

## ESP 178 Applied Research Methods

### Studying for the Final

For the final, read the two assigned articles (handed out in class and available on the course website) by Olli, et al. and by Dill, et al. On the final, you will be asked questions about the design of these studies, from the conceptual model through their data collection approach and the interpretation of their results. Some questions will ask you to explain what the researchers did. Other questions will ask you to critique what they did. You will also be asked to think about other ways the research could have been done.

Concepts you should review and understand before the final:

#### *Pre-Midterm Concepts*

Independent variable

Dependent variable

Conceptual model

Measurement reliability

Measurement validity

“Gold standard”

External validity

Population

Sampling frame

Stratified sampling

Cluster sampling

Probability sampling

Nonprobability sampling

Causal validity

Association

Time-order criterion

Spurious relationship

Causal mechanism

Intervening or mediating variable

Unit of observation

Unit of analysis

Ecological fallacy

Cross-sectional design

Longitudinal design

Experimental design

Quasi-experimental design

Treatment

Treatment or experimental group

Control or comparison group

Pre-test/post-test or before/after

Randomization

Threats to internal validity

#### *Post-Midterm Concepts*

Errors of observation

Errors of non-observation

Response rates

Nonresponse bias

Rules for survey question writing

Rules for designing questionnaires

Survey administration

Mail surveys – how, pros & cons

Phone surveys – how, pros & cons

In-person interviews – how, pros & cons

Electronic surveys – how, pros & cons

Dillman method

Scales/indexes – purpose, techniques

Likert scale

Descriptive analysis

Bi-variate analysis

Multi-variate analysis

Regression coefficient

p-value

R-square & adjusted R-square

Dicennial Census

Sampling frame for Census

Short form versus long form of Census

Census undercount

Qualitative research

Observation

Focus groups

Interviews

Transcripts

Coding

Research ethics

Informed consent