



**FAYETTEVILLE STATE UNIVERSITY**  
**SCHOOL OF EDUCATION**  
**DEPARTMENT OF EDUCATIONAL LEADERSHIP**

**I. LOCATOR INFORMATION**

Semester:	Fall 2009
Course # and Name:	EDLE 723: Quantitative Research Application and Methodology
Credit:	3 Hours
Class Time:	Thursday, 6:00 -8:50 p.m.
Instructor:	Dr. Frank Keane
Class Location:	Butler Bldg. Room 315
Office Telephone:	(910) 672-1274
E-mail Address:	fkeane@uncfsu.edu
Office Hours:	T&R3-6PM.
Office Location:	315, Butler Building

**II. COURSE DESCRIPTION**

This course provides a study of quantitative methods used to conduct educational and educationally-related research and includes critical analysis of selected research articles and research design. Emphasized is the ability to use research and research methods to improve practices in educational and educationally-related settings.

The conceptual framework of the School of Education is reflected in this course and establishes a shared vision of its efforts in preparing educators to work effectively in PK-12 schools. It defines the educator as a Facilitator of Learning, one who seeks to make the learning process accessible and one who enables learning to take place successfully. This presupposes that the educator is reflective and serves as a catalyst, stimulator, and motivator of the teaching for learning process. The School of Education's conceptual framework encompasses five curricular strands: Content, Knowledge, Learning Theories, Learning Climate Dispositions and Methodology, all of which when taken together make up the core outcome drivers of the teacher education experience. The five process drivers: Assessment, Diversity Collaboration Technology and Reflection, provide focus and direction to the curricular strands that underpin the education programs of Fayetteville State University. The schools conceptual framework adheres to all of the North Carolina regulatory agencies as well as the Professional and Learned Societies Guidelines. This course EDLE 721 is built upon the concept of Content, Knowledge, Learning Theories, Learning Climate, Dispositions and Methodology. Each of the five drives is supported by class assignments and learning activities, as well as class discussions and readings. In each course a culminating research paper binds together the elements of the conceptual framework and the process drivers.

### **III. TEXTBOOKS**

Ary, Donald, Jacobs Lucy and Razavieh, Asghar & Sorenson Chris. Introduction to Research in Education. 7th edition. 2007. Wadsworth Group, Belmont Ca.

(Suggested, not required)

Campbell, Donald and Stanley, (1963). Experimental and Quasi-Experimental Designs For Research. Houghton Mifflin, Company, Boston.

### **IV. SPECIFIC COURSE OBJECTIVES**

The proposed objectives for this course are for the students to....

Demonstrate general skills, knowledge and abilities related to the basics of educational research.

Recognize and demonstrate knowledge related to different research methodologies.

Read and critique research conducted by other practitioners.

Demonstrate orally and written, characteristics of experimental and quasi-experimental research designs.

Demonstrate knowledge and skills of the role of statistics in research.

Demonstrate knowledge and skills of a computer program for managing, analyzing, and displaying data.

Develop an awareness of the need for intelligent consumption of research and for carrying out research activities.

Prepare an in depth research prospectus.

Demonstrate knowledge and skills for evaluating educational programs using research data.

Demonstrate knowledge of making decisions from assessment and evaluation data.

## **COURSE COMPETENCIES**

The competencies from this course will prepare students to fulfill the basic requirements of the State Department of Public Instruction, NCATE, and the Fayetteville State University Doctoral Research Committee as related to research skills needed by school leaders.

## **v. EVALUATION CRITERIA and GRADING**

The final grade for this course will reflect the average of test results, class participation and written assignments. To receive full credit assignments must be presented at the start of class on the due date.

### A. Assignments:

Four research critiques and  
Class participation: 10%  
Critiques are due 10,17,24 SEP & 10OCT.

Mid-term exam  
(8 OCT): 20%  
Research Prospectus &  
Presentation?  
(Due 3DEC) 50%

**FINAL EXAM**  
**(10 DEC )** 20%  
Fall Break is 15&16 Oct.

### B. University Grading Scale

92 - 100 = A  
83 - 91 = B  
73 - 82 = C  
< 72 = F

For additional academic policy information kindly consult the current Graduate School catalog.

## **VI. SPECIFIC COURSE REQUIREMENTS**

The minimum requirements to achieve excellence in this course:

1. Each student is expected to attend all scheduled classes and participate in activities and discussions. It is recommended that you regard our class as a meeting with your Superintendent. You are to regard this as an opportunity to influence the boss. So be prepared! The meeting will begin at 6PM. What time will you arrive?

2. Each student is expected to read and study research at least six hours per week excluding regular scheduled classes.
3. Each student is to critique four different published research articles. Each article must reflect Quantitative Research. (Format attached.)
4. Each student is to gain access to a doctoral dissertation in education or the social sciences for review. The student is to read the entire dissertation and present an oral critique of the dissertation to the class. In giving the critique pay special attention to: Statement of the Problem, Literature Review, Methods and Procedures, Findings, and Conclusions and Recommendations. Tell whether you consider the dissertation demonstrate high, medium or low scholarship. The dissertation must reflect quantitative research.
5. Each student must pass the course mid-term and final exam.
6. Each student is to prepare in written form (APA style) a research prospectus. This must include Chapters I,II and III of a potential dissertation. This can be an important step toward graduation!  
 \*Prospectus topic requires approval of instructor. When selecting a topic think of what is of interest to you. What makes you happy and will be of real interest to you? There will be more on this . . . much more!!! The paper must use APA format, be typed, and have a dissertation orientation. Don't panic yet!
7. You are required to scheduled and appointment with your instructor during the month of November. The meeting is to occur during office hours and a student will be appointed to set up the appointments.

## **VII. TEACHING STRATEGIES**

The teaching strategies for the course will vary depending upon the learning styles and strengths of the students enrolled. It is expected that the instructor will place emphasis on library research and group discussions, lectures, student demonstrations, video reviews, computer usages, and students critiquing articles with instructor feedback and clarification.

This course really requires your attention and the payoff will be visible in your dissertation. We will not have class on 15OCT Thursday 26 Nov(Turkey day, eat lots).

## **VIII. EXPECTED COURSE SEQUENCE**

### Week One Scientific Inquiry

- a. The Nature of Educational Research, course overview
- b. Ways of Knowing
- c. The Value of Research
- d. Read chapters 1 & 2 of your textbook

### Week Two The Research Problem

- a. The Basics of Educational Research models
- b. Ethics and Research
- c. Read chapters 3 & 4

### Week Three The Hypothesis

- a. Asking the right question
- b. Research variables Read chapters 5
- c.

### Week Four Statistical Analysis

- a. measurement
- b. scales of measurement
- c. need for objective measurement
- d. Read chapter 6

### Week Five Inferential Statistics

- a. Research Tools and Instrumentation
- b. descriptive and inferential statistics
- c. Read chapters 7

### Week Six More Stats Chapters 6-7

- a. correlational research introduction
- b. samples
- c. review chapters 1-7 and review for mid-term

### Week Seven

- a. Mid-term exam
- b. Case studies and survey research. No reading required for this class but read chapter 8 for next week

### Week Eight Tools of Research

- a. Scales and Inventories
- b. read chapter 8

### Week Nine Validity and Reliability

- a. Research Methodologies controls to reduce threats to validity
- b. Interpretation of statistical procedures
- c. Read chapters 9

### Week Ten Methods

- a. Qualitative Research versus Quantitative Research
- b. experimental design
- c. Discussion of selected research studies (dissertations)
- d. read chapter 10

#### Week Eleven Ex Post Facto Designs

- a. Experimental Research Design
- b. Quasi-Experiential Design
- c. Read Campbell's book, if available
- d. Read chapter 11

#### Week Twelve

- a. Continuation of Research Design
- b. Apply different research designs to different research methodologies

#### Week Thirteen Correlational Research

- a. Chapter 12

#### Week Fourteen Surveys Ch 13

- a. Doing research in schools
- b. Doing research for dissertations
- c. Inferential statistics
- d. Program Evaluation

#### Week Fifteen

- a. Using the computer in research
- b. Computer as research tool
- c. Computer for more processing
- d. Computer for data analyses
- e. Getting data ready for computer
- f. Catch up on my unfinished readings

#### Week Sixteen

- a. Final Exam

#### **IX References**

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**Course Guidance:**

A typical class will begin with a summary of the previous weeks discussions. Students will be expected to participate in this summary. In week three we will always follow the summary with at least one research problem statement. A student or students will be asked to develop the statement, which will then be analyzed. In time everyone will be afforded the opportunity to participate.

**JOURNALS (select four articles from these)**

American Education Research Journal, Review of Educational Research, Journal of Experimental Education, American Psychologist, Journal of Abnormal and Social Psychology, Journal of Applied Psychology, Harvard Educational Review, Journal of Educational Psychology



to solve some problem. Remember to always start with the end in mind. This is true in life, but even truer in research, because research is often a process of systematic exclusion. If you did not anticipate it you will not find it, or you will not recognize it if you do stumble across, it! The real issue is to always keep in mind the meaning of it!

Guidelines for your research prospectus:

1. Make a list of educational leadership problems for which you would be interested in conducting a research study.
2. Using the list, choose one (1) problem which you will actually research or will prepare an in depth research prospectus. (Due the fourth class meeting)
3. The following is a checklist or guideline of items which are typically included in a research report or thesis. Not all of the suggested categories are necessary or appropriate for all studies, and the order of items within chapters may vary somewhat. These items are intended to serve as a guide. The research proposal is a written statement of the research design. It explains the purpose of the study, defines the problem, outlines research methodology, details the procedures to be followed and states cost and deadlines. The research proposal should be precise, specific, and concrete.

#### Chapter I - The Problem

- Introduction
- Background of the problem
- Statement of the problem or purpose of the study
- Questions to be answered, objectives to be investigated or statement of hypotheses
- Importance of the study
- Definition of terms

#### Chapter II - Review of Related Literature

- Purposes to be served by review of research literature
- Organization of related literature

#### Chapter III - Methodology or Procedures

- Description of research methodology or approach (e.g. experimental, descriptive, or survey).
- Research design
- Selection of subjects
- Instrumentation (tests measures, questionnaire)
- Data collection and recording
- Data processing and analysis (statistical techniques)
- Methodological assumptions and/or limitations

References and/or Bibliography. This is required.

The final research study is to be typed and should be proofread carefully. (This is a major exercise. It counts for one-half of your final grade.) It is to be written in the past tense. Using APA format. Don't panic! We will have lots of discussion in class on this and other subjects. This product of learning should be very close to a final draft of a dissertation proposal.

Email is: [fkeane@uncfsu.edu](mailto:fkeane@uncfsu.edu)