ Proficient 12 – 13.4 points	Explains 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.
C Approaching Proficiency 10.5 – 11.9 points	Explains 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.
F Unsatisfactory Less than 10.5 points	Student work is so brief, incomplete, or off-topic that any reasonably accurate assessment is impossible.

Assessment/Feedback: X/15

Results and Findings (15 points possible)

In this section, indicate what you discovered or found as a result of your data gathering. Focus on results that are related to your research concern and answer your research questions or shed light on your research hypotheses. Introduce your findings before you begin to describe them, and remind us of your research question again. Organize this section in a way that makes sense for your data/findings—by student, by theme, by data source, etc. Use illustrative examples from your data to SHOW us your findings. Use tables to summarize and SHOW us what you’ve learned. Focus on what’s truly interesting in your findings, even if you have limited data to support this. Feel free to use mini case studies to illustrate your findings, through the lens of a few students. 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 or not—or how—your findings corroborated your expectations. Were there any surprises in your findings? Can you think of any alternative explanations for your findings? Consider the following questions as you draft your results and findings:

- 1) Did you restate your research question and what was found through your research?
- 2) Are the findings thoroughly and adequately presented?

- 3) Is there convincing evidence to support your themes?
- 4) Is there connection and coherence among the separate themes?
- 5) Did you explain your findings to your critical friend to gain his or her perspective on your interpretations?

Grade/Points	Rubric Description
A- to A Exemplary 13.5 – 15 points	Reports and interprets narrative and 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.
B to B+ Proficient 12 – 13.4 points	Reports and interprets narrative and numerical data accurately, objectively, and concisely. For the most part, analytical tools are appropriate to the methodology. Does not highlight explicit links between study outcomes, hypotheses (if stated), and the original research question; however, such links may logically be implied.
C Approaching Proficiency 10.5 – 11.9 points	Reports and interprets narrative and 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.
F Unsatisfactory Less than 10.5 points	Student work is so brief, incomplete, or off-topic that any reasonably accurate assessment is impossible.

Assessment/Feedback: X/15

Discussion, Reflection, Implications, Recommendations, and Action Plan (10 points possible)

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. What did you learn from the study? How did it relate to your masters curriculum? How will it influence your teaching—that is, based on the results and themes that emerged from the study, what changes will you make in your teaching? How will you share these findings with others? What are the implications for future research? Speculate on what it would mean if your data pointed in one direction versus another. Again, 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—mean to you as a professional and a person. Describe how you might share the findings of your paper—with your principal, your grade level team, other teachers who are working with these students, use it in a workshop, claim it as an area of expertise on your resume, etc. Be sure to describe potential implications of your study and its findings for other teachers and for education policymakers. Consider the following questions as you draft your discussion, reflection, implications, recommendations, and action plan:

- 1) Have you adequately explained the implications of your study to your students’ learning?
- 2) Have you adequately explained the implications of your study to your professional development?
- 3) Have you adequately explained the implications of your study to your teaching and reframing of your practice? Revisit your original research question. Take a retrospective journey and reflect back on the “self” or your role and the conscious (and perhaps at the time unconscious) consequences of your actions in the process of studying your teaching practice.

- 4) Have you adequately explained the implications of your study to the education field?
- 5) Have you adequately explained the relevance of your study to national and state education standards?
- 6) Have you discussed any limitations?
- 7) Have you identified areas for future research possibilities?

Grade/Points	Rubric Description
A- to A Exemplary 9 – 10 points	Offers 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/interpretations using sound arguments consistent with study findings. Describes recommendations for future research, and how results will be applied in the practice.
B to B+ Proficient 8.0 – 8.9 points	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/interpretations using sound arguments consistent with study findings. Does not describe recommendations for future research, or how results will be applied.
C Approaching Proficiency 7 – 7.9 points	Addresses practical implications of study findings including how they will be shared with others. Attempts to discuss threats to validity, but does so superficially and/or fails to offer antidotes. Does not consistently support assertions/interpretations using sound arguments consistent with study findings. Does not describe recommendations for future research, or how results will be applied in practice.
F Unsatisfactory Less than 7 points	Student work is so brief, incomplete, or off-topic that any reasonably accurate assessment is impossible.

Assessment/Feedback: X/10

References, Appendices, Writing Styles, Mechanics, and General Notes (5 points possible)

Include a complete list of references in APA format. Append all appropriate materials, including, if relevant, any questionnaires, inventories, assessments, sample student work, etc. 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. In addition, follow these general guidelines:

- The model for your study report is not a master's thesis nor traditional class research paper, but rather an article prepared for submission to a journal that focuses more on practice than theory.
- You may find it helpful to select a journal whose research emphasis and readership match your research topic and follow its manuscript submission criteria. Chapter 8 in the Mills text presents a sample article.
- It is expected that the entire project will be described in a 25-30 page paper; please do not exceed the 30-page limit.
- Write in the past tense as much as it makes sense to do so
- Your paper does not have to be anonymous; you can include names, as this is an internal document and will not be shared anywhere outside of our class
- Be sure to make a personal and professional connection to your topic and project
- Citations are not necessary in the introduction
- Feel free to revise your questions based on data, to make these questions more focused

Consider the following questions as you draft your references and appendices and consider the overall writing quality of your paper:

- 1) Did you follow the APA style for the report for a running head, page numbering, references, citations, and the appendix? Does the report include a title page with project title, author's name, and author's professional affiliation?
- 2) Are references current and from different sources?
- 3) Are all references cited in the research report included in the references? Have you provided a complete reference list of all print and nonprint (Internet) references?
- 4) Is the report coherent, concise, and well-structured with a clear purpose?
- 5) Is the report grammatically correct with proper usage of language?
- 6) Does the report have your distinctive focus and voice? Have you used professional language (i.e., no jargon)? Have you written in an accessible style and presentation?

Grade/Points	Rubric Description
<p>A- to A+ Exemplary 4.5 – 5 points</p>	<p>Paper is well written with no notable 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. Paper adheres to formatting specifications provided in course text and materials. Citations/references page follow APA style.</p>
<p>B to B+ Proficient 4 – 4.4 points</p>	<p>Paper is well written with few notable 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. Citations/references page do not follow APA style.</p>
<p>C Approaching Proficiency 3 – 3.9 points</p>	<p>Paper falls short of accepted standards for master's level composition. 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. Paper does not adhere to formatting specifications provided in course text and materials. Citations and references page do not follow APA style.</p>
<p>F Unsatisfactory Less than 3 points</p>	<p>Paper is so brief, incomplete, or off-topic that any reasonably accurate assessment is impossible.</p>

Assessment/Feedback: X/5

Overall Assessment/Feedback: for PBA X/60

Grading Scale for Research Project

Exemplary: 60 points. Substantially meets the project and report requirements. All criteria are addressed fully

Accomplished: 56-59 points. Meets the project and report requirements. Criteria adequately addressed

Developing: 55-53 points. Meets some, but not all, of the project and report requirements. Weaknesses in addressing some of the criteria

Undeveloped: 53 points and below. Does not meet the project and report requirements. Weaknesses in addressing the majority of the criteria

Teacher Research Impact Collaborative Presentation

The M.Ed. Program exit requirement is a teacher research impact presentation which is completed during your capstone course, EDUC 675. *The Teacher Research Impact Presentation is an ungraded requirement for EDUC 675*, however, students are required to successfully complete a Teacher Research Impact Presentation in order to exit and graduate from the Secondary Education program. Your grade for EDUC 675 will be posted only upon successful completion of the Teacher Research Impact Presentation.

Working in a small group (likely your critical friend team) organized by broad areas of research interests, you will identify one authentic, alternative, contemporary media-based method through which you will share the impact of your teacher research. While you will make a brief presentation of your individual research findings in class, the mission of this assignment is for your collaborative to design and enact a presentation which brings together your papers and its impact of/for student learning and your professional development as a teacher (e.g., as differentiation, management, classroom environments, student engagement.) You might highlight the very importance of teacher research or summarize the findings of your group members' efforts around a common theme or topic. Examples will be offered.

After your presentation, you are also encouraged to display and present these findings in an alternative setting and through creative means, with your primary goal being engaging in an exercise in demonstrating the significance of your teacher research to the broader world. You may potentially share your project with the Secondary Program Faculty and members of the larger college or educational community.

Grading Scale for Course

Grade	Standards	Grading	Grade Points	Graduate Courses
A	Meets Standard	93 – 100	4.00	Satisfactory / Passing
A-	Meets Standard	90 – 92.9	3.67	Satisfactory / Passing
B+	Approaches Standard	88 – 89.9	3.33	Satisfactory / Passing
B	Approaches Standard	83 – 87.9	3.00	Satisfactory / Passing
B-	Approaches Standard	80 – 82.9	2.67	<i>Please note that B- is not a passing course grade.</i>

READING RESOURCES

Teacher Research

- Falk, B., & Blumenreich, M. (2005). *The power of questions: A guide to teacher and student research*. Portsmouth, NH: Heinemann.
- Goodnough, K. (2001). Teacher development through action research. *Action in teacher education*, 23 (1), 37-46. [Access through GMU, Library, e-journal.](#)
- Greely, K. (2000). *Why fly that way?: Living community and academic achievement*. NY: Teachers College.
- Hubbard, R. S., & Power, B. (1999). *Living the questions: A guide for teacher-researchers*. Portland, ME: Stenhouse.
- Kagan, D. M. (1993). *Laura and Jim and what they taught me about the gap between educational theory and practice*. NY: State University of New York Press.
- Lassonde, C. A., Galman, S., & Kosnik, C. (Eds.), (2009). *Self-study research methodologies for teacher educators*. Rotterdam, The Netherlands: Sense.
- Leedy, P. D., and Ormrod, J. E. (2001). *Practical research: Planning and design*. Upper Saddle River, NJ: Merrill.
- MacLean, M.S. & Mohr, M. (1999). *Teacher-researchers at work*. National Writing Project, Berkeley, CA.
- Samaras, A. P., & Freese, A. R. (2006). *Self-study of teaching practices primer*. New York, NY: Peter Lang.
- Samaras, A. P., Freese, A. R., Kosnik, C., & Beck, C. (Eds.) (2008). *Learning communities in practice*. The Netherlands: Springer Press.
- Samaras, A. P., Adams-Legge, M., Breslin, D., Mittapalli, K., Magaha O'Looney, J., & Wilcox, D. R. (2007). Building a plane while flying it: Reflections of teaching and learning self-study. *Reflective Practice*, 8(4), 467-481.
- Seidman, I. (1998). *Interviewing as qualitative research: A guide for researchers in education and the social sciences*. New York: Teachers College Press.
- Wilcox, D. R., & Samaras, A. P. (2009). Examining our Career Switcher teachers' first year of teaching: Implications for alternative teacher education program design. *Teacher Education Quarterly*, 36 (4), 173-191.
- Zenkov, K. & Harmon, J. (2009). Picturing a writing process: Using photovoice to learn how to teach writing to urban youth. *Journal of Adolescent and Adult Literacy*, 52(7), 575-584.

Data Analysis

- Bogdan, R. C., & Biklen, S. K. (2007). *Qualitative research for education: An introduction to theory and methods*. Boston, MA: Allyn & Bacon.
- Czaja, R., & Blair, J. (1996). *Designing surveys: A guide to decisions and procedures*. Thousand Oaks, CA: Pine Forge Press.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis*. Thousand Oaks, CA: Sage.
- Patton, M. Q. (1990). *Qualitative evaluation and research methods (Second Edition)*. CA: Sage.
- Rovessi, C., & Carroll, D. J. (2002). *Statistics made simple for school leaders*. Lanham, MD: Scarecrow Press.
- Salkind, N. (2000). *Statistics for people who think they hate statistics*. Thousand Oaks, CA: Sage.
- Saldaña, J. (2013). *The coding manual for qualitative researchers*. Thousand Oaks, CA: Sage.

Research and Writing

- American Psychological Association (2009). *Publication Manual of the American Psychological Association*. American Psychological Association: Washington, DC.
- Booth, W. C., Colomb, G. G., & Williams, J. M. (1995). *The craft of research*. Chicago, IL: The University of Chicago.
- Dahl, K. K. (1992). *Teacher as writer: Entering the professional conversation*. Urbana, IL: NCTE.

Online Resources

*Also see Web Links for Teacher Research posted on Bb.

Biennial International Conference on the Self-Study of Teacher Education Practices
<http://www.castleconference.com/conference-history.html>

Studying Teacher Education: A journal of self-study of teacher education practices:
<http://www.tandf.co.uk/journals/titles/17425964.asp>

Self-Study of Teacher Education Practices Special Interest Group <http://aera.net/sstepsig109>

Data Collecting Tools: Go to Google docs, then spreadsheets to create survey.
Also Survey Monkey <http://www.surveymonkey.com/home.asp>

National Reports and Test Reporting Centers

The Nation's Report Card/National Assessment of Educational Progress

<http://nces.ed.gov/nationsreportcard/>

National Center for Educational Statistics <http://nces.ed.gov/help/sitemap.asp>

TIMSS and PIRLS The International Math and Science Study and International Literacy Study <http://www.timss.org/>

Best Evidence/School Reform Reports/School Models. Johns Hopkins University

<http://www.bestevidence.org/index.htm>

Week “Online” indicates Bb participation and field work; online classes are in grey	Topics	Assignments Post on Class Discussion thread before class where listed Red font requires peer review	Readings Chapters are in text Exemplars located in Bb folder
Week #1 1/26 On Campus	Introduction to Teacher Research: Self-Study Action Research Method Working with Critical Friends Finding your Research Question (RQ)	Upload a picture of yourself on the class discussion thread In-class activity: “I wonder activity” Use Critical Friend Inquiry (CFI): 1.1 pp. 5-6	During first week, read Preface, Chapter 1, & Appendix A Overview Self-Study Resource Center at http://www.sagepub.com/samaras/
Week #2 2/2 On Campus	Refining your RQ Drafting a Rationale and Argument Using the literature to inform your study	Discussion Thread Assignment 1: Post Research Artifact & Memo (use pp. 105-106 text) Begin your literature review (see p. 137)	Chapters 2 & 4 See Table 2.1 to draft your timeline GMU Teacher Research Exemplars <u>focus on Intro/Rationale:</u> <i>K. Mayden , Fall 2014</i> <i>Mautz, Fall 2014</i>
Week #3 2/9 On Campus	Research Design Being an Ethical Teacher Researcher	Discussion Thread Assignment 2: Post Rationale & RQ (see p. 124 text)	Chapters 6 & 7 GMU Teacher Research Exemplar <u>focus on Design & Timeline:</u> <i>Mautz, Fall 2014</i>
Week #4 2/16 Online	Literature Review	Post Peer Review of Assignment #2: Peer Rationale & RQ Use electronic databases for your literature review	Chapter 8 GMU Teacher Research Exemplar <u>focus on Literature Review:</u> <i>B. Saxena, Fall 2014</i>

<p>Week #5 2/23</p> <p>On Campus</p>	<p>Collecting Data</p>	<p>Discussion Thread Assignment 3: Post Literature Review</p>	<p>Chapter 9</p> <p>GMU Teacher Research Exemplars with <u>focus on Method</u>:</p> <p><i>J. Payden, Fall 2014 and L. Walsh, Fall 2014</i></p>
<p>Week #6 3/2</p> <p>Online and Field Work</p>	<p>Collect Data in the Field</p>	<p>Discussion Thread Assignment 4: Post Methods: Data Chart incl Pedagogical Strategies See: Mautz p.13; Payden pp. 10-11; Walsh p. 17</p>	<p>Chapter 10</p> <p>GMU Teacher Research Exemplar with <u>focus on Analysis</u>:</p> <p><i>L. Sprague, Fall 2014</i></p>
<p>3-9 to 3/15</p>	<p><i>Have a Lovely Spring Break!</i></p>		
<p>Week #7 3/16</p> <p>Online and Field Work</p>	<p>Continuing Collecting & Analyzing Data</p>	<p>Post Peer Review of Assignment #4: Methods: Data Chart & Pedagogies</p>	<p>No readings this week</p>
<p>Week #8 3/23</p> <p>On Campus</p>	<p>Assessing Research Quality</p> <p>Validation Workshop</p>	<p>Work on Draft 1 Move charts into narrative format</p>	<p>Chapter 11</p> <p>GMU Teacher Research Exemplar with <u>focus on Results</u>:</p> <p><i>L. Sprague, Fall 2014</i></p>
<p>Week #9 3/30</p> <p>Online</p>	<p>Writing your Results</p>	<p>Discussion Thread Assignment 5: Post Draft 1 for peer review</p>	<p>Chapters 12</p> <p>GMU Teacher Research Exemplars with <u>focus on Discussion & Critique & Appendix</u>:</p> <p><i>L. Walsh, Fall 2014</i></p>

<p>Week #10 4/6</p> <p>Online</p>	<p>Writing your Discussion and Critique</p>	<p>Discussion Thread Assignment 6: Post Peer Review of Assignment #6: Draft 1 with tracking & comments</p>	<p>No readings this week</p> <p>Write, write, write!</p>
<p>Week #11 4/13</p> <p>On Campus</p>	<p>Polishing your Paper</p>	<p>Discussion Thread Assignment 7: Post Draft 2 for Professor Review</p>	<p>No readings this week</p>
<p>Week #12 4/20</p> <p>Online</p>	<p>Finalize Teacher Impact Presentations</p>	<p>Meet with group to finalize presentation</p>	<p>No readings this week</p>
<p>Week #13 4/27</p> <p>On Campus</p>	<p>Finalizing Paper</p>	<p>POST Teacher Impact Presentation</p> <p>Review Professor feedback and finalize paper</p>	<p>No readings this week</p>
<p>Week #14 5/4</p> <p>On Campus</p>	<p>Individual Presentations In 5 minutes tell us:</p> <ol style="list-style-type: none"> 1. your RQ 2. Rationale 3. key discoveries 4. most valuable insight/mistake 	<p>POST and BRING hard copy of Teacher Research Project</p> <p>Post Appendix online only.</p>	<p>No readings this week</p>