

**Research Methods (HDFS 3390),  
Alan Reifman, Texas Tech University  
Exam 1 Review**

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- **Multiple Choice (40 items)**
- **Please bring orange Scantron**
- **Likelihood of being on the exam**
  - **MOST LIKELY: Topics covered in lecture *and* reading**
  - **SECOND-MOST LIKELY: Topics covered only in lecture**
  - **Reading-only topics (one from each article)**
  - **Many Concepts Come in Pairs: Don't Confuse Them!**
- **Topics**
  - **Introduction**
    - **Philosophy of the course (research methods as a tool to solve practical problems, help people)**

**SAMPLE ITEM**

A simple research example we saw to get the class started involved a television reporter investigating whether \_\_\_\_\_ made women more successful in their social lives.

A. Above-average height	B. Straight vs. curly hair	C. Traditional vs. modern fashion	D. Botox to make one's lips fuller
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- **Data Matrix**
  - **Unit of analysis (individuals, couples, etc.)**
  - **Independence of observations (why 6 couples would go on 6 lines/rows of data, rather than be depicted as 12 individuals)**
  - **Variables**

**SAMPLE ITEM**

The unit of analysis (also known as unit of observation) appears in the \_\_\_\_\_ of a data matrix.

A. rows	B. columns	C. diagonal	D. central square
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- **Theory & Hypothesis**
  - **Theory is a larger explanatory system, whereas hypothesis is a specific prediction**
  - **What makes for a good theory**
  - **Hypotheses must be testable and falsifiable (e.g., study of Kübler-Ross coping stages)**

- Theories (and their associated hypotheses) are never proven right, always a work in progress
- **Deductive** (Theory ==> Hypothesis ==> Data Collection, typically quantitative) & **Inductive** (Data Collection, typically qualitative ==> Development of Theories and Hypotheses)

**SAMPLE ITEM**

The statement “Teenagers who are regularly supervised and monitored by their parents will engage in lower levels of delinquent behaviors than teens who are less supervised and monitored” represents a/an:

A. Theory	B. Hypothesis	C. Conjecture	D. Proposition
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- **Conducting a Research Study**
  - Initial stages (e.g., ideas, theories/hypotheses, ethics)
  - Collecting data (e.g., measurement)
  - Final stages (e.g., analyzing data)

**SAMPLE ITEM**

The step in a research project that must always come first is:

A. Recruiting participants	B. Analyzing the data	C. Publishing your findings	D. Getting ethics approval
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- **Research Ethics**
  - Voluntariness
  - Protection from harm
  - Privacy
  - Deception
  - Institutional Review Board (IRB)/Human Subjects Committee

**SAMPLE ITEM**

Common type(s) of possible harm to participants in modern social-behavioral research include:

A. Stress-anxiety	B. Embarrassment	C. Moderate physical discomfort	D. All of the above
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- **Intro to Measurement**
  - **Conceptual** (abstract, general) & **operational** (concrete) **definitions** (mid-level may help think this through)
  - Types of Variables (Nominal, Ordinal, Ratio)
  - Other aspects of measurement (e.g. connection to theory; mutually exclusive and exhaustive)

SAMPLE ITEM

Using hair stylists' number of repeat customers to measure their haircutting ability is a/an \_\_\_\_ definition.

A. conceptual	B. operational	C. inductive	D. deductive
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○ **Reliability & Validity**

- **Reliability (consistency)**
- **Definitions and when to use each form of **reliability** (based on number of testing occasions and form of data collection):**
  - Test-retest
  - Internal consistency (alpha)
  - Inter-Rater
- **Validity (accuracy, measures what it is supposed to measure)**
- **Definitions and when to use each form of **validity****
  - Predictive/Criterion-related
  - Construct: Convergent
  - Construct: Discriminant
  - Content
  - Face
- **Correlation statistic (Used for reliability and validity; positive correlation tells us that high score on one measurement goes with high score on another; maximum = 1.0)**

SAMPLE ITEM

If the highest scorers on the Medical College Admission Test (MCAT), which is designed to assess likelihood for success as a medical student and ultimately as a doctor, received the best residency training placements (e.g., neurosurgery at Harvard) after medical school, this would demonstrate:

A. Test-retest reliability	B. Predictive validity	C. Internal-consistency reliability	D. Face validity
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