

Experimental Psychology – Arlo Clark-Foos
Study Guide for Exam #2 (Fall 2010)

Studying Behavior

- Variable (situational, response, mediating, participant)
- Operational Definition
- Positive, Negative, Zero, & Curvilinear Relationships
- Nonmonotonic function
- Correlation Coefficient
- Random Variability & Error Variance
- Nonexperimental vs. Experimental Methods
- Correlational Methods
- Cause, Effect, & Control
- Third-Variable Problem
- Confounding Variables
- Randomization
- Independent Variable & Levels
- Dependent Variables
- Field Experiments
- *Ex Post Facto* design
- Validity (Internal, External, & Conclusion)

Measurement Concepts

- Reliability
 - True Score + Measurement Error
 - Test-Retest
 - Internal Consistency
 - Interrater Reliability
- Construct Validity
 - Face Validity
 - Content Validity
 - Predictive (Criterion) Validity
 - Concurrent Validity
 - Convergence Validity
 - Discriminant Validity
- Reactivity
- Scales of Measurement
 - Nominal
 - Ordinal
 - Interval
 - Ratio

Experimental Design

- Confounding & Internal Validity
- Posttest-Only Design
- Selection Differences
- Pretest-Posttest Design
- Solomon Four-Group Design
- Independent Groups vs. Repeated Measures Designs
- Random Assignment
- Order & Carryover Effects
- Practice & Fatigue Effects
- Counterbalancing
- Latin Squares
- Matched Pairs Design

Conducting Experiments

- Participant Selection
- Manipulating IVs
- Consent Forms
- Deception
- Straightforward vs. Staged Manipulations
- Confederates
- Strength and Cost of Manipulations
- Measuring DVs
- Types of DVs (Self-Report, Behavioral, & Physiological)
- Galvanic Skin Response (GSR), functional Magnetic Resonance Imaging (fMRI), Electroencephalograph (EEG), etc.
- Sensitivity of DV
- Floor & Ceiling Effects
- Demand Characteristics
- Filler Items & Distractors
- Placebo Groups
- Experimenter Bias & Expectancy Effects
- Clever Hans
- Single- & Double-Blind Experiments
- Research Proposals
- Pilot Studies
- Manipulation Check
- Debriefing
- Communicating Results (Report, Presentation, Journal).