

Problems and Methods in Educational Research

George Mason University, Graduate School of Education

Dr. Anastasia Kitsantas

Spring, 2004

EDRS 810 001

Class Meeting: Robinson, A, Room 246, T 4:30-7:10 PM

Office: Robinson Hall, Room 353

Phone: (703) 993-2688

Office Hours: MT 1-4:00 PM

E-mail: akitsant@gmu.edu

Other hours may be arranged by appointment.

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 should:

- be able to understand what research is, and how it differs from other intellectual and practical activities in education;
- be able to understand the major approaches to educational research, and the implications of the differences between these for doing and evaluating research in education;
- be able to find, understand, evaluate, and apply published research that is relevant to their field;
- be able to design the basic components of small-scale research studies, both quantitative and qualitative, including
 - identifying a research problem to study
 - formulating the purposes of the study
 - developing a conceptual framework for the study
 - generating appropriate research questions
 - planning relevant and feasible methods of sampling, data collection, and analysis
 - anticipating plausible validity threats, and thinking of ways to deal with 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 Fifth 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.

Course Methodology: This course consists of lectures, large group and electronic discussion, in class activities, and individual/group assignments.

Required Texts

McMillan, J.H., & Schumacher, S. (2001). *Research in education: A conceptual introduction* (5th ed). Reading, MA: Addison-Wesley Longman.

Maxwell, J.A. (1996). *Qualitative research design: An interactive approach*. Thousand Oaks, Sage Publications, Inc.

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

Course Pack (available at the bookstore).

Course Requirements: It is expected that each of you will:

- (1) Read all assigned materials for the course.
- (2) Participate in classroom activities that reflect critical reading of materials.
- (3) Complete two in class assignments and two HW assignments. *
- (4) Design and conduct a pilot research study.*
- (5) Present the pilot research study in class in a poster format. *
- (6) Write four summary critiques of quantitative and qualitative research articles. *
- (7) Attend each class session.

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

Course Evaluation

1. In class/Homework Assignments: Students will be asked to work individually or in groups of 2 students on 4 in class/homework assignments throughout the semester (all assignments are clearly described in the course packet).

2. Pilot Research Study: This course requires students to develop and conduct a pilot-research study in an educational setting. Students will work in groups of 2-3 students. This study is intended to be the place where you reflect what you learn from this course. It should be written in

a way that one would submit for a national professional conference paper presentation. Other requirements for this course are designed to build up bases for the final pilot research proposal. For example, assignment #2 in the course packet will assist you in locating relevant research, abstracts, and articles for your topic of interest. Research papers must be handed in on time and must adhere to the APA Publication Manual Guidelines.

This pilot research study will be divided into 6 sequential parts.

1. Identify broad topic of interest; conduct a literature review; discuss significance of the proposed study; state purpose and hypotheses.
2. Methods- describe sample; identify measures to test hypotheses; discuss procedures and design of the study.
3. Data collection.
4. Data analysis.
5. Results section.
6. Discussion and Conclusion.

Please note: The elements of the pilot-research study are listed in your course packet.

3. Presentation of Group Pilot Research Study: The presentation of the final paper will take place the last day of class in a poster session format. The pilot research study presentation will follow AERA poster presentation guidelines. Please see guidelines posted on the AERA website, www.aera.net.org. The course instructor and students will evaluate group posters (see evaluation form in the course packet). Each member of the class should receive an abstract and a reference list of the study.

Individual Reflections on Conducting Research

After completing the collaborative study of conducting a research study, reflect on that experience. What did you learn from it? How do you think course material helped you carry out the study?

4. Article Critiques of Quantitative and Qualitative Methodologies: This course requires students to write critiques of three research articles. The critiques should include the following parts: purpose, methods, results, and critical comments as well as your reflections about the article (see course packet for specific instructions). In addition, students will be assigned in groups to write a critique on their peers' final draft of the pilot research study.

5. 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.

RUBRIC FOR PARTICIPATION AND ATTENDANCE

ELEMENT	LEVEL OF PERFORMANCE			
	Distinguished (9-10 pts.)	Proficient (8 pts.)	Basic (7 pts.)	Unsatisfactory (6 or less pts.)
Attendance & Participation	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.	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.	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.	The student is late for class. Absences are not documented by following the procedures outlined in this section of the syllabus. The student is not prepared for class and does not actively participate in discussions.

Grading Policy

Group or Individual Homework Assignments (2)	10 pts each/20pts
Article Critiques (4)	5 pts each/20 pts
Pilot Research Study	40 pts
Presentation of Pilot Research Study (Poster Session)	10 pts
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%		

Honor Code

All evaluations and homework will be taken under the GMU Honor Code. Students are expected to abide by the honor code set forth in the current edition of the Student Handbook. All exams, assignments and papers are honor work. That means that students must not give nor receive any unauthorized assistance. While members of a team may collaborate on written paper assignments, they may not give or receive assistance from other teams. Plagiarism is also a violation of the honor code. The University's Honor Code guidelines for academic honesty are at:

<http://mason.gmu.edu/~montecin/plagiarism.htm>

Learning Disabilities

Students with any type of documented disability that may interfere with their learning in this class may negotiate a reasonable accommodation with the instructor. If you have not contacted the Office of Disability Services, and you have a disability please make sure to register for services.

EDRS 810: Tentative Course Organization and Schedule

DATE	TOPIC	ASSIGNED READING	WORK DUE
Jan 20	Review syllabus- Introduction to the Field of Educational Research	Chapter 1 (JM & SS)	
Jan 27	Fundamental Principles of Educational Research APA Style/Content and Organization of a Manuscript SPSS Overview	Chapter 1 (APA Manual)	In Class Assignment #1
Feb 3	Modes of Inquiry, Data Collection Techniques, and Research Reports	Chapter 2 (JM & SS) Maxwell, pages 1-13	HW Assignment #1
Feb 10	Research Problems: Statements, Questions, and Hypotheses	Chapter 3 (JM & SS)	GMU Library Session
Feb 17	Literature Review Educational Research on the Internet	Chapters 4 & 5 (JM & SS)	HW Assignment #2 Topic of Interest Summary statement/ Annotated Bibliography Possible instruments to measure your constructs
Feb 24	Quantitative Research Designs and Methods Introduction to Designing Quantitative Research	Chapter 6 (JM & SS) Appendix C (APA Manual)	IRB requirements In class Assignment #2 Case Studies
Mar 2	Descriptive Statistics Quantitative Data Collection Techniques	Chapter 7 & 8 (JM & SS)	Literature Review and Introduction (draft) Submit IRB Proposal

Mar 9	No Class/Spring Break		
Mar 16	Non-experimental Research Designs and Surveys Experimental and Single-Subject Research Designs	Chapters 9 & 10 (JM & SS)	Methods of pilot research study (draft)
Mar 23	Inferential Statistics	Chapter 11 (JM & SS)	Article Critique #1 (Quantitative) Arrange to collect data for pilot research study
Mar 30	Qualitative Research Designs and Methods Purposes: Why are you Doing this Study? Qualitative Research Designs	Maxwell, pages 14-24 Chapter 12 (JM & SS)	Article Critique # 2 (Quantitative/Qualitative) SPSS and assistance with data analyses
Apr 6	Qualitative Strategies Qualitative Data Analysis	Chapters 13 & 14 (JM & SS) Maxwell, pages 25-48, 86-96	Article Critique # 3 (Qualitative) Results section of pilot research paper (draft)
Apr 13	Concept Analysis and Historical Research	Chapter 15 (JM & SS) Maxwell, pages 49-85	First draft of the pilot research paper for instructor's feedback
Apr 20	Research Proposals Evaluation Research and Policy Analysis	Maxwell, pages 99-114 Chapter 16 (JM & SS)	Peer review critique # 4
Apr 27	Conclusions		POSTER SESSION
May 11			Pilot Research Study Due

Reading List

In addition to the readings assigned above, these articles and excerpts will be covered in class.

Eisner, E., & Peshkin, A. (1990). *Qualitative research in education: The continuing debate*.

Teachers College Press, New York.

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research*. Thousand Oaks: Sage

Publications.

Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among*

five traditions. Thousand Oaks, CA: Sage Publications.

Marshall, C., & Rossman, G.B. (1995). *Designing qualitative research*, (2nd Ed.). Thousand

Oaks, CA: Sage Publications.

Meloy, J. M. (1994). *Writing the qualitative dissertation: Understanding by*

doing. Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.

Miles, M. B., & Huberman, M. A. (1994). *Qualitative data analysis*, (2nd Ed.). Thousand Oaks,

CA: Sage Publications.