



Graduate School of Education
Program: Doctoral Studies in Education
Fall Semester, 2009
SYLLABUS

Course title: EDRS 810: *Problems and Methods in Educational Research*

Meeting: Innovation Hall, Room 129
Tuesdays 4:30 – 7:10

Instructor: Frederick J. Brigham, Ph.D.

Office: 2204 West Hall (Inside 2200, Ph.D. in Education Suite)

Phone: 703 993 1667 (email is the better way to contact me) My voice mail has a recurring problem. We are working on it.

Email: fbrigham@gmu.edu

Hours: 1:00 – 4:00 Wednesday afternoons. Other times may be available by appointment. I teach off campus on Thursday afternoons so I am never available on Thursdays. Please notify me if you are coming, even during office hours, if at all possible.

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.

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

Course Objectives

Upon successful completion of the course, students will:

- understand what research is, and how it differs from other intellectual and practical activities in education;
- understand the major approaches to educational research, and the implications of the
- differences between these for doing and evaluating research in education;
- find, understand, evaluate, and apply published research that is relevant to their field;
- 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
- write clearly and coherently about the conceptual framework, questions, and methods used in a research study;
- use the writing style described in the Fifth Edition of the *Publication Manual of the American Psychological Association* (APA) for writing term and research papers;
- reflect on their actions and choices and use that reflection to inform practice;
- present written research results clearly and coherently.

GSE Syllabus Statements of Expectations

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

- Students are expected to exhibit professional behavior and dispositions. See <http://gse.gmu.edu> for a listing of these dispositions.
- Students must follow the guidelines of the University Honor Code. See http://www.gmu.edu/catalog/apolicies/#TOC_H12 for the full honor code.
- Students must agree to abide by the university policy for Responsible Use of Computing. See <http://mail.gmu.edu> and click on Responsible Use of Computing at the bottom of the screen.
- Students with disabilities who seek accommodations in a course must be registered with the GMU Disability Resource Center (DRC) and inform the instructor, in writing, at the beginning of the semester. See www.gmu.edu/student/drc or call 703-993-2474 to access the DRC.

Course Methodology

This course consists of lectures, large group and online formats, in class and individual or group activities, and individual assignments.

Required Text

Creswell, J.W. (2008). *Educational Research: Planning, conducting, and evaluating quantitative and qualitative research* (3rd ed.)*. Upper Saddle River, NJ: Pearson Education.

ISBN13: 978-0-13-613550-1

ISBN10: 0-13-613550-1

This text has a Companion Website that will be employed in this class:

http://wps.prenhall.com/chet_creswell_educational_3/

American Psychological Association. (2001). *Publication manual of the American Psychological Association* (5th ed.). Washington, DC: Author.

George Mason Blackboard:

<https://courses.gmu.com>

* There is a class website that contains course documents and relevant links. Students are required to download pertinent documents and complete weekly assessments for class.

File Names for Online Submission

You must include your name *in the file name* when you submit in the Dropbox. I will deduct five points from each submission (nonrefundable) if your file downloads without your name in the title. Non-refundable means that even if you send the file early for feedback purposes, you lose the five points for the assignment if it does not contain your name ***in the file name***. The system will *not* add your name to your submission as is required for this class. It will label it on the server but when it downloads, only the name of the file *as it appears on your computer* will be transmitted. The name must be assigned to the file on your computer before you send it to the Assignments file. For example:

<your-last-name-here_quantitative_method_section>
<your-last-name-here_qualitative_method_section>
<your-last-name-here_HSRB_proposal>
<your-last-name-here_CITI_certificate>
<your-last-name-here_Final>

General Course Requirements¹:

It is expected that each person enrolled in this class will:

1. Read all assigned materials for the course.
2. Attend each class session and participate in classroom activities that reflect critical reading of materials.
3. Complete the online Mandatory Training for Person's Conducting Research with Human Subjects.
4. Complete homework assignments, including weekly online tests and submit results to professor prior to each class meeting.
5. Write and submit a complete human subject proposal to match the quantitative intervention study method section assignment.
6. Write two method sections: one quantitative intervention study and one qualitative research study.
7. Present one method section to the class.
8. Complete one take home exam.

Specific Course Requirements

Online weekly tests: Students are asked to complete and submit online tests on each week's assignment. (Be sure to complete all sections of weekly tests, possibly including multiple choice, true-false, and/or matching.)

Mandatory Training for Persons Conducting Research Using Human Subjects:

¹ Late assignments will not be accepted by the instructor. If an emergency occurs please notify the instructor in advance. Don't ask me if it is alright to miss class. It is not. The decision about whether or not it is necessary is yours. I believe that it is demeaning to both of us for me to evaluate the legitimacy of your reasons. If something happens that you want me to know about, feel free to tell me, but if you need to miss class and it is a rare occurrence, I don't need to know why. If it is a long-term or recurring problem, however, we should devise a strategy to deal with it together.

Students will be asked to complete Mandatory Training for Persons Conducting Research Using Human Subjects. Information is available online: <http://www.gmu.edu/pubs/osp/humansubjects.html>. Following this link downloads a word document with complete instructions for the procedure. The document downloads to your computer and does not usually open automatically, so you must find it after the download. The training takes between two and five hours and can be accessed directly (without the downloaded instructions) from: <http://www.citiprogram.org>. Copy and paste your completion certificate, then place a copy of certification of training completion on the digital drop box Blackboard site and email me when you complete the training.

Completion of Human Subjects Proposal: Students will write a human subjects proposal to accompany a quantitative intervention research method section. The materials are available on the web and the class Black Board site: <http://www.gmu.edu/pubs/osp/humansubjects.html>. Turn in a hard copy and place an electronic version on the digital drop box Blackboard site.

Method Sections: Students will write two different method sections replicating and extending previous research studies. Each method section will be written in APA format (see sample paper on pp 306-320 of the APA manual) and contain relevant sections specific to each type of research design. One will be a **quantitative intervention research** study; one will be a **qualitative research** study (examples of each appear in chapter one of your textbook). Turn in hard copies and place electronic versions on the Assignments box on the Blackboard site. Your document will include:

1. Statement of purpose and research questions, including a statement indicating research you are replicating and extending and a relevant citation for the study.
2. Method (5-6 pages)
 - Research design
 - Participants and setting
 - Materials
 - Data sources (dependent variables) instrumentation (where relevant)
 - Procedures (proposed data collection process)
 - Proposed preliminary data analyses
3. References

In class/Homework: Students will be asked to work individually or in small groups on in class/homework assignments throughout the semester. Some assignments are listed on the syllabus, although they may be amended throughout the semester.

You need to find several types of articles throughout the semester. *Please note that ERIC documents, websites, popular press, and trade book sources are unacceptable for these assignments.* We need to identify professional resources from referred (peer-reviewed) journals. Electronic versions of the articles are acceptable and actually encouraged, but they must be from refereed journals. ERIC documents (those with the letters ED in the article identifier) are not refereed and so unacceptable. You need not restrict yourself to any particular domain, but it seems wise to select articles from your area of interest.

When you are requested to find a particular article (e.g., an experimental intervention research

study, a survey research study) identify either in the margins of the article or by highlighting within the articles, the relevant parts of the study:

- (a) the purpose;
- (b) the research questions;
- (c) the research design, including independent and dependent variables when relevant;
- (d) the participants;
- (e) the materials;
- (f) the data sources, outcome measures and/or dependent variables or measures;
- (g) the research procedures;
- (h) the data analysis procedures;
- (i) the results; and
- (j) implications, if any from the study.

Presentation: One method section will be presented orally using audio-visual aides (e.g., power point slides) during a ten-minute presentation. Place a copy of the slides on digital black board. Sign up sheets for presentation times will be distributed in class. Sample PowerPoint templates will be available.

Class Participation and Attendance Policy: Because of the importance of lecture and discussion to your total learning experience, I wish to encourage you 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 10% of your course grade. With reference to the grading scale described later in this syllabus, you will note that this percentage is equivalent to a full letter 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.

Bring flash, zip or other relevant media to class in order to save work completed during class. You may also attempt to email your work from the computer used in class to your own email account. Be aware that the technology support team reinstalls a new disc image on each university-owned computer in each lab every night. The disc image contains no user-created files and has the effect of erasing everything that was saved on the drive during the previous day. Any failure in email transmission will, therefore, result in the loss of your work and require you to complete it again.

Course Evaluation

RUBRIC FOR In Class/HOMEWORK ASSIGNMENTS

Adequate assignment (1 point): Assignment is thorough, thoughtful, correctly done, and submitted on time.

Marginal assignment (.5 point): Assignment is carelessly prepared, not thoughtful, or incomplete.

Inadequate assignment (0 points): Assignment has little or no value, or is not submitted on time.

RUBRIC FOR WEEKLY TESTS

Adequate test (1 point): Submitted on time; reflects a score of 90% or greater.

Marginal test (.5 point): Lower score reflects lack of content knowledge.

Inadequate test (0 points): Very low score or not submitted on time.

RUBRIC FOR EXAMINATION (15 points)

Item scoring criteria:

Exemplary response: (13-15 points) Provides direct and thorough response to question, defines relevant terms, provides specific examples or instances of the concepts being discussed. Answer is directly reflective of lecture, readings, activities, or assignments, or other material of direct relevance to class.

Adequate response: (10-12 points) Provides direct and relevant response to question, provides accurate information directly relevant to class readings, notes, or activities. May provide less information, less elaboration, or a less thoughtful overall response than an exemplary response.

Marginal response: (5-7 points) Provides some relevant information, but does not demonstrate overall a clear or complete understanding of the relevant concepts.

Inadequate response: (0 points) Weak response that does not appear to reflect course content or activities. May include inaccurate information.

No response: (0 points) no response or response that is entirely inaccurate.

RUBRIC FOR METHOD SECTION ASSIGNMENTS

Exemplary paper (18-20 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.

Adequate paper (16-17 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.

Marginal paper (14-15 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.

Inadequate paper (1-13 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.

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 PARTICIPATION, HOMEWORK AND ATTENDANCE

Exemplary (9-10 points): The student attends all classes, is on time, is prepared and 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.

Adequate (8 points): The student attends all classes, is on time, is prepared and follows outlined procedures in case of absence; the student makes active contributions to the learning group and class.

Marginal (7 points): The student is on time, prepared for class, and participates in group and

class discussions. The student attends all classes and if an absence occurs, the procedure outlined in this section of the syllabus is followed.

Inadequate (6 or less points): The student is 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 discussions. The student may fail to exhibit professional behavior and dispositions. **Excessive absences can result in additional penalties and potential withdrawal from class.**

RUBRIC for HUMAN SUBJECT PROPOSAL

Exemplary (9-10 points) Appropriately written document containing all components, including: protocol contains answers to all questions, clearly written, informed consent forms written in readability and format appropriate for target audience.

Adequate (7-8 points) Good overall proposal, but is lacking in one or two of the criteria for an exemplary proposal. Not entirely reflective or thoughtful, or minor writing style or APA format errors may be present.

Marginal (6-7 points) Overall, is acceptable but contains one or more significant problems. Contains some useful information, but may have substantial problems with procedures, writing style or APA format, or unclear or inappropriate description of implementation of project.

Inadequate (<6 points) Proposal contains substantial problems in important areas such as writing, proposed implementation of intervention, procedures for evaluation of results, or overall thoughtfulness.

RUBRIC for HUMAN SUBJECT Online Training

Pass (5 points) Successful completion of online BASIC and other relevant components training on time

No Pass (0 - 4 points) Unsuccessful completion of online BASIC and other relevant components or late in completing assignment.

RUBRIC FOR Presentations

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.

Grading Scale

Weekly on line tests	10 pts total
Human Subjects on line training completion	5 pts
Human Subject Proposals 10 pts	10 pts
Method Sections	40 pts total (20 pts each)
Method Section Presentation	10 pts
Exam	15 pts
In Class/Homework, Class Participation and Attendance	10 Pts
TOTAL	100 pts

Letter grades will be assigned as follows:

A+ 98-100%	A 93-97.49%	A- 90-92.49%
B+ 88-89.49%	B 83-87.49%	B- 80-82.49%
C 70-79.49%	F below 70%	

Homework Assignments

IF WE ALTER THE SCHEDULE, MOVE THESE ASSIGNMENTS TO THE RELEVANT CLASS

- Class 2:* Select a *published research article* from the library. Read the article; bring it to class having identified: the research problem, the literature review, the purpose or research questions, the method section, the data collection procedures, the data analyses and the discussion. Highlight each area by identifying it in the margins.
- Class 3:* Select a *published literature review* article from the library. Read the article; bring it to class having identified the parts of the review in the margins.
- Class 6:* Select a *published experimental quantitative research intervention study article* from the library. Read the article; bring it to class having identified: the research problem, the literature review, the purpose or research questions, the method section, the data collection procedures, the data analyses and the discussion. Highlight each area by identifying it in the margins.
- Class 9:* Select a *published qualitative research article* from the library. Read the article; bring it to class having identified: the research problem, the literature review, the purpose or research questions, the method section, the data collection procedures, the data analyses and the discussion. Highlight each area by identifying it in the margins.
- Class 12:* Select a *published survey research* article from the library. Read the article; bring it to class having identified: the research problem, the literature review, the purpose or research questions, the method section, the data collection procedures, the data analyses and the discussion. Highlight each area by identifying it in the margins.

Tentative Course Schedule

Week	Date	Topic	Reading/Preparation	Due
1	9/01	Review syllabus Introduction to the Field of Educational Research; Introduction to GMU Policy for Human Subjects	Chapters 1, 2 & 3 (I will lecture these topics. Please read the chapters to confirm your understanding.)	SET UP <ul style="list-style-type: none"> • Blackboard section • PRENTICE HALL WEB SITE • http://www.citiprogram.org and • http://www.gmu.edu/pubs/osp/humansubjects.html IN CLASS
2	9/08	Guest: Sandy Sanford, Compliance Officer, George Mason University Human Subjects Review Board.	Review Human Subjects information	<ul style="list-style-type: none"> • http://www.citiprogram.org review on line module prior to class • http://www.gmu.edu/pubs/osp/humansubjects.html • Review GMU policies and procedures prior to class
3	9/15	Creating an HSRB Proposal from and existing study. No on-site class meeting, see Blackboard site for presentation of relevant material.	PowerPoint presentation found on class website.	<ul style="list-style-type: none"> • Weekly tests for chapters 1, 2, & 3. • Post a research article of your choice to class. <ul style="list-style-type: none"> ○ Identify the research problem, ○ the review of relevant literature, ○ the purpose or research questions, ○ the method section, ○ the data collection procedures, ○ the data analyses and the discussion. ○ Highlight each area by identifying it in the margins or by including a standalone summary sheet listing the components (e.g., purpose is found on page 114, paragraph 3). • Review the postings of two peers and provide a written summary of whether or not you agree with their identifications of the different sections. Also, state whether or not you believe that it is actually a research article as compared to another type of publication (e.g., position paper, policy proposal, etc.) and why. • Select any research study you have read and complete the Abstract section (items 1 - 4) of the HSRB Application Form.

Week	Date	Topic	Reading/Preparation	Due
4	9/22	Identifying Research Problems; Reviewing the Literature Specifying a Purpose; Research Questions	Skim Chps 1-3 for refresher Chapters 4 and 5	<ul style="list-style-type: none"> • Weekly tests for chapters. • Bring a literature review paper or your choice to class. <ul style="list-style-type: none"> ○ Identify the parts of the review in the margins.
5	9/29	Guest Wendy Mann: How to use the relevant data bases effectively at the GMU library Meet @ class time in the Johnson Center Library Instruction room.	Johnson Center Library Instruction	<ul style="list-style-type: none"> ○
6	10/06	Collecting, Analyzing and Interpreting Quantitative Data,	Chapters 6 and 7	<ul style="list-style-type: none"> • Weekly tests for chapters. • Bring a <i>Quantitative</i> intervention RESEARCH study to class. <ul style="list-style-type: none"> ○ Identify the research problem, the literature review, ○ the purpose or research questions, ○ the method section, ○ the data collection procedures, ○ the data analyses and the discussion. ○ Highlight each area by identifying it in the margins
	10/13	No class. Labor Day adjustment		<ul style="list-style-type: none"> •
7	10/20	Getting Started with SPSS	What ever chapters are left from 2/25	<ul style="list-style-type: none"> • Work on quantitative method section.
8	10/27	<ul style="list-style-type: none"> • Peer review of method section and matching HSRB proposals in class. • Using SPSS and Analyzing Quantitative Data 		<ul style="list-style-type: none"> • Draft of Quantitative Research Method and matching Human Subject proposal due for peer review
9	11/03	Collecting Analyzing and Interpreting Qualitative Data	Chapters 8 & 9	<ul style="list-style-type: none"> • Quantitative Research Method and matching Human Subject proposal due • Weekly tests for chapter. • Bring a <i>Qualitative</i> research study to class. <ul style="list-style-type: none"> ○ Identify the research problem, ○ the literature review, ○ the purpose or research questions, ○ the method section, ○ the data collection procedures,

Week	Date	Topic	Reading/Preparation	Due
				<ul style="list-style-type: none"> ○ the data analyses and ○ the discussion. ○ Highlight each area by identifying it in the margins
10	11/10	On line activity: Article review and evaluation.	Materials provided on website.	<p>Complete review of manuscript submitted for publication and make recommendation to editor regarding publication.</p> <p>Complete review of APA on manuscript provided.</p>
11	11/17	Grounded Theory, Ethnographic and Narrative Designs	Chapters 14, 15, & 16	<ul style="list-style-type: none"> • Weekly tests for chapters.
12	11/24	Experimental and Quasi-Experimental Designs, Correlational and Survey Designs	Chapters 11,12, & 13	<ul style="list-style-type: none"> • Bring a survey research article to class. • Identify the parts of the article in the margins. • EXAM POSTED ON BB
13	12/01	Independent work on qualitative method section and exam		<ul style="list-style-type: none"> • No class meeting, individual appointments for consultation available • work on final class products, including • qualitative method section, • presentations and • exam.
14	12/08	Peer review of qualitative method sections. Mixed Method and Action Research Designs	Chapters 17 & 18	<ul style="list-style-type: none"> • work on exam • Weekly tests for chapters • Draft of Qualitative research method due for peer review. • Presentation Templates POSTED on BB
15	12/15	Summary and synthesis: What have we learned about educational research methods	work on exam	Qualitative research method