

Education 765 Research Design in Higher Education Winter 2000

Thursday 1-4pm

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This course is intended to prepare doctoral students to design focused research studies (especially for the dissertation), give students' experience in developing good research proposals, and assist students with skills to critically evaluate the design and conduct of studies developed by other researchers. The course is required for doctoral preparation in the CSHPE program and is intended to complement what the student learns in other courses, especially in quantitative and qualitative methods classes or other courses that require the development of research studies. Students will not carry out their own research study in this course, and therefore, it is important that students read textbooks and research articles which provide examples of research designs in the emerging knowledge base for the field of higher education. Research articles conducted from a variety of paradigms will be used throughout the course, addressing a variety of higher education topics.

Course Goals

Students will be expected to learn to:

1. Read and critique research articles and proposals on various topics in higher education to assess the research evidence on a given topic.
2. Become familiar with qualitative and quantitative research designs, and array of extant methods, to understand their uses, strengths, and limitations.
3. Develop a research proposal that reflects knowledge of good principles of research design.
4. Develop elements of a sound research design when confronted with any topic, given a problem statement and appropriate information about the conditions for the study.

Students who have already taken the statistical research sequence and a qualitative research course will be best prepared to discuss some of the issues and to develop their own research proposals. Supplementary reading may be assigned in consultation with students who do not have sufficient knowledge about statistics or qualitative methods, as many of the topics and concepts assume a basic understanding of methods. This course is not intended to teach the specifics of implementing any one method, but rather, to evaluate the strengths and limitations of the methods chosen to generate knowledge in education and social science in general. If students are clearly going to write a dissertation on the topic selected for their research design proposal, students are encouraged to also consult with a dissertation chair.

Texts

The course is structured around three general texts that are useful for developing a variety of research designs. These texts are: David R. Krathohl's, Methods of Educational and Social Science Research: An Integrated Approach, 1997, 2nd edition. New York: Addison Wesley Longman, which will serve as the main text; John W. Creswell's, Research Design: Qualitative & Quantitative Approaches, 1994. Thousand Oaks, CA: Sage; and Howard Becker's, Tricks of the Trade: How to Think About Your Research While You're Doing It, Chicago: University of Chicago. Students might find the latter text useful before, during, or perhaps near the completion of a research study. Additional readings may be provided as handouts for class discussion, particularly as the course progresses and students in the class seem interested in thinking more about particular areas.

On occasion, these texts will be supplemented by readings that are useful in developing research proposals, literature reviews, as well as conducting research. I have found these sources useful, but not all students will be interested in purchasing these because of their specific use. These works include, for example, Howard Becker's, Writing for Social Scientists; How to Start and Finish Your Thesis, Book, or Article. Chicago: University of Chicago (useful for academic writing in general); Wayne C. Booth, Gregory G. Colomb, and Joseph M. Williams, The Craft of Research, 1995. Chicago: University of Chicago (useful for proposal and CQE development). Also on reserve at IRIS are several books students might wish to review if they intend to further develop as a quantitative or qualitative researcher. When students have determined the research paradigm they will use for the dissertation, they may consider purchasing one of these books from a local bookstore or website. These general references and several research methods books will be useful for a class presentation on a particular method, and in further developing the details of a research design.

Evaluation and Course Activities

Class Participation and Exercises (25% of the grade)

Each week students are expected to participate in class discussions, raise questions, and complete exercises that will help them to reflect on the readings and think about developing a good research design. Exercises are primarily intended to generate more discussion and on occasion, may be collected by the instructor and returned to students by the next class period. Research articles will be critiqued in class, and each student will have a chance to participate in "front row duty" to lead the critique of the article. Some exercises will be devised for use in class to help extend the central concepts.

Research Proposal (25% of the grade)

Over the course of the term, students are expected to develop a defensible research proposal of their own with a 1) clear problem statement and rationale for the study, 2) specific research question(s), 3) situated within a brief literature review of related theory and research studies, and 4) a design that fits the approach for the research question posed, addressing issues of internal and external validity and overall features that will enhance the trustworthiness and credibility of the proposed research. The instructor may ask to see several drafts of the research proposal, will raise questions for improvement, and students will continue to work on and revise their work until the final product is due at the end of the term.

Peer Review and Short Paper on a Specific Method (25% of the grade)

Virtually all research designs go through some type of peer review process in academia, whether it be at the dissertation proposal stage, in requests for funding, or when a study is completed and is reviewed for publication. For this reason, you are expected to participate in a peer review process, offering suggestions to point out strengths and weakness of a proposal to assist an author in the improvement of his/her design. In addition, you will write a short paper (not more than 10 pages) selecting a specific research technique describing its 1) purpose and use; 2) advantages and limitations of the method; 3) its probable place on the continua of Description to Validation, Acontextual to Contextual, Obtrusive to Unobtrusive methods; and 4) identify an article that uses the technique to illustrate the points you raise. This papers will be presented in a 10-15 minute presentation in class.

Design Exercise and Short Quiz (25% of the grade)

A problem statement will be assigned and students will be asked to prepare a brief research design to discuss in class. This activity is intended to provide practice in writing a good research question

and articulate the essential elements of a defensible design to cultivate thinking about research. In addition, a short quiz on basic concepts in the course will be administered several times during the semester.

January 6th

Week 1 Introduction

Tricks for Getting Started on Your Own Research Proposal
Higher Education Issues From Interests to Topics, From Topics to Questions
Variety of Research Methods
Value of Critique: Peer Review Processes and Quality Research

Read and refer to throughout the Course:

Krathwhol, Appendix, Writing a Research Proposal, 649-677
Critiquing a Research Article (handout)
Creswell, Chapter 1/Format for the Research Proposal (handout)

Recommended Reading:

Booth, Colomb, and Williams, The Craft of Research, Chapter 3, 35-45. (Copy)
Krathwohl, Chapter 1 (only skim, we will be modeling such critiques using articles from the higher education literature).
Krathwohl, Chapter 2 &3

January 13th

Week 2 Using the Research Literature: Deference or Disrespect?

Types of literature on higher education topics and their uses
Stating the research problem or facing the “So What Question”
Framing Research Questions
Beginning to Critique Research
Distinguishing Between a Broad Synthesis and focused Literature Review

1. Required Readings:

Krathwhol, Chapter 5 Finding Research Problems
Krathwhol, Chapter 6 Finding Links to Past Research: The Literature Review
Creswell, Chapters 2-4
Booth, Colomb, and Williams, The Craft of Research, Chapter 4 from Questions to Problems, 46-63. (Copy)
Dunkin, Michael J. (1996). Types of Errors in Synthesizing Research in Education, Review of Educational Research, 66 (2), 87-97. (Copy)

Recommended Reading:

Becker, Writing for Social Scientists, Chapter 8, Terrorized by the Literature, 135-149. (On reserve at IRIS also Copy)

2. Homework for class discussion:

Exercise 2.1 Claiming Knowledge (handout)
Exercise 2.2 Critique of Research I: Framing the Study (handout)

January 20th

Week 3 Using Theory, Conceptual Frameworks, and Hypotheses

Definition of a Theory

Different Uses of Theory in Quantitative and Qualitative Designs

Forming Hypotheses (Strict tests versus heuristic device)

Developing a Conceptual Framework to Guide Data Collection and Analysis

Expanding the Boundaries of Current Theory

1. Required Reading:

Krathwohl, Chapter 4 The Research Chain of Reasoning- A Conceptual Framework

Creswell, Chapter 1, 5, & 6

Becker, Tricks of the Trade, 1-51

2. Homework for class discussion:

Exercise 3.1 Reviewing the Literature on your topic (handout)

Exercise 3.2 Critique of Research II: Researchers' Use of Theory (handout)

January 27th

Week 4 Sampling Populations, Subjects, Contexts: Who, What, Where, and Why Them?

DUE: First Draft of Research Proposal Due (without a Design)

External Validity or Generalizability Power

Unit of Analysis or Case

Types of Sampling Procedures

Deciding to use unique/extreme cases or typical cases

Institution Type, Multi-institution versus single-institution studies

1. Required Readings:

Krathwohl, Chapter 8

Becker, Tricks of the Trade, Chapter 3

2. Homework for class discussion

Exercise 4.1 Practice Sampling (handout)

Exercise 4.2 Critique of Research III: Samples and Rationale (handout)

February 3

Week 5 Designs for Establishing Causality and Assessing Impact

Internal Validity

Conditions for Establishing Causation

Experimental Design

Assessing Change versus Impact

Statistical Control and Non-random settings like colleges

Longitudinal Designs and Cross-Sectional Designs

1. Required Readings:

Astin, A.W. Assessment for Excellence: The Philosophy and Practice of Assessment and Evaluation in Higher Education, pp. 16-37. ACE/MacMillan. (On reserve at IRIS)

Krathwohl, Chapter 7 & 20
Becker, Tricks of the Trade, pp. 51-66.
Creswell, pp. 126-142.

2. Homework for class discussion:
Exercise 5.1 Assessing Impact (handout)
Exercise 5.2 Critique of Research IV: Evaluating Designs (handout)

February 10

Week 6 Qualitative Research Design Features

Uses and Advantages of a Qualitative Approach
Modes and Type of Data Collection
From Indicators to Concepts to Theory-Building
Role of the Researcher
Strategies for Establishing Internal Validity
Modes of Analysis

1. Required reading:
Krathwohl, Chapters 11, 12, 13, 14 & 15
Becker, Tricks of the Trade, pp. 109-214

Recommended reading:
Krathwhol, Chapter 22 Historical Research

2. Homework for class discussion:
Exercise 6.1 Conducting a Pilot Study (handout)
Exercise 6.2 Critique of Research V: Evaluating Designs (handout)

February 17

Week 7 Quantitative Research Designs

Uses and Advantages of a Quantitative Approach
Operationalizing Concepts/Constructs: From Concepts to Indicators
Types of Variables and Variety of Measures
Validity and Reliability
Mode and Types of Data Collection
Survey Research, Descriptive and Correlational Studies
Potential Sources for Data: Individuals, Institutions, National Data
Analytical Techniques

1. Required reading:
Krathwhol, Chapters 16, 17, & 18
Creswell, Chapter 8, pp. 116-126

Recommended reading:
For those who need a review of statistical tests of significance and inferential statistics read
Krathwhol, Chapter 19.

2. Homework for class discussion:

Exercise 7.1 Operationalizing Constructs (handout)

Exercise 7.2 Critique of Research VI: Assessing Quantitative Designs (handout)

February 24

Week 8 Special Topics in Quantitative and Qualitative Research

DUE: Draft of Research Proposal (including Design)

Possible Topics may include: Writing and Interpreting Results, Choosing a Dissertation Committee based on a research Proposal, Tricks in Analysis of Data, Handling Counterintuitive Findings, Non-significant Results are Significant, Documenting your role in the research process, Describing proposed and actual modes of analysis, etc.

1. Required reading:

Guba & Lincoln, Competing Paradigms in Qualitative Research, in the Handbook of Qualitative Research, 105-117. (Copy)

Other Readings (TBA)

2. Homework for class discussion:

Exercise 8.1: On Choosing a Method (handout)

Exercise 8.2: Critique of Research VII: A Full Critique (handout)

March 2 *No class: Spring Break*****

March 9

Week 9 Methods Presentations

DUE: Short Paper on the application of a specific research method not mentioned in the course to date. Prepare overheads for key points in your talk, including citations for your information.

Case Study Research

Content or Document Analysis

Focus Groups

Participant Observation

Ethnography

Ethnomethodology

Phenomenology

Discourse Analysis

Life History

Cultural Studies

Causal modeling

Network Analysis

Discriminant Analysis

Logistic regression

Time series studies

Replication Studies

Hierarchical Linear Modeling

Survival Analysis

Issues in Secondary Data Analysis

Any Not Listed, Approved by Instructor

March 16

Week 10 Constraints of a Study and Limitations of Research

Ethical procedures in research

Criteria to Optimize

Defining the Scope of the Study

Specifying Limitations, how these were minimized and future research potential

Clarifying the Significance of the Study

1. Required readings:

Creswell, Chapters 9 & 10

2. Homework for class discussion:
Exercise 10.1: Critique of Research VII: A Full Critique (handout)

March 23

Week 11 Evaluation Research, Action Research, & Mixed Method Designs

Research Driven by Decisions in Practice
Practical Issues in Conducting Evaluation and Action Research
Effective Use of Mixed Method Designs

1. Required Reading:
Kraithwhol, Chapter 23 & 24
Creswell, Chapter 10
2. Homework for class discussion:
Exercise 11.1 Developing a Mixed Method Design (handout)

March 30 AAHE Annual Meeting - No Scheduled Class

Week 12 Full Research Proposal Draft Due to Peer Reviewer, Pick up Proposals to Review

April 6 Meta-Analysis and Research-Based Knowledge

DUE: Two-page Peer Review

The Peer Review Process

1. Required reading:
Krahwhol, Chapter 21 & Chapter 25

In Class Design Exercise

April 13 Presentations and Critiques of Selected Student Proposals

DUE: Final Revised Research Proposal Due