

SYLLABUS**GEORGE MASON UNIVERSITY
COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT
PROGRAM NAME: Ph. D. in Education****EDRS 810
Problems and Methods in Educational Research**

Fall Semester, 2012

Meeting Time/Days: Wednesday: 4:30 - 7:10 pm

Location: Innovation Hall, Room 336

PROFESSOR:

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COURSE DESCRIPTION:

- A. **Prerequisites:** Admission to the Ph.D. program or permission of instructor.
- B. **Course description from the university catalog:** 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.

NATURE OF COURSE DELIVERY:

This course consists of lectures, large group and online formats, in class, whole group, small groups, and individual activities and assignments and use of relevant software including SPSS.

LEARNER OUTCOMES:

This course is designed to enable students to:

- be able to understand what research is, and how it differs from other intellectual and practical activities in education;
- be able to understand the major approaches to educational research, and the implications of the differences between these for doing and evaluating research in education;
- be able to find, understand, evaluate, and apply published research that is relevant to their field;
- be able to design the basic components of small-scale research studies, both quantitative

and qualitative, including

- identifying a research problem to study
- formulating the purposes of the study
- developing a conceptual framework for the study
- generating appropriate research questions
- planning relevant and feasible methods of sampling, data collection, and analysis
- anticipating plausible validity threats, and thinking of ways to deal with these
- dealing appropriately with ethical issues in the research
- be able to write clearly and coherently about the conceptual framework, questions, and methods used in a research study;
- be able to use the writing style described in the Sixth Edition of the *Publication Manual of the American Psychological Association* (APA) for writing term and research papers;
- be able to reflect on their actions and choices and use that reflection to inform practice;
- be able to present written research results clearly and coherently.

REQUIRED TEXT:

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

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

<http://www.prenhall.com/creswell>

Recommended Texts

American Psychological Association. (2009). *Publication manual of the American Psychological Association*

(6th ed.). Washington, DC: Author.

Green, S.B., & Salkind, N.J. (2011). *Using SPSS for windows and macintosh: Analyzing and understanding data* (6th ed.). Upper Saddle River, NJ: Pearson Education.

Tjeerd Plomp & Nienke Nieveen (2008). Introduction to Educational Design Research
http://www.slo.nl/downloads/2009/Introduction_20to_20education_20design_20research.pdf/download

Course Requirements:

*Late assignments will not be accepted by the instructor. If an emergency occurs please notify the instructor in advance.

1. **Online weekly multiple choice tests (8 total):** Students are asked to complete and submit online multiple choice tests on each week's assignment. Go to <http://prenhall.com/creswell> and complete multiple choice tests for each chapter (refer to syllabus for due dates). Email exam results to yourself and me at aekelly100@hotmail.com using a text file format (individual).
2. **Mandatory Training for Persons Conducting Research Using Human Subjects:** 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>. The training takes between two and five hours and can be accessed from: <http://www.citiprogram.org> Copy and paste your completion certificate, then email me at aekelly100@hotmail.com when you complete the training. (individual)
3. **Completion of Human Subjects Proposals (2 total):** Students will form small teams to write a human subjects proposal to accompany **each of** a quantitative intervention research and a qualitative research methods section. The materials are available on the web: <http://research.gmu.edu/ORSP/HumanSubjects.html> Turn in a hard copy, **signed by each team member**, and email me an electronic version to aekelly100@hotmail.com.
4. **Method Sections (2 total):** Students in teams will write two different method sections replicating and extending previous research studies. Each method section will be written in APA format (see sample paper in 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. Turn in hard copies, **signed by each team member**, and email electronic versions to me at aekelly100@hotmail.com

Quantitative example, which can also guide the qualitative version (also see textbook):

1. Statement of purpose and research questions, including a statement indicating research you are replicating and extending and a relevant citation for the study. (see also APA manual pp. 247-249)
2. Method (5-6 pages)

Participants characteristics

Sampling procedures,
setting Sample size

Materials

Content for all conditions

Method of implementation for all conditions

Deliverer

Setting

Time span, including number of sessions, duration of each session

Unit of analysis

Measures (Data sources) (dependent variables) instrumentation (where relevant)

Procedures (proposed data collection process)

Proposed preliminary data analyses (table of research question by data source by proposed data analysis)

3. References

5. **Article reviews (5 total):** 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, and a one-page single-spaced critique of the claims of the article (a-j, as appropriate), each signed by each team member.**
6. **Presentations (2 total):** Method sections will be presented orally using audio-visual aids (e.g., power point slides) during ten-minute presentations, each. Place a copy of the slides on digital black board. Sign-up sheets for presentation times will be distributed in class. **Team grades will be assigned.**
7. **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 17% 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.
Class participation includes discussing (five individual) homework assignments (see calendar)

Bring flash or other relevant media to class in order to save work completed during class.

Course Evaluation

Rubric for Five Reviewed Articles (10 pts) (team)

Adequate assignment (2 point): Assignment is thorough, thoughtful, correctly done, and submitted on time.

Marginal assignment (1 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 Eight Online Quizzes (8 pts) (individual)

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 Methods Sections (one qualitative and one quantitative) (20 each) (team)

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 Human Subjects Protocol for Each of the Two Method Sections (5 each) (team)

Exemplary (5 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 (3-4 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 (1-2 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 (0 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 Participation and Attendance

Homework assignments (5 total) (individual)

Adequate assignment (2 point): Assignment is thorough, thoughtful, correctly done, and submitted on time.

Marginal assignment (1 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.

Homework discussion and other attendance points

Exemplary (7 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 (5-6 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 (4 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 (3 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.**

Grading Policy

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| Weekly online quizzes (individual) www.prenhall.com/creswell | 8 pts total |
| Human Subjects on line training completion (individual) | 5 pts |
| Human Subject Proposals for Method Sections (team) | 10 pts (5 pts each) |
| Method Sections (qualitative/quantitative) (team) | 40 pts total (20 pts each) |
| Method Section Presentations (qualitative/quantitative) (team) | 10 (5 pts each) |
| Article Reviews (5) (team) | 10 pts |
| Homework (5) (individual) | 10 pts |
| Discussion of Homework and other Class Participation and Attendance (individual) | 7 pts |
| TOTAL | 100 pts |

Letter grades will be assigned as follows:

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|----|-----------|---|-----------|----|-----------|
| 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% | | |

Class activities

Tentative Course Organization and Schedule

| DATE | TOPIC | ASSIGNED READING DUE | WORK DUE |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. 8/29 | Review syllabus- Introduction and the Field of Educational Research; what is a claim? What is a warranted claim? What does it mean to observe? | [general introduction to library searching] | Examine various websites we will be accessing: prentice hall web site: www.prenhall.com/creswell ; human subjects' training site: http://www.citiprogram.org ; and GMU HSRB site; http://research.gmu.edu/ORIA/InstitutionalReview.html . http://research.gmu.edu/ORIA/docs/Human%20Subjects%20Application%20Form.doc – this is the template for later work |
| 2. 9/5 | Conducting Research and Steps in the Research Process | Chapters 1 and 2 | Bring a peer reviewed published research article 1 to class. 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. Attach critique of article claims. Discuss <i>Educational Researcher</i> journal by Kelly and Yin (2007). Review: pp. 31-44. [Homework 1 Due] |
| 3. 9/12 | Reviewing the literature; revisit as necessary Conducting Research and Steps in the Research Process | Chapter 3 | Submit online tests for chapters 1, 2 Bring article 1 with highlighted sections it in the margins. Compare literature reviews across teams. Submit article 1 with attached critique of article's claims [due]. Listen to the documentary, http://soundportraits.org/on-air/they shall take up serpents/ [transcript on page] Write a one-page reflection. Bring to next class to discuss with the GMU Human subjects expert. [Homework II for next week] |
| 4 9/19 | Guest: 1 st hr; Aurali Dade; Specifying a Purpose; Research Questions; Reporting & Evaluating Research | Human Subjects. Chapters 4-5 | Submit online test for chapter 3. Presentation by a representative, GMU HSRB. http://www.citiprogram.org review on line module prior to class http://research.gmu.edu/ORIA/InstitutionalReview.html . Review GMU policies and procedures prior to class. [Homework II due] |

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| 5. 9/26 | Collecting, Analyzing and Interpreting Quantitative Data Ann Driscoll, CEHD Librarian, 7:20pm | Chapter 6 | Submit online tests for chapters 4,5. Bring an intervention research study to class (article 2). Mandatory Training for Persons Conducting Research Using Human Subjects must be completed and certification document submitted. Listen to http://thedianerehms.org/shows/2012-08-29/algebra-necessary . [read http://www.nytimes.com/2012/07/29/opinion/sunday/is-algebra-necessary.html?pagewanted=all]. What claims are being made? [Homework III, next week] |
| 6. 10/3 | Using SPSS and Analyzing Quantitative Data; Experimental designs, correlations, survey research | Chapters 10, 11, 12 | Submit online test for chapter 6. Submit highlighted article 2 with attached critique of article's claims. Class will review chapters 10,11, and 12. Bring a survey research article to class (article 3). Identify the parts of the article in the margins. Homework III due. |
| 7. 10/10 | No face to face class | | Review http://thedianerehms.org/shows/2011-02-02/vaccines-and-autism-story-medicine-science-and-fear Write a one-page critique of the claims and methods used; bring to next class. [Homework IV, for next week] Catch up on other work. |
| 8. 10/17 | Bring electronic and hard copy versions of your method section and HSRB proposals to class | Chapters 7 & 8 Collecting Analyzing and Interpreting Qualitative Data | Draft of Quantitative Intervention Research Method and matching Human Subject proposal due for peer review; Work on quantitative method and HSRB proposals (due week after Thanksgiving). Bring and discuss your critique of vaccines and autism in teams. Report out. [Homework IV due] |
| 10/24 | Analyzing and Interpreting Qualitative Research | Chapters 7& 8 | Quantitative Research Method and matching Human. Subject Proposal (and all consent forms) due. Submit online tests for chapters 7, 8 Bring a qualitative research study to class (article 4). 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. Discuss across teams. Critique. |

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| 9. 10/31 | More examples and work data analyses | | <p>Submit highlighted article 4 with attached critique of article's claims.</p> <p>For next week, listen, again, to the documentary, [read transcript] http://soundportraits.org/on-air/they_shall_take_up_serpents/</p> <p>Write a one-page reflection about how you would research this group and activity. Bring to next class. [Homework V, next week]</p> |
| 10. 11/7 | Grounded Theory, Ethnographic and Narrative Designs | Chapters 13, 14 & 15 | <p>Draft of Qualitative research method and Human Subjects section due for peer review.</p> <p>Discuss "They shall take up serpents" as a source for ethnographic of narrative analysis. [Homework V due]</p> |
| 11. 11/14 | Mixed Method and Action Research Designs | Chapters 16 & 17 | <p>Qualitative research method and human subjects section due.</p> <p>Practice designing and discussing mixed methods. Bring a mixed method research study to class (article 5). 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. Discuss across teams. Critique.</p> |
| 12. 11/21 | Thanksgiving | | |
| 13. 11/28 | Review of design-based research Plomb download, see textbooks list | | <p>Submit highlighted article 5 with attached critique of article's claims.</p> <p>Work on final class products, including presentations.</p> |
| 14. 11/31 | Method section presentations | | Qualitative methods presentations |
| 15. 12/5 | Method section presentations part 2 | | Quantitative methods presentations |

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Student Expectations

- Students must adhere to the guidelines of the George Mason University Honor Code [See <http://academicintegrity.gmu.edu/honorcode/>].
- Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester [See <http://ods.gmu.edu/>].
- Students must follow the university policy for Responsible Use of Computing [See <http://universitypolicy.gmu.edu/1301gen.html>].
- 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.
- Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.
- Students are expected to exhibit professional behaviors and dispositions at all times.

Campus Resources

- 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/>].
- 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/>].