

**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, Summer 2014

Mondays, Wednesdays, and Fridays 4:00-6:40pm, Innovation 319

**PROFESSOR**

Jori Beck, Ph.D.

Office hours: By appointment only

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**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**

Mertler, C. A., and Charles, C. M. (2010). *Introduction to educational research* (7th edition). Boston, MA: Pearson Allyn & Bacon.

Galvan, J. L. (2009). *Writing literature reviews* (4<sup>th</sup> ed.). Glendale, CA: Pyrczak Publishing.

**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\_LiteratureReviewConceptMap

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 meets during an expedited summer session so missing one class is roughly 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.

<b>Assignment Name</b>	<b>Evaluation Points</b>
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)	22.5 points each x 2 = 45 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	10 points
<b>Grand total: 100 points</b>	

### **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 during one of our Friday online sessions. Information about the Training 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](mailto: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. Concept maps will be presented over two class periods; presentation dates will be determined the first night of class via sign-ups.

	<b>4 (5 points)</b>	<b>3 (4 points)</b>	<b>2 (3 points)</b>	<b>1 (2 points)</b>
<b>Content</b>	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.
<b>Presentation</b>	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. Qualitative and Quantitative Proposals (22.5 points each x 2 = 45 points)**

Students will write two different proposals replicating and extending previous research studies. Each proposal will be written in APA format and contain relevant sections included in the rubric below. One will be a **quantitative research** proposal and one will be a **qualitative research** proposal. 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). **Similarly, if peer reviews are not completed, or they are not completed according to guidelines, points will be taken off of your own paper**. Each methods section (not including the letter of consent) should be 5-7 pages in length. Failure to cite appropriately using APA 6<sup>th</sup> 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](mailto:jbeck12@masonlive.gmu.edu).

	<b>4 (4.5 points)</b>	<b>3 (3.5 points)</b>	<b>2 (2.5 points)</b>	<b>1 (1.5 points)</b>
<b>Introduction</b>	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.
<b>Conceptual</b>	The conceptual	This section of	This section of the	This section of the

<b>Framework</b>	framework contains recent (i.e. 2008 to present) as well as seminal pieces on the research topic and is organized and coherent.	the proposal lacks some key elements and/or is illogical and/or somewhat unclear.	proposal lacks several key elements and/or is illogical and/or unclearly written.	proposal lacks many key elements, is illogical, and/or unclearly written.
<b>Research Questions and Methods</b>	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.
<b>Data Analysis</b>	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.
<b>Ethics and Validity</b>	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 data sources, outcome measures and/or dependent variables or measures; (f) the research procedures; (g) the data analysis procedures; (h) the results; and (i) 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-i, as appropriate) by the following class meeting.** Because the first article review will occur early in the semester, the first article review will only focus on the literature review, and, thus, **emphasis will be placed on items a and b for this article review only.**

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

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

**5. Poster Presentations (5 points each x 2 = 10 points):** Research proposals will be presented in-class as posters.

	<b>4 (5 points)</b>	<b>3 (4 points)</b>	<b>2 (3 points)</b>	<b>1 (2 points)</b>
<b>Content</b>	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 (10 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.

	<b>4 (10 points)</b>	<b>3 (8 points)</b>	<b>2 (6 points)</b>	<b>1 (4 points)</b>
<b>Content and Frequency</b>	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 <b>not</b> completed the required readings. The student never contributes to class discussions.

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**

<b>Day</b>	<b>Topic/Activity</b>	<b>Readings/Assignments Due</b>
Monday 5/19	- Introduction to course and research - Expectations	
Wednesday 5/21	- Reviewing the literature <b>- Research night with Anne Driscoll, class will meet in Fenwick Library instruction room</b>	Galvan Chs. 1 and 3 Mertler and Charles Ch. 1 <b>Due: Have a topic ready to research for this session</b>
Friday 5/23		<b>No class: Memorial Day holiday (University closed)</b>
Monday 5/26		<b>No class: Memorial Day holiday</b>

		<b>(University closed)</b>
Wednesday 5/28	-Analyzing literature - APA format	Galvan Chs. 4 and 5 Mertler and Charles Chs. 8 and 11 <b>Due: Bring a quantitative research article (e.g. survey study) to class</b>
Friday 5/30	<b>Online:</b> Complete Mandatory Training for Persons Conducting Research Using Human Subjects	<b>No class: Online activity</b> <b>Due: Article Review #1 due by class time</b> <b>Due by 8:00 pm Sunday 6/1: Mandatory Training for Persons Conducting Research Using Human Subjects</b>
Monday 6/2	- Synthesizing literature - Quantitative data collection	Galvan Ch. 8 Mertler and Charles Chs. 6 and 13 <b>Due: Group #1 mini-presentations of concept maps, concept maps emailed to instructor by class time</b>
Wednesday 6/4	- Writing a draft proposal - Quantitative analysis	Galvan Ch. 9 Mertler and Charles Ch. 7 <b>Due: Group #2 mini-presentations of concept maps, concept maps emailed to instructor by class time</b>
Friday 6/6	<b>Online:</b> Peer review	<b>No class: Online activity</b> <b>Due: Peer review due via email to your partner and instructor by 8:00 pm Sunday 6/8</b>
Monday 6/9	- Poster Presentations of Quantitative Methods Section	<b>Due: Quantitative proposal and accompanying letter of informed consent due by class time</b>
Wednesday 6/11	- Introduction to qualitative research	Galvan Ch. 6 Mertler and Charles Ch. 10 <b>Due: Bring qualitative research article (e.g. interview study, case study) to class</b>
Friday 6/13	<b>Online:</b> Comparison of qualitative and quantitative methods	<b>No class: Online activity due by 8:00 pm Sunday 6/15</b> Liu (2011) Blackboard Dooley and Assaf (2009) Blackboard <b>Due: Article Review #2 due by class time</b>
Monday 6/16	- Qualitative data collection methods	Maxwell (2013) Blackboard
Wednesday 6/18	- Qualitative data analysis	Maxwell (2013) Blackboard <b>Due: Bring mixed methods research article to class</b>
Friday 6/20	<b>Online:</b> Peer review	<b>No class: Online activity</b>

		<b>Due: Article Review #3 due by class time</b> <b>Due: Peer review due via email to your partner and instructor by 8:00 pm Sunday 6/22</b>
Monday 6/23	- Mixed methods research designs	Galvan Ch. 12 Mertler and Charles Ch. 14
Wednesday 6/25	- Poster Presentations of Qualitative Methods Section - Course evaluations	<b>Due: Qualitative proposal poster</b>
Friday 6/27	Exam period 7:30-10:15	<b>Due: Qualitative proposal and accompanying letter of informed consent due by 10:15</b>