

George Mason University
College of Education and Human Development
Ph.D. in Education Program



EDRS 810 001: Problems & Methods in Educational Research
(3 credits) Spring 2018
Wednesdays, 4:30-7:10 PM, Robinson A243

Instructor: Nancy Holincheck, Ph.D., NBCT
Office Hours: 3:30-4:30 Wednesdays or by appointment
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Prerequisites: Admission to the Ph.D. program or permission of instructor.

Course Description:

This is an advanced course in the interpretation and application of education research methods. Emphasizes comparison of alternative philosophies of research, ways of formulating questions/hypotheses, research plans, and analysis procedures. Students evaluate existing studies and investigate a range of research approaches.

Course Delivery Method:

The class sessions will include both lecture and discussion as well as group work.

Course Objectives:

Upon successful completion of the course, students should:

- Be able to understand what research is, and how it differs from other intellectual and practical activities in education;
- Be able to understand the major approaches to educational research (qualitative, quantitative, and mixed methods) and the implications for doing and evaluating research;
- Be able to identify different types of research designs;
- Be able to distinguish research design from methodological approach;
- Be able to find, understand, evaluate, and apply published research that is relevant to their field;
- Be able to design the basic components of small-scale research studies, both quantitative and qualitative, including:
 - Identifying a research problem to study
 - Formulating the purposes of the study
 - Developing a conceptual framework for the study
 - Generating appropriate research questions
 - Planning relevant and feasible methods of sampling, data collection, and analysis
 - Anticipating plausible validity threats, and thinking of ways to deal with these
 - Dealing appropriately with ethical issues in the research.
- Be able to write coherently and clearly about the conceptual framework, questions, and methods used in a research study;
- Be able to use the writing style described in the sixth edition of the Publication Manual of the American Psychological Association (APA) for writing term and research papers;
- Be able to reflect on their actions and choices, and use that reflection to inform practice;
- Be able to present clear and coherent written summary of research results from scholarship.

Required Texts

- Johnson, R. B. & Christensen, L. (2017). *Educational research: Quantitative, qualitative and mixed methods approaches, 6th edition*. Thousand Oaks, CA: SAGE Publications.
This text has a companion website for students: <https://edge.sagepub.com/rbjohnson6e> with study guides, practice quizzes, and other materials.
- American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: Author.

Course Performance Evaluation

Students are expected to submit all assignments on time. Assignments should be submitted to Blackboard according to the schedule outlined in the syllabus.

Course Assignments & Examinations

	<i>Points</i>
Participation & Professionalism	20
Current Practices in Research	10
Human Subjects Online CITI Training	10
Midterm Exam	15
Quantitative Research Proposal Paper	25
Qualitative Research Proposal – Poster Presentation	20
<i>Total Points</i>	100

1. Participation & Professionalism (20%)

Attendance, punctuality, preparation, and active contribution to small and large group efforts are essential. These elements of your behavior will reflect the professional attitude implied in the course goals and will account for 20% of your course grade. Students who must miss a class must notify the instructor (preferably in advance) and are responsible for completing all assignments and readings for the next class. See rubric at the end of this syllabus.

2. Current Practices in Research: Reflective Interview Summary & Discussion (10%)

This assignment focuses on understanding research in your professional area. For this assignment you will interview a faculty member in your specialization or secondary area who is involved in research. We will collaborate on potential interview questions together in class, but you should also write some of your own. You will summarize your finding in a narrative report and a brief presentation in class.

3. Human Subjects Online CITI Training (10%)

Students will complete Mandatory Training for Persons Conducting Research Using Human Subjects. **For this course, you will be required to complete the Basic Course AND one additional 'optional' module related to your area of interest.**

- Specific directions for how to log on can be found at the GMU Office of Research Subject Protection website: <http://oria.gmu.edu/research-with-humans-or-animals/institutional-review-board/human-subjects-training/> Follow their directions to register and access the CITI Training Program.
- You should save a pdf copy of your completion certificate (or take a screenshot and paste into a document), and submit a copy to Blackboard when you complete the training. See the Class Schedule in the syllabus for the due date for verification of completion of CITI training.

4. Midterm Exam (15%)

One exam will cover the material from the class and textbook and include multiple choice as well as short answer questions. This exam will occur in the middle of the semester, to ensure that students are prepared to apply their knowledge during the second half of the semester. The exam will focus on key research concepts and terms from the textbook and from class discussions.

Recommended: Online Chapter Quizzes

You should complete the online quizzes on each week's assigned readings from the course textbook. (Be sure to complete all sections of the assigned chapters' quizzes, possibly including multiple choice, true-false, and/or matching.) Quizzes for each week can be found at the textbook's Companion Website: <https://edge.sagepub.com/rbjohnson6e>

5. Quantitative Research Proposal (25%)

Students will write a quantitative research proposal (introduction, literature review, and methods sections). This proposal should build on existing research and may replicate and extend previous research studies. The proposal will contain relevant sections specific to the research design (see pp 41-59 of the APA manual). Organizational headings must be used. These headings may vary depending on your research design and the specifics of your individual study.

Quantitative Proposal Requirements (for Paper):

- Introduction & Literature Review
 - Introduce topic & briefly situate it in policy or practice to establish significance
 - Literature review (If you are replicating & extending a previous study, be sure to describe the original work. A minimum of 6 empirical research articles must be included in your review; additional references may be needed to establish the research questions.)
 - Statement of purpose and research questions.
- Methods
 - Research Design
 - Participants (when applicable, should include setting, subjects & sampling procedures)
 - Measures
 - Intervention (when applicable, should include control/alternate treatment)
 - Procedures (when applicable, should include study procedures, data collection procedures, scoring procedures, fidelity of treatment procedures.)
 - Ethical considerations
 - Proposed Preliminary Data Analyses
 - Limitations of Proposed study
- APA Style References

6. Qualitative Research Poster Presentation (20%)

Your qualitative proposal will be prepared in a presentation format, and presented as you would a poster presentation at an academic conference. You will prepare a poster that will be shared during our final class session. (You may prepare a 12-slide presentation in lieu of an actual poster; the slides must be printed to post on wall.). You should provide a sample handout (overview) that could be shared. Further directions will be provided in class.

Qualitative Proposal Requirements (for Poster):

- Introduction & Literature Review
 - Brief introduction to the topic & literature review.
 - Statement of purpose and research questions.
- Methods
 - Research design
 - Participants (should include sampling procedures)

- Data Sources (when applicable, should include instrumentation)
- Procedures (proposed data collection process—this heading is sometimes combined with Data Sources in qualitative research)
- Ethical Considerations
- Proposed Preliminary Data Analyses
- Limitations of Proposed study
- APA Style References

GRADING SCALE

| 95-100 =A | 90-94 =A-| 86-89=B+ | 83-85=B | 80-82= B- | 70-79=C |Below 70=F |

Professional Dispositions

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

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

Campus Resources

- Support for submission of assignments to Tk20 should be directed to tk20help@gmu.edu or <https://cehd.gmu.edu/aero/tk20>. Questions or concerns regarding use of Blackboard should be directed to <http://coursessupport.gmu.edu/>.

- For information on student support resources on campus, see <https://ctfe.gmu.edu/teaching/student-support-resources-on-campus>

For additional information on the College of Education and Human Development, please visit our website <https://cehd.gmu.edu/students/> .

Proposed Class Schedule:

Date	Class Topic	Read for class this week	Assignments due for class
Jan. 24 Week 1	Course Overview, syllabus, What is research? Research basics, types of education research	No readings assigned	
Jan 31 Week 2	Research basics, research questions	<ul style="list-style-type: none"> • APA Manual chapter 1 • Text chapters 1 & 2 • Other book chapter on Bb 	Bring to class: List of research questions that are relevant to your doctoral emphasis; begin to identify relevant literature
Feb 7 Week 3	Literature Review	<ul style="list-style-type: none"> • Text chapter 4 • Research study on Bb 	Work on literature review chart
Feb 14 Week 4	Ethics & research; Constructing research questions; evaluating research	<ul style="list-style-type: none"> • Text chapter 6 • Other book chapter on Bb 	Bring to class: completed literature review chart to class for small group discussion Examine: CITI training info (due in Week 6)
Feb 21 Week 5	Sampling & Validity	<ul style="list-style-type: none"> • Text chapters 10 & 11 • Research study on Bb 	Bring to class AND submit to Blackboard: Current Practices in Research –Reflective Interview Summary. Submit to Blackboard by 4:30 pm on Wed 2/21.
Feb 28 Week 6	Measurement & Assessment	<ul style="list-style-type: none"> • Text chapters 7, 8 & 9 • Research study on Bb 	Submit to Blackboard: Verification of Human Subject Online CITI Training certification by 11:59 pm on Tues 2/27
Mar 7 Week 7	MIDTERM EXAM + Guest speaker	No readings assigned	If you have not yet shared your Interview Summary with the class, bring it with you again today.
Mar 14 Week 8	Spring Break: No class meeting		
Mar 21 Week 9	Selecting a Quantitative Research Method	<ul style="list-style-type: none"> • Text chapters 12, 13 & 14 • Research study on Bb • Vickers p. 4-11 (Bb) 	Bring to class: Draft of Quantitative Research Proposal to class for peer & instructor review

Mar 28 Week 10	Collecting, Analyzing, Interpreting Quantitative Data	<ul style="list-style-type: none"> Text chapters 18 & 19 Research study on Bb 	
Apr 4 Week 11	Selecting a Qualitative Research Method	<ul style="list-style-type: none"> Text chapters 15 & 16 Research study on Bb 	Submit to Blackboard: <i>Final Quantitative Research Proposal to Instructor via Bb by 11:59 pm on Tues 4/3</i>
Apr 11 Week 12	Data Analysis: Qualitative	<ul style="list-style-type: none"> Text chapter 20 Research study on Bb 	
Apr 18 Week 13	Mixed Methods Research; Presentation of research	<ul style="list-style-type: none"> Text chapter 17 Research study on Bb 	Bring to class: <i>Outline of Qualitative Proposal to class for peer & instructor feedback</i>
Apr 25 Week 14	Summary & synthesis	<ul style="list-style-type: none"> Research study on Bb Identify and SKIM a dissertation on a topic of interest 	
May 2 Week 15	Summary & synthesis; Qualitative Poster Presentations	Final Course Evaluations (completed in class) Bring to class: <i>Qualitative Proposal Poster presentation & sample handout for class on 5/2</i>	
May 9 Week 16	Final Exam Date	<i>No class meeting</i> Submit to Blackboard: <i>Final slides & sample handout from poster presentation due to Instructor via Bb by 4:30 pm on Tues 5/9</i>	

Assessment Rubrics:

Rubric for Participation & Professionalism

- **Exemplary (18-20 points):** The student attends all classes, is on time, completes all weekly readings and brings required materials to class. The student follows outlined procedures in case of absence; the student actively participates and supports the members of the learning group and the members of the class. Student contributes meaningfully to all Blackboard discussion board posts.
- **Adequate (16-17 points):** The student attends all classes, is on time, completes most weekly readings and brings required materials to class. The student follows outlined procedures in case of absence; the student makes active contributions to the learning group and class. Student contributes to Blackboard discussion board posts.
- **Marginal (14-15 points):** The student is on time, completes most weekly readings and brings required materials to class. The student attends all classes and if an absence occurs, notifies the instructor and completes any missed activities or assignments; the student participates in most group and class discussions. Student contributes to most Blackboard discussion board posts.
- **Inadequate (13 or fewer points):** The student is chronically late for class. Absences are not documented by following the procedures outlined in this section of the syllabus. The student is unprepared for class and does not actively participate in in-class and Blackboard discussions. The student may fail to exhibit professional behavior and dispositions. **Excessive absences may result in additional penalties and potential withdrawal from class**

Rubric for Current Practices in Research: Faculty Interview

- **Exemplary (9-10 points):** Meaningful student reflection is evident. Reflective summary includes analysis of what the student learned about research and or their field of research from the interview,

as well as some detail learned about the faculty member who they interviewed. Connections to class discussions or readings are made. Reflective summary is submitted to blackboard on time and brought to class for small group discussion.

- **Adequate (6-8 points):** Overall acceptable, but lacking in some criteria for an exemplary rating.
- **Inadequate (5 or fewer points):** Reflective interview summary includes no student reflection.

Rubric for Human Subject online CITI Training

- **Adequate evaluation (10 points):** Successful completion of online BASIC module (related to conducting research in schools OR your research interest area) on time.
- **Marginal evaluation (5 points):** Successful completion of online BASIC module. Verification of CITI Training is submitted after due date.
- **Inadequate (4 or fewer points):** Unsuccessful completion of online BASIC module.

Rubric for Quantitative Research Proposal

- **Exemplary paper (23-25 points):** Appropriate topic, thorough and thoughtful purpose and research questions with appropriate studies referenced, appropriate and clearly described research design, participants, materials, data sources, implementation procedures, and careful brief description of data analyses. Good writing style, free of mechanical or stylistic errors, appropriate use of APA format. Draft was brought to class for small group and instructor feedback.
- **Adequate paper (20-22 points):** Good overall paper, lacking in one or two of the criteria for an exemplary paper. Not entirely reflective or thoughtful, or minor writing style or APA format errors may be present. Draft was brought to class for small group and instructor feedback.
- **Marginal paper (17-19 points):** Overall, acceptable but with one or more significant problems. Contains some useful information, but may have substantial problems with evaluation, writing style or APA format, or unclear or inappropriate description of implementation of project. Draft may not have been complete enough for class or instructor feedback.
- **Inadequate paper (1-16 points):** Paper with substantial problems in important areas such as writing, proposed implementation of intervention, procedures for evaluation of results, or overall thoughtfulness. Contains little or no information of value to field of education. Draft may not have been complete enough for class or instructor feedback.
- **Unacceptable/no paper (0 points):** Paper with no value whatsoever relative to the assignment, or no paper turned in at all. May describe a project of no value that was not approved for this assignment.

Rubric for Presentation

- **Exemplary presentation (19-20 points):** Keeps within the time limits; reflects poise, clarity, knowledge and interest in the content being presented; reflects a high level of preparation; make effective use of literature, handouts, demonstrations; describes very clearly the treatment(s) under consideration; keeps the audience engaged; provides information of interest and value to audience.
- **Adequate presentation (16-18 points):** Good overall presentation, but may be lacking in one or two of the criteria specified in exemplary response. May seem a little less polished or prepared, may be vague in some place, or may fail to completely engage the audience.
- **Marginal presentation (12-15 points):** Presentation provides relevant information, but demonstrates only a limited understanding of the topic or project. Style, or visual aids may be less than inadequate.
- **Inadequate presentation (1-11 points):** Weak overall presentation that reflects very little knowledge of topic or project. May appear very poorly prepared, or may not have followed directions. Handouts or visual aids may be inadequate or lacking.
- **Unacceptable/no presentation (0 points):** Completely unsatisfactory presentation, with no reasonable reference to topic or project; or no presentation made.