

GEORGE MASON UNIVERSITY
COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT
GRADUATE SCHOOL OF EDUCATION
Educational Psychology, Research methods, and Education Policy

EDRS 590:001 Education Research
3 Credits, Fall 2013
Wednesdays 7:20-10:00 Thompson L018

PROFESSOR

Jori Beck, M.A., Doctoral candidate

Office hours: By appointment only

Phone: (570) 490-3594 (cell)

Email: jbeck12@masonlive.gmu.edu

I. COURSE DESCRIPTION

Develops skills, insights, and understanding to perform research, with emphasis on interpreting and applying research results. Critiques research, and uses findings in educational settings.

II. OBJECTIVES

As a result of this course, the students will:

- become literate in the basic concepts, principles, and techniques of educational research
- acquire basic skills in the analysis and interpretation of research data
- appreciate the underlying cognitive processes involved in conducting educational research as a form of thinking and problem solving
- acquire the skills associated with the critical reading and evaluation of the educational research literature
- engage in collaborative action research

III. EDUCATIONAL PSYCHOLOGY PROGRAM STANDARDS

Across the many course in the Educational Psychology, a number of standards will be addressed. These standards are noted, below. Those emphasized most strongly in this course are in bold text.

1. Candidates will demonstrate an understanding of principles and theories of learning, cognition, motivation, and development as they apply to a wide variety of contemporary learning contexts.
2. Candidates will use their *knowledge, skills, and dispositions* to apply principles and theories of learning, cognition, motivation, and development to analyze and develop instruction in applied settings.
- 3. Candidates will demonstrate an understanding of the basic concepts, principles, techniques, approaches, and ethical issues involved in educational research.**
- 4. Candidates will use their knowledge of quantitative and qualitative research methodology to critically read and evaluate quantitative and qualitative research articles.**
- 5. Candidates will use their knowledge of quantitative and qualitative research methodology to develop a research proposal and conduct research.**

6. Candidates will demonstrate critical thinking, oral presentation, technological, and writing skills as they are used in the profession. These include:

- a. Knowledge and use of APA style**
- b. Oral presentations**
- c. Poster presentations**
- d. Article abstracts**
- e. Research proposals**
- f. Literature reviews**
- g. Technological skills (including library/reference skills, interactive displays skills, data analysis skills)**

IV. REQUIRED TEXTS

Creswell, J.W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Upper Saddle River, NJ: Pearson Education.

Maxwell, J. A. (2013). *Qualitative research design: An interactive approach* (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Note: Other journal articles and readings will be posted to Blackboard.

RECOMMENDED TEXTS

American Psychological Association. (2009). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: Author.

Vickers, A. (2010). *What is a p-value anyway? 34 stories to help you actually understand statistics*. Boston, MA: Pearson.

V. COURSE ASSIGNMENTS, POLICIES, AND GRADING: All assignments must be written in Times New Roman 12 point font, double-spaced, and follow APA (6th edition) formatting guidelines (see <http://owl.english.purdue.edu/owl/resource/560/01/> for more information). **Assignments should be submitted electronically via email and are due by class time on the date indicated.** Assignments turned in late will be eligible for only 50% of the available points. If there is an emergency contact me as soon as possible. **All assignments should be submitted with the following naming convention: student's last name and the title of the assignment.** For example:

E.g. Beck_Literature Review Concept Map

Failure to follow any of these guidelines will result in a reduction in points for the assignment. **Absentee Policy:** I understand that we all get sick and busy. However, our class only meets once a week so missing class once is equivalent to missing a week's worth of class. If you are absent more than once, I will deduct points from your class participation grade as a result. You can't contribute to class if you do not attend.

Technology Policy: When you are using cell phones, laptops, etc., please be respectful of your

peers and your instructor and do not engage in activities that are unrelated to class. Such disruptions show a lack of professionalism and may affect your participation grade.

Assignment Name	Evaluation Points
1. Mandatory Training for Persons Conducting Research Using Human Subjects	10 points
2. Literature Review Concept Map and Mini-Presentation	10 Points
3. Methods Sections x 2 (quantitative and qualitative)	25 points each x 2 = 50 points
4. Article Reviews x 3	5 points each x 3 = 15 points
5. Poster Presentations x 2	5 points each x 2 = 10 points
6. Class Participation	5 points
Grand total: 100 points	

1. Mandatory Training for Persons Conducting Research Using Human Subjects (10 points)

Students will be asked to complete Mandatory Training for Persons Conducting Research Using Human Subjects. Information is available online: <http://oria.gmu.edu/research-with-humans-or-animals/institutional-review-board/human-subjects-training/>. The training takes between two and five hours and can be accessed from: <http://www.citiprogram.org>. When you complete the training, save the certificate as a PDF and email it to me at jbeck12@masonlive.gmu.edu.

Note: There is no rubric for this assignment.

2. Literature Review Concept Map and Mini-Presentation (10 points)

The purpose of a literature review is to get a sense of the work that has been done in a particular area as well as the work that *has not* been done (i.e. locating a void). The purpose of this assignment is to graphically organize the larger take-aways based on your reading on your research topic of interest (see example on Blackboard; for example software please see <http://www.youtube.com/watch?v=QyIyTb7BK14>). You will email the concept map to me by class time on the date it is due and you will also present this concept map to the class in a mini-presentation. This mini-presentation will also serve as a consultation for your method(s) section(s) because it will include information about your proposed methods of data collection and analysis.

	4 (5 points)	3 (4 points)	2 (3 points)	1 (2 points)
Content	Concept map provides a coherent overview of the research topic including methods used to measure and assess applicable constructs.	Most information is present, but key elements are missing or unclear.	Key elements are missing or unclear and thus the concept map is somewhat incoherent.	Key elements of the concept map are missing and/or the map is incoherent.
Presentation	Presentation is brief (approximately 5 minutes) and the speaker is clear and easy to understand.	Presentation is brief (approximately 5 minutes) but the speaker is somewhat hard to understand.	Presentation is too brief or too long (under or over 5 minutes) but the speaker is difficult to understand.	Presentation is too long or too short (well under or over 5 minutes) and/or the speaker is unclear or cannot be heard by the audience.

3. Method Sections (25 points each x 2 = 50 points)

Students will write two different method sections replicating and extending previous research studies. Each method section will be written in APA format and contain relevant sections included in the rubric below (see “A proposal for a study of medical school teaching” on pp. 161-178 in Maxwell). One will be a **quantitative research** study and one will be a **qualitative research** study. Please include a one-page, letter of informed consent (see my example on Blackboard) describing any potential risks or benefits to participants as a result of participating in the study as well as any compensation participants may receive; **failure to submit a letter of informed consent with each methods section will result in a reduction in points from the final grade for the assignment.** The letter of informed consent will be evaluated based on quality as well as criteria (i.e. description of research procedures, risks and benefits to participants, confidentiality, participation, and contact information). Each methods section (not including the letter of consent) should be 5-7 pages in length. Failure to cite appropriately using APA 6th ed. or to write in a coherent manner will result in an overall deduction from the final grade. Email electronic versions to me by the assigned date at jbeck12@masonlive.gmu.edu.

	4 (5 points)	3 (4 points)	2 (3 points)	1 (2 points)
Introduction	Overview of extant literature is brief but coherent; statement of research problem and statement of purpose are clear and concise.	Overview of extant literature is brief but mostly coherent; may lack some key elements.	Overview of extant literature is brief but somewhat incoherent; key elements are unclear or absent.	Overview of extant literature is too brief or too long; key elements are not present or incoherent.
Conceptual Framework	The conceptual framework	This section of the proposal	This section of the proposal lacks	This section of the proposal lacks many

	contains recent (i.e. 2008 to present) as well as seminal pieces on the research topic and is organized and coherent.	lacks some key elements and/or is illogical and/or somewhat unclear.	several key elements and/or is illogical and/or unclearly written.	key elements, is illogical, and/or unclearly written.
Research Questions and Methods	Research questions are coherently written and derive logically from the conceptual framework; methods accurately measure or capture the constructs of interest. Description of site and sample are clear.	This section of the proposal lacks some key elements and/or is illogical and/or somewhat unclear.	This section of the proposal lacks several key elements and/or is illogical and/or unclearly written.	This section of the proposal lacks many key elements, is illogical, and/or unclearly written.
Data Analysis	A brief overview of proposed methods of data analysis are provided and follow logically from the methods of data collection.	This section of the proposal lacks some key elements and/or is illogical and/or somewhat unclear.	This section of the proposal lacks several key elements and/or is illogical and/or unclearly written.	This section of the proposal lacks many key elements, is illogical, and/or unclearly written.
Ethics and Validity	Potential threats to validity and ways to address these threats are presented coherently. Ethical issues in this research are considered and presented coherently.	This section of the proposal lacks some key elements and/or is illogical and/or somewhat unclear.	This section of the proposal lacks several key elements and/or is illogical and/or unclearly written.	This section of the proposal lacks many key elements, is illogical, and/or unclearly written.

4. Article Reviews (5 points each x 3 = 15 points)

Students will be asked to work in small teams on in-class/homework article reviews throughout the semester. 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. For example, identify the

following parts: (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. **For grading, each team will turn in one annotated article in class. Failure to turn in an annotated article will result in a deduction of points for each team member. Each individual team-member will submit a one-page, single-spaced critique of the claims of the article (a-j, as appropriate) by the following class meeting.**

Note: Please bring flash or other relevant media to class in order to save work completed during class.

	4 (5 points)	3 (4 points)	2 (3 points)	1 (2 points)
Content and Coherence	Critique is accurate and contains items a-j appropriately. Critique is coherently written.	Critique is mostly accurate but lacks key elements from items a-j. Critique is somewhat coherently written but includes some grammatical errors.	Critique is somewhat inaccurate and lacks key elements from a-j. Critique is somewhat incoherently written and grammatical errors interfere with meaning.	Critique is inaccurate and/or lacks key elements from a-j. Critique is incoherently written and numerous grammatical errors make it impossible to read.

5. Poster Presentations (5 points each x 2 = 10 points): Method sections will be presented orally using audio-visual aids (e.g., PowerPoint slides, Prezi) during ten-minute presentations.

	4 (5 points)	3 (4 points)	2 (3 points)	1 (2 points)
Content	Presentation provides a coherent overview of proposed research questions, methods, analysis, validity, and ethical concerns.	Presentation does not include some key elements of the research proposal.	Presentation does not include many key elements of the research proposal.	Presentation does not include most key elements of the research proposal.

6. Class Participation (5 points)

This is your class. The success of this course depends upon all students being prepared for class and contributing to discussions and activities. Attendance is *not* participation. Participation includes whole class and small group discussion and work.

	4 (5 points)	3 (4 points)	2 (3 points)	1 (2 points)
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Content and Frequency	It is evident from the student's contributions that he/she is prepared for class and has completed the required readings. The student contributes to class discussions consistently.	It is evident from the student's contributions that he/she is mostly prepared for class and has completed most of the required readings. The student contributes to class discussions somewhat consistently.	It is not clear from the student's contributions that he/she has completed any of the required readings. The student contributes to class discussions intermittently.	It is clear from the student's contributions that he/she has not completed the required readings. The student never contributes to class discussions.
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Assignments will be graded according to the rubrics provided in this syllabus. Course grades will be based on the following scale:

96-100	A+	80-82	B-
93-95	A	70-79	C
90-92	A-	60-69	D
86-89	B+	Less than 60	F
83-85	B		

VI. College of Education and Human Development Statements

a. Students must adhere to the guidelines of the George Mason University Honor Code [See <http://oai.gmu.edu/honor-code/>]

Please note that:

- “Plagiarism encompasses the following:
 1. Presenting as one's own the words, the work, or the opinions of someone else without proper acknowledgment.
 2. Borrowing the sequence of ideas, the arrangement of material, or the pattern of thought of someone else without proper acknowledgment.”
(from Mason Honor Code)
- Paraphrasing involves taking someone else's ideas and putting them in your own words. When you paraphrase, you need to cite the source.
- When material is copied word for word from a source, it is a direct quotation. You must use quotation marks (or block indent the text) and cite the source.
- Electronic tools (e.g., SafeAssign) may be used to detect plagiarism if necessary.
- Plagiarism and other forms of academic misconduct are treated seriously and may result in disciplinary actions.

b. Students must follow the university policy for Responsible Use of Computing [See <http://universitypolicy.gmu.edu/1301gen.html>].

c. Students are responsible for the content of university communications sent to their George Mason University email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students

solely through their Mason email account.

d. The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance [See <http://caps.gmu.edu/>].

e. Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester [See <http://ods.gmu.edu/>].

f. Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.

g. The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing [See <http://writingcenter.gmu.edu/>]. For additional information on the College of Education and Human Development, Graduate School of Education, please visit our website [See <http://gse.gmu.edu/>]

PROFESSIONAL DISPOSITIONS

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

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://ceh.dgmu.edu/values/>.

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

VI. TENTATIVE COURSE ORGANIZATION AND SCHEDULE

Day	Topic/Activity	Readings/Assignments Due
August 28 th	- Introduction to course and research - Expectations	
September 4 th	- Reviewing the literature - Research night with Anne Driscoll, class will meet in Fenwick Library instruction room	Creswell Ch. 3 Maxwell Ch. 3 Due: Have a topic ready to research for this session
September 11 th	- Identifying a research problem - APA format	Creswell Ch. 2 Due: Bring a qualitative research article (e.g. qualitative case study, interview study, etc.) to class
September 18 th	- Research questions - Visit from Aurali Dade, Office	Creswell Ch. 4 Maxwell Ch. 4

	of Research Integrity and Assurance	Due: Training for Persons Conducting Research Using Human Subjects, Article Review #1
September 25 th	- Conducting a qualitative study	Creswell Ch. 7 Maxwell Ch. 5 Due: Mini-presentations of concept maps
October 2 nd	- Analyzing qualitative data	Creswell Ch. 8
October 9 th	- Evaluating research	Creswell Ch. 9 Maxwell Ch. 6
October 16 th	- Poster Presentations of Qualitative Methods Section	Due: Qualitative methods section and accompanying letter of informed consent
October 23 rd	- Qualitative and quantitative methods	Liu (2011) Blackboard Dooley and Assaf (2009) Blackboard Due: Bring quantitative intervention research article to class Extra credit opportunity: Attend the AERA Brown Lecture on October 27th and submit a one-page reflection on Orfield's talk (10 points)
October 30 th	- Conducting a quantitative study	Creswell Ch. 5 Due: Article Review #2
November 6 th	- Action Research Designs	Creswell Ch. 17 Due: Bring action research article to class
November 13 th	- Guest speaker: Dr. Lori Bland, Data-driven decision making - Analyzing quantitative data	Mandinach, Honey, and Light (2006) Blackboard Marsh, Pane, and Hamilton (2006) Blackboard Creswell Ch. 6 Due: Article Review #3
November 20 th	- Mixed methods research designs	Creswell Ch. 16 Turner et al. (1998)
November 27th	Thanksgiving break – no class	
December 4 th	No class – Instructor at a conference	Due: Peer review of Quantitative methods section
December 11th	Exam period 7:30-10:15 Poster Presentations of Quantitative Methods Section Course evaluations	Due: Quantitative methods section and accompanying letter of informed consent