



**College of Education and Human Development
Division of Special Education and disAbility Research**

Fall 2015

EDRS 810 001: Problems and Methods in Educational Research

CRN: 71869, 3 - Credits

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| Instructor: Dr. Kelley Regan | Meeting Dates: 08/31/15 - 12/21/15 |
| Phone: 703-993-9858 | Meeting Day(s): Tuesday |
| E-Mail: kregan@gmu.edu | Meeting Time(s): 7:20 pm-10:00 pm |
| Office Hours: by appointment | Meeting Location: Thompson Hall L028 |

***Note:** This syllabus may change according to class needs. Students will be advised of any changes immediately through George Mason e-mail and/or through Blackboard.*

Course Description: Advanced in interpreting and applying educational research methods. Emphasizes comparisons of alternative philosophies of research, ways of formulating questions and hypothesis, research plans, and analysis procedures. Students evaluate existing studies, and investigate a range of research approaches.

Prerequisite(s): Admission to the Ph.D. program or permission of the instructor.

Co-requisite(s): None

Nature of Course Delivery

Learning activities include the following:

1. Class lecture and discussion
2. Application activities
3. Small group activities and assignments
4. Video and other media supports
5. Research and presentation activities
6. Electronic supplements and activities via Blackboard

Course Objectives

Upon completion of this 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
 - 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.

Required Textbooks

- Johnson, R. B., & Christensen, L. (2014). *Educational Research: Quantitative, Qualitative, and Mixed Methods Approaches* (5th edition). Los Angeles, CA: Sage.

Note: This text has a Companion Website: <http://www.sagepub.com/bjohnson5e/main.htm> with study materials, practice quizzes, and other resources.

- American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: Author.

Required Resources

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 are responsible for accessing the materials (for printed copies, etc.) prior to class. In addition, you will need to login to Blackboard to upload assignments for the course.

Access Blackboard through myMason:

→Go to the GMU homepage: <http://www.gmu.edu/>

→Click on MyMason on the top of the page.

→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.

Additional Readings

Readings will include those assigned by the instructors to facilitate the learner outcomes. These may include journal articles and other scholarly products or proposals to review

Course Relationships to Program Goals and Professional Organizations

This course is part of the George Mason University, College of Education and Human Development (CEHD), Graduate School of Education, Special Education, CEHD PhD in Education Program. This program complies with university and program standards.

GMU Policies and Resources for Students:

- a. Students must adhere to the guidelines of the George Mason University Honor Code [See <http://oai.gmu.edu/the-mason-honor-code/>].
- b. Students must follow the university policy for Responsible Use of Computing [See <http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/>].
- 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/>].

- h. **Library Support:** Mason Libraries' Liaison Librarians provide George Mason University students, faculty, and staff specialized assistance in their areas of expertise, supporting the academic programs on Mason's Fairfax, Arlington and Prince William campuses (<http://library.gmu.edu/research/liais.html>). Among other services, Liaison Librarians
- provide research assistance in person, by phone, e-mail and IM
 - offer scheduled, subject-focused research consultations for students and faculty

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. [See <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/>]

Course Requirements

It is expected that each of you will:

- (1) Read all assigned materials for the course.
- (2) Attend and be on time for each class session and participate in classroom activities that reflect critical reading of materials. (If an emergency occurs please notify the instructor in advance.)
- (3) Complete the online Mandatory Training for Person's Conducting Research with Human Subjects.
- (4) Complete homework assignments, including online tests and submit results to professor prior to class meeting.
- (5) Write one quantitative methods section in a professional manner following guidelines stated in the Publication Manual of the American Psychological Association
- (6) Present one methods section to the class.

ASSIGNMENTS

Attendance and Participation

Attendance, punctuality, preparation, and active contribution to small and large group efforts are essential.

1. Students are expected to attend all classes, arrive on time, be prepared for class, demonstrate professional behavior (see Professional Disposition Criteria at <http://www.gse.gmu.edu> for a listing of these dispositions), and complete all assignments with professional quality in a timely manner. To successfully complete this course, students need to adhere to the due dates for specific readings and assignments to be completed. If you feel you

cannot adhere to the schedule noted in the syllabus, please contact the Instructor immediately to discuss options for withdrawing and completing the course during another semester.

2. Laptops, cell phones, PDAs and all other electronic devices should be silenced during class time. If you choose to use your personal laptop for note taking, I ask that you utilize it for that purpose only (not for surfing the web, checking email, etc.).

3. Promptness: All assignments must be submitted on or before the assigned due date. In fairness to students who make the effort to submit work on time, 5% of the total assignment points will be deducted each day from your grade for late assignments.

4. Written Products: All written assignments must be prepared in a professional manner following guidelines stated in the Publication Manual of the American Psychological Association (6th edition). All final products must be typed. Products that, in the judgment of the instructor, are unreadable or unprofessionally prepared will be returned un-graded or assigned a lower evaluation.

****PLEASE** expect to verbally participate, effectively listen during every class session, and encourage discussion of your peers.

Collaborative and Independent critique of a Research Article

Students will work in groups of 3 or 4 in one homework assignment to be completed on Google docs. A quantitative intervention study or qualitative article will be provided to your group members to read individually. Each member will have a role to work on one Google doc to present a thorough critique of the empirical research article. The critiques should include the following parts:

- purpose
- methods
- results
- critical comments
- critical reflections about the article

Students will then independently, in class, complete a critique of another empirical research article.

Online Chapter Quizzes

Students are asked to complete and submit three online quizzes on assigned readings from the course textbook. (Be sure to complete all sections of weekly quizzes, possibly including multiple choice, true-false, and/or matching.) Quizzes for each week can be found at the textbook's Companion Website: <http://www.sagepub.com/bjohnson5e/main.htm> Please email the score/performance of the assigned quiz to yourself. Then, forward the email to my mason account to receive credit.

HSRB CITI Training Module Completion

GMU requires a mandatory Training (3-5 hours approximately) for Persons Conducting Research Using Human Subjects. Seven learner modules in the Basic Course are required prior to applying to conduct any research at Mason using human subjects. For this course, you will be required to complete the Basic Course and one additional optional module.

- This online training module can be accessed at <http://www.citiprogram.org>. For this course, **you must complete the required basic course before the optional modules are available 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 Integrity & Assurance (ORIA) website: <http://oria.gmu.edu> Select Human Subjects Training from the menu.
- Copy and paste your completion certificate in a document, then turn in a hard copy only (this will be returned to you for your records).

GMU also requires that all researchers (including student researchers) submit a research application to the office of Human Subject Protections PRIOR to conducting research. For this course, you should review the application form for class discussion.

- Application forms and guidelines can be found at the GMU Office of Research Integrity & Assurance (ORIA) website: <http://oria.gmu.edu> Select IRBNet Information from menu.

Quantitative Research Proposal (paper)

Students will write a research proposal (introduction, literature review, and method 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 may vary depending on your research design and the specifics of your individual study. Be sure to refer to the APA manual as well as similar work in your field to help you determine what is critical to include in your own proposal. Also refer to the APA manual for how to format headings and citations appropriately. Turn in a hard copy and place an electronic version on the relevant assignment box Blackboard site.

Quantitative Proposal Requirements:

• **Introduction & Literature Review**

- Brief introduction to the topic & literature review. (If you are replicating and extending a previous study, you should be sure to describe the original work).
- Statement of purpose and research questions.

• **Method** (5-6 pages)

- **Research Design**

- **Participants** (when applicable, should include setting, subjects, interventionists)
- **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)
- **Proposed Preliminary Data Analyses**

• **References**

Qualitative Research Proposal (Presentation)

Your qualitative proposal will be presented in a presentation format. In addition, a handout should be prepared for everyone in the class. Further directions will be provided in class.

Qualitative Proposal Requirements:

- **Purpose Statement** (Statement of purpose and research questions).
- **Method**
 - **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)
 - **Proposed Preliminary Data Analyses**

COURSE EVALUATION

Attendance and Participation (15%) (one point for each class session is possible)

Collaborative (5 points) **and Independent** (5 points) **critique of a Research Article** (10%)

5 Points for *collaborative* critique with peers using Google docs

5 points for *independent*, in class, critique of an article

In a narrative paragraph, provide the following information to represent a critique of a research article.

- Accurately identify the purpose of the article (1 point)
- Accurately identify the methods used (to include type of research, variables as applicable, participants, data sources, measures) (1 point)
- Accurately summarize the results of the study (1 point)
- Provide one critical comment regarding how this article extends the field about this research topic (1 point)
- Provide personal critical reflection about the article (regarding the content, results, procedures, measures, or a future research question to pose, etc.)

Evaluation of Online Chapter Quizzes (15%) (5 points possible for each)

Online Quizzes are expected to be submitted on time with a score of 80% or greater. Points will be deducted in the following manner for tests that received a score lower than 80%, are late, or are not submitted. Thoroughly complete assigned readings. Go to companion website and select quiz for designated chapter (<http://www.sagepub.com/bjohnson5e/main.htm>)

- Assigned chapter quiz *completed* (+1 point), submitted *on time* (+2 points) *score* of 65-75% or greater (+1 point) OR *score* of 80% or greater (+2 points)

Rubric for HSRB CITI Training Module (10%)

CITI Training Module

- Pass: Successful completion of online BASIC and one supplemental module (related to conducting research in schools or your research interest area) on time.
- Fail: Unsuccessful completion of online BASIC or supplemental module or late in completing assignment.

Rubric for Quantitative Proposal (Paper) (35%)

(30 points for content; 5 points for mechanics, grammar, APA)

- ✓ Exemplary paper
(Content - 30 points): Appropriate topic, thorough purpose, appropriate research questions, clear description of research design, participants, materials, data sources, and procedures. Adequate and brief description of analysis, and general understanding/interpretation of the relevant methodology
(APA/Mechanics – 5 points): clearly and directly written, good writing style, free of mechanical or stylistic errors, appropriate and correct use of APA format
- ✓ Adequate paper
(Content – 27-29 points): Good overall paper, lacking in one or two of the criteria for an exemplary paper. and/or may have neglected specific components relevant to the methodology
(APA/Mechanics – 3-4 points): Not entirely clear and thorough, minor writing style or APA format errors may be present;
- ✓ Marginal paper
(Content – 24-26 points): Overall, acceptable but with one or more significant problems. Contains some useful information, but may have substantial problems with the evaluation, or unclear or inappropriate description of methodology.
(APA/Mechanics – 2 points): Substantial problems with writing style/APA format
- ✓ Inadequate paper
(Content < 24 points): Paper with substantial problems in important areas such as writing, description of participants, data sources, procedures, data analysis, or overall thoughtfulness. Contains little or no information of value to the field of education.

(APA/Mechanics- 2 points): Writing lacks organization, subheadings, limited APA format

- ✓ Unacceptable/no paper (0 points): Paper with no value whatsoever relative to the assignment, or no paper turned in at all.

Rubric for Qualitative Proposal Presentation (15%)

- ✓ Exemplary presentation (A): Appropriate topic, a clearly stated purpose statement, and appropriate research questions that are consistent with the qualitative research methodology. Appropriate and clearly described research design, participants, materials, data sources, implementation procedures, and careful brief description of data analyses. Keeps within time limits; reflects poise, clarity, knowledge and interest in the content being presented; reflects a high level of preparation; makes effective use of visuals, handouts, demonstrations; keeps the audience engaged; provides information of interest and value to audience. (13-15 points)
- ✓ Adequate presentation (B): 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. (10-12 points)
- ✓ Marginal presentation (C): 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. (9 points)
- ✓ Inadequate presentation (D): 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. (< 9 points)
- ✓ Unacceptable/no presentation (0 points): Completely unsatisfactory presentation, with no reasonable reference to topic or project; or no presentation made.

Grading Scale

A+ = 97-100%

A = 94-96%

A- = 90-93%

B+ = 87-89%

B = 84-86%

B- = 80-83%

C+ = 77-79%

C = 74-76%

C- + 70-73%

F = <69%

Late Work. Students must contact the instructor prior to missing a due date and arrange a new date that is within a week from the original due date. Points may be deducted (one per day) missing due dates with no prior approved excuse.

CLASS TOPICS & DUE DATES

| Date | Class Topic & Reading Assignments | Due Dates |
|----------|--|---|
| 9/1/15 | <ul style="list-style-type: none"> • □ Chapter 1: Introduction to Educational Research • □ Chapter 2: Quantitative, Qualitative, and Mixed Rsrch <ul style="list-style-type: none"> • APA manual Chapter 1: Writing for the Behavioral and Social Sciences | |
| 9/8/15 | <ul style="list-style-type: none"> • □ Chapter 4: How to Review the Literature and Develop Research Questions <ul style="list-style-type: none"> • APA manual Chapter 2: Manuscript Structure and Content (also see page 174+ in APA manual) | Quiz (Chapter 2) |
| 9/15/15 | <ul style="list-style-type: none"> • Chapter 5: How to Write a Research Proposal Guest Speaker: Anne Driscoll, Education Librarian | Bring Research Questions to class |
| 9/22/15 | <ul style="list-style-type: none"> • □ Chapter 10: Sampling in Quantitative, Qualitative, and Mixed Research (pp. 269-276) Read Chapter 6: Research Ethics Obtaining Institutional Review Board Approval | Quiz (Chapter 6) |
| 9/29/15 | <ul style="list-style-type: none"> • □ □ Chapter 9: Six Major Methods of Data Collection (pp. 233-237) • □ Chapter 22: How to Prepare a Research Report and Use APA Style Guidelines | |
| 10/6/15 | <ul style="list-style-type: none"> • Chapter 11: Validity of Research Results in Quantitative, Qualitative, and Mixed Research (pp. 298-316) | <ul style="list-style-type: none"> • DRAFT Quantitative Research Proposal (Intro) |
| 10/13/15 | No Tuesday classes | |
| 10/20/15 | <ul style="list-style-type: none"> • Chapter 7: Standardized Measurement and Assessment | Collaborative Critique of a Research Article |

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| 10/27/15 | Review; Class Activity TBA | |
| 11/3/15 | <ul style="list-style-type: none"> • Online class Meeting; Complete CITI Module Training | <ul style="list-style-type: none"> • <input type="checkbox"/> CITI Training Completion Certificates (turn in on 11/10) |
| 11/10/15 | <ul style="list-style-type: none"> • Chapter 12: Experimental Research: Weak and Strong Designs Chapter 13: Experimental Research: Quasi and Single- Case Designs | QUIZ (Chapter 12) |
| 11/17/15 | <ul style="list-style-type: none"> • <input type="checkbox"/> Chapter 19: Descriptive Statistics Chapter 20: Inferential Statistics In-class Independent critique of a Research Article | Quantitative Research Proposal DUE (Intro & Methods) |
| 11/24/15 | <ul style="list-style-type: none"> Chapter 15: Narrative Inquiry and Case Study Research • Chapter 16: Phenomenology, Ethnography, and Grounded Theory | |
| 12/1/15 | <ul style="list-style-type: none"> • Chapter 21: Data Analysis in Qualitative and Mixed Research | <ul style="list-style-type: none"> • <input type="checkbox"/> DRAFT first slides of Qualitative Research Presentation |
| 12/8/15 | <ul style="list-style-type: none"> • Chapter 18: Mixed Research Methods | |
| 12/15/15 | <ul style="list-style-type: none"> • Qualitative Research Presentations | |

NOTE: This syllabus may change according to class needs.