

**GEORGE MASON UNIVERSITY
COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT
GRADUATE SCHOOL OF EDUCATION
Ph.D. in Education Program**

EDRS 810 002: Problems & Methods in Educational Research

3 credits, Fall 2015, CRN 71870

Wednesdays, 4:30-7:10 PM, Robinson B218

Professor: Nancy Holincheck, Ph.D., NBCT

Office Hours: 3:30-4:30 Wednesdays or by appointment

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Course Description:

Prerequisites: Admission to the Ph.D. program or permission of instructor.

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 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, and the implications of the differences between these for doing and evaluating research in education;
- 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 clearly and coherently 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 written research results clearly and coherently.

Course Methodology: This course consists of lectures, large group and electronic discussion, in class activities, and individual/group assignments. *All readings must be completed prior to the class session* in order to take advantage of, and participate in, class activities and discussions.

Required Texts

- Johnson, R. B. & Christensen, L. (2014). *Educational research: Quantitative, qualitative and mixed methods approaches*. Thousand Oaks, CA: SAGE Publications.
This text has a companion website for students: <http://www.sagepub.com/bjohnson5e/main.htm> with study guides, conceptual frameworks and practice quizzes.
- Alvesson, M. & Sandberg, J. (2013). *Constructing Research Questions: Doing Interesting Research*. London: SAGE Publications.
- American Psychological Association. (2009). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: Author.

Recommended Readings:

- Keller D. K. & Casadevall-Keller, M. L. (2010). *The tao of research*. Los Angeles: SAGE.
- Vickers, A. (2010). *What is a p-value anyway? 34 Stories to help you actually understand statistics*. Boston, MA: Addison-Wesley.

Required Access to Course Blackboard Site

Blackboard will be used to post important information for this course. Announcements and resources are posted on the Blackboard site in between class sessions. You will submit assignments electronically through Blackboard. You are responsible for accessing the materials prior to class. In addition, you will need to login to Blackboard to upload assignments for the course.

Access Blackboard through myMason:

- Go to <http://mymasonportal.gmu.edu>
- Enter your user login and password (the same as your GMU email login and password)
- Click the “Courses” tab at the top of the screen
- Select your course from the middle column.

Course Assignments & Examinations

	<i>Points</i>
Participation & Professionalism	20
Evaluation of Empirical Research Studies (2)	10
Human Subjects Online CITI Training	10
Quantitative Research Proposal Paper	30
Qualitative Research Methods Section	20
Poster Presentation	10
<i>Total Points</i>	100

1. Participation & Professionalism (20%)

Students will be asked to work individually or in small groups in class assignments throughout the semester. Students will also be asked to participate in online Blackboard Discussions outside of class time. Because of the importance of lecture and discussion to your total learning experience, you are strongly encouraged to both attend and participate in class regularly.

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.

2. Evaluation of Empirical Research Articles (10%)

At two different times during the semester, students will analyze & evaluate two empirical research articles, including *one quantitative intervention study* and *one qualitative study*. The studies should be drawn from education literature that is relevant to the student's field and/or Ph.D. concentration. Students should use the form provided in class and posted to Blackboard, which includes the following sections:

- *Description of study: Purpose of study, Methods, Results/Findings*
- *Critical comments: Analyze the strengths & weaknesses of the research design & overall quality*
- *Critical reflections about the article: Discuss implications of the findings within your field and how this research may inform or influence you in your future education research endeavors.*

Your empirical research article evaluations should be submitted electronically to Blackboard by the dates indicated in the Class Schedule. Please also bring a copy of the article and the form to class for small group discussion.

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.**

- This online training module can be accessed at <http://www.citiprogram.org>. (You must complete the required basic course before the optional modules are available).
- 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/>
- 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. Quantitative Research Proposal (30%)

Students will write a **quantitative research proposal**, including a review of relevant academic literature and a methods section written in APA format (see sample paper on pp 41-59 of the APA manual). A first draft of this assignment will be submitted to your instructor via Blackboard and reviewed with your peers before the final version of this assignment is due to your instructor.

Quantitative Proposal Requirements

- Abstract
 - Write this *LAST*. This informative abstract should summarize the background, purpose, methods & potential implications of your student in 150-250 words.
- Introduction
 - Introduce your overall topic & the significance of this topic in an educational context. State your purpose for pursuing this line of research and clearly state your research question(s).
- Literature Review
 - This section should include a relevant literature review to demonstrate a basic level of knowledge of the research that has already been accomplished in the field of interest.
 - Most literature reviews are organized thematically from an analysis of the literature, but an historic review of literature on the topic may also be appropriate. Students should avoid summarizing each reference in "book report" style and instead strive to synthesize the literature.
 - If you are replicating & extending a previous study, be sure to describe the original work in detail. In your methods section you must distinguish between your methods & the original.
 - A rough estimate of number of references required for your literature review would be 8-10, but more may be needed to establish the research questions.

- Methods
 - Research Design
 - Participants (include setting, subjects & sampling procedures)
 - Measures (describe each measure thoroughly, including those pulled from literature AND those created by the researcher; include copies of measures in the appendices)
 - Intervention (when applicable, should include control/alternate treatment)
 - Procedures (explain procedures sequentially, should include study procedures, data collection procedures, scoring/evaluation procedures, fidelity of treatment procedures.)
 - Proposed preliminary data analyses (use your textbook & class discussion to write this section)
 - Limitations (discuss potential limitations of your proposed research design, sample size, length of study or the tools you will use.)
 - Ethical considerations (address how you will protect participants & how you will protect the data)
 - Potential significance (address how your findings may be useful to other researchers and/or to practitioners in the field)
- APA Style References
- Appendices (include copies of measures such as surveys or scales as relevant)

5. Qualitative Research Methods Section (20%)

Students will write a **qualitative research methods section**, including the relevant components of a qualitative methods section written in APA format. Note that this is essentially a qualitative research proposal without a literature review. *You will need to examine literature to prepare to write this methods section, but no formal literature review section is required.*

- Introduction
 - Introduce your overall topic & the significance of this topic in an educational context. State your purpose for pursuing this line of research and clearly state your research question(s). You are encouraged to thoroughly explain your own interests and connections to the research topic in a qualitative proposal.
- Method
 - Research design
 - Participants (who are they, where are they, why are you interested in them, how will you identify & recruit them)
 - Data sources (describe each data source thoroughly, including those pulled from literature AND those created by the researcher; include cop)
 - Procedures (proposed data collection process—this heading is sometimes combined with Data Sources in qualitative research)
 - Proposed preliminary data analyses (briefly discuss how you plan to analyze the qualitative data)
 - Limitations
 - Ethical Considerations
 - Potential significance
- APA Style References
- Appendices (include a copy of the consent form you will use AND as relevant, include interview protocols, questionnaires, observation checklists, etc.)

6. Poster Presentation (10%)

As a culminating activity each student will create a poster presentation of one of the proposals (above). Each student will present their poster during class at the end of the semester. Specific directions for creating the poster will be provided in class and on Blackboard. Note that a handout is not required, nor recommended.

Grading Scale

Grade	Grading	Graduate Course Standard
A	94-100	Satisfactory / Passing
A-	90-93	Satisfactory / Passing
B+	85-89	Satisfactory / Passing
B	80-84	Satisfactory / Passing
C	70-79	Does not meet requirements of the Graduate School of Education
F	<69	Does not meet requirements of the Graduate School of Education

GMU Policies and Resources for students

- Students must adhere to the guidelines of the George Mason University Honor Code.
[See <http://oai.gmu.edu/the-mason-honor-code/>]
- Students must follow the university policy for Responsible Use of Computing.
[See <http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/>]
- Students are responsible for the content of university communications sent to their 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.**
- 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/>].
- 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/>].
- Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.
- The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing.
[See <http://writingcenter.gmu.edu/>]

Professional Dispositions

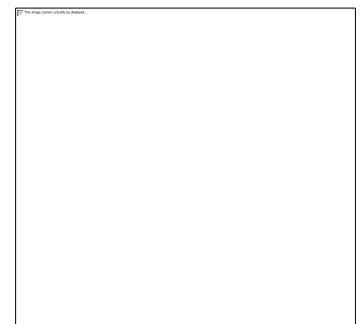
Students are expected to exhibit professional behaviors and dispositions at all times.

Core Values Commitment

The College of Education & Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice.

Students are expected to adhere to these principles:

<http://cehd.gmu.edu/values/>



For additional information on the College of Education and Human Development, Graduate School of Education, please visit our website [See <http://gse.gmu.edu/>]

Proposed Class Schedule:

Date	Class Topic	<p align="center">Readings & Assignments due for class date <i>J/C = Johnson & Christensen text A/S = Alvesson & Sandberg text</i> <i>Readings marked (Bb) are available on Blackboard</i></p>
Sep 2 Week 1	Course Overview, syllabus, purposes & uses of education research; accessing academic literature	<p>Readings due for class this week:</p> <ul style="list-style-type: none"> • J/C chapters 1 (Bb) & 22 <p><i>Review syllabus before class, bring questions to class</i></p>
Sep 9 Week 2	Research basics, types of education research; Interesting research questions; APA style	<p>Readings due for class this week:</p> <ul style="list-style-type: none"> • APA Manual chapter 1 • J/C chapter 2 • A/S chapter 1 & 2 • Supplemental Text: Tao of Research, p. 21-28 (Bb) <p><i>Bring to class: list of research questions that are relevant to your doctoral emphasis; begin to identify relevant literature</i></p>
Sep 16 Week 3	Ethics & research; Constructing research questions; evaluating research	<p>Readings due for class this week:</p> <ul style="list-style-type: none"> • J/C chapters 6 • A/S chapter 3 & 4 • Supplemental Text: Tao of Research, p. 31-38 (Bb) <p><i>Examine CITI training info (due in Week 5)</i> <i>Submit completed Quantitative Intervention Evaluation of Empirical Research Article to Bb before class Wed 9/16; Bring copy of article & evaluation form to class on 9/16</i></p>
Sep 23 Week 4	Writing literature reviews: reviewing for a purpose	<p>Readings due for class this week:</p> <ul style="list-style-type: none"> • J/C chapter 4 • Randolph: Guide to writing dissertation literature reviews (Bb) <p><i>Bring completed literature review chart to class for small group discussion on 9/23</i></p>
Sep 30 Week 5	Specifying a purpose, research questions, constructing a literature review	<p>Readings due for class this week:</p> <ul style="list-style-type: none"> • A/S chapters 5 & 6 • J/C chapters 5 • Sample research study-linked on Bb <p><i>Submit verification of Human Subject Online CITI Training certification to Blackboard before class on Wed 9/30</i></p>
Oct 7 Week 6	Writing your research proposal, critiquing research proposals	<p>Readings due for this week:</p> <ul style="list-style-type: none"> • Review J/C chapters 5 & 22 • Identify and SKIM a dissertation on a topic of interest <p><i>Bring Draft of Quantitative Research Proposal to class on Wed. 10/7</i></p>
Oct 14 Week 7	Measurement & Assessment; Data Collection Methods	<p>Readings due for class this week:</p> <ul style="list-style-type: none"> • J/C chapters 7, 8 & 9 • Sample research study-linked on Bb <p><i>Submit edited draft to instructor via Bb by Sunday, 10/18, 11:59 pm</i></p>

Oct 21 Week 8	Sampling & Validity of research; Quantitative vs. Qualitative Research Methods	Readings due for class this week: <ul style="list-style-type: none"> • J/C chapters 10 & 11 • Sample research study-linked on Bb Submit completed Qualitative Evaluation of Empirical Research Article to Bb before class Wed 10/21; Bring copy of article & evaluation form to class on 10/21
Oct 28 Week 9	Selecting a Quantitative Research Method	Readings due for class this week: <ul style="list-style-type: none"> • J/C chapters 12, 13 & 14 • Sample research study-linked on Bb • Supplemental Text: Vickers p. 4-11 (Bb)
Nov 4 Week 10	Selecting a Qualitative Research Method	Readings due for class this week: <ul style="list-style-type: none"> • J/C chapters 15, 16, & 17 • Sample research study-linked on Bb Final Quantitative Research Proposal due to Instructor via Bb by 11:59 pm Sunday, 11/8
Nov 11 Week 11	Collecting, Analyzing, Interpreting Quantitative Data	Readings due for class this week: <ul style="list-style-type: none"> • J/C chapters 19 & 20 • Sample research study-linked on Bb
Nov 18 Week 12	Data Analysis: Qualitative	Readings due for class this week: <ul style="list-style-type: none"> • J/C chapter 21 • Sample research study-linked on Bb Bring Draft of Qualitative Methods Section to class for peer feedback
Nov 25 Week 13	Thanksgiving Break – No Class	
Dec 2 Week 14	Mixed Methods Research; Presentation of research	Readings due for class this week: <ul style="list-style-type: none"> • J/C chapter 3 & 18 • Sample research study-linked on Bb
Dec 9 Week 15	Summary & synthesis: What have we learned, where do we go from here?;	Readings due for class this week: <ul style="list-style-type: none"> • A/S chapter 7 & 8 Qualitative Methods Section due to Instructor via Bb by 11:59 pm on Sunday, 12/13
Dec 16 Week 16	Poster Presentations	<i>Final Exam Date: Poster Presentation due in lieu of exam</i> Final Course Evaluations (completed in class) Poster presentation & handout due in class on 12/16

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 Evaluation of Empirical Research articles

- **Adequate evaluation (5 point):** Evaluation is thorough, thoughtful, correctly done, submitted to Blackboard on time and brought to class for small group discussion.
- **Marginal evaluation (3 points):** Evaluation is carelessly prepared, not thoughtful, or incomplete.
- **Inadequate evaluation (2 or fewer points):** Evaluation is poorly done and/or is not submitted on time.

Rubric for Human Subject online CITI Training

- **Adequate evaluation (10 points):** Successful completion of online BASIC and one supplemental module (related to conducting research in schools or your research interest area) on time.
- **Marginal evaluation (5 points):** Successful completion of online BASIC module; supplemental module may be missing. Verification of CITI Training (BASIC module and supplemental module) is submitted after due date.
- **Inadequate (4 or fewer points):** Unsuccessful completion of online BASIC or supplemental module or late in submitting partial verification of CITI training.

Rubric for Quantitative & Qualitative Research Proposals

- **Exemplary paper (23-25 points):** Appropriate topic, thorough and thoughtful purpose and research questions with appropriate study cited for replication and extension, 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 submitted to Blackboard on time and brought to class for small group 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 submitted to Blackboard on time and brought to class for small group 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 have been submitted late or not brought to class for small group 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 submitted.
- **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 (10 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 overheads, handouts, demonstrations; describes very clearly the treatment(s) under consideration; keeps the audience engaged; provides information of interest and value to audience.
- **Adequate presentation (8-9 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 (6-7 points):** Presentation provides relevant information, but demonstrates only a limited understanding of the topic or project. Style, handouts, or visual aids may be less than inadequate.
- **Inadequate presentation (1-5 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.