

**Florida State University
College of Criminology and Criminal Justice**

PhD Comprehensive Examination in Research Methods & Statistics

Spring 2007

Instructions:

There are four sections to the exam. Answer one question from each section. You have until 4:00pm to finish. If you have problems with the exam, you may consult with faculty proctoring the exam. Return your completed exam to the proctor on duty when you are finished.

Dan Mears (Room 308), 8:00am – 1:00pm;
Bill Doerner (Room 318), 1:00pm – 4:00pm;
Brian Stults (Room 317), 2:00pm – 4:00pm

SECTION I: RESEARCH DESIGN

1. Kerlinger makes the statement that, "It is easy to say that experimental research is 'better' than ex post facto research, or that experimental research tends to be 'trivial', or that ex post facto research is 'merely correlational'." Explain what is meant by this statement, provide the strengths and weaknesses of experimental and ex post facto research, and provide an example of how you would approach a particular research question using both methods.
2. Design a research project that will help determine how much drug use is occurring in high schools and why this is happening.

SECTION II: DATA GATHERING METHODS

3. Discuss the positives and negatives associated with surveys of the following type: phone, mail, online, and in-person. Include examples in which each of the methods would be most appropriate.
4. Discuss strengths and weaknesses of five of the following field research areas and techniques. Cite relevant literature to illustrate your discussion.
 - a. Establishing and maintaining field relations
 - b. Participant observations
 - c. Interviewing
 - d. Document reviews and other systematic procedures
 - e. Reliability and validity
 - f. Analysis of field data
 - g. Ethical problems in field work

SECTION III: STATISTICS

5. Multinomial Logistic Regression with ordered and non-ordered dependent variables is being used more often in the literature. Explain the similarities and differences in these two techniques, how they differ from Logistic Regression using a binary dependent variable, and provide a hypothetical or real example of how both methods would be used in a research project. Include the limitations of the approach as well.
6. Model specification lies at the heart of most statistical analyses, yet researchers may not always agree about the “best” specification. Discuss the advantages and disadvantages of relying solely on theory to determining (a) the variables to include in a model and (b) how such variables should be coded and what functional form (e.g., linear, quadratic, log) they should be given. Then discuss the advantages and disadvantages of relying solely on empirical approaches to determining (a) the variables to include in a model and (b) how such variables should be coded and what functional form (e.g., linear, quadratic, log) they should be given.

SECTION IV: DATA INTERPRETATION

7. Interpret the findings of the attached article by Peterson and Dix. This means that you should tell what the results mean with respect to the goals of the researchers and what they were trying to find out, just as you were writing the Results and Discussion/Conclusion sections of the journal article. Do not merely repeat in words what is already shown in numbers in the tables. What conclusions would follow from the results? What problems with the methods might undermine or weaken these conclusions?
8. Interpret the findings of the attached article by Piquero, Gomez-Smith and Langston. This means that you should tell what the results mean with respect to the goals of the researchers and what they were trying to find out, just as you were writing the Results and Discussion/Conclusion sections of the journal article. Do not merely repeat in words what is already shown in numbers in the tables. What conclusions would follow from the results? What problems with the methods might undermine or weaken these conclusions?