Mark Van Selst
Ψ120 Practice Exam for Midterm #2

This test will be graded out of 29 points.
This test is worth 16% of your final grade.
It is in your best interests to attempt an answer to every question.

Any form of cheating (reading from another's paper, "cheat sheets", reading answers off your hand, etc.) will result in an F for the course and may lead to expulsion from the University.

- Answer every question with your best guess as to the one answer that is "most correct"
- If you believe a question is ambiguous, write out your reasoning in the margin (attempt to answer the question regardless)

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1. What is:

(1 point)

a) Confound:

b) Independent Variable:

c) Statistical Conclusion Validity:

d) Staged manipulation (define and provide an example):

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2. Consider the following two survey questions:

"Do you prefer your burgers fried or flame-broiled?"

and

"Do you prefer a hamburger that is fully cooked on a hot stainless grill or cooked by passing the raw meat through an open propane flame?"

From a methodological point of view, what difficulty do you see with these two versions of this question? (use technical terms)

(1 point)

3. Define each of the following:

(1 point)

a) Manipulation check

b) Participant Variable

c) Reactivity

d) Sampling Frame

e) Double-blind administration

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4. Describe an example scenario for each of these terms (it may help to provide a definition for each term)

(1 point)

a) Purposive Sampling (ok to provide an example scenario instead of a definition)

b) Systematic Naturalistic Observation (provide an example scenario)

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5. When designing questions for a survey, there are several important things that should be kept in mind. I have provided two. Provide two of the remaining three (Reference: Cozby, p.125, and in class).

(1 point)

a) avoid unfamiliar technical terms (write at a grade 8 level)

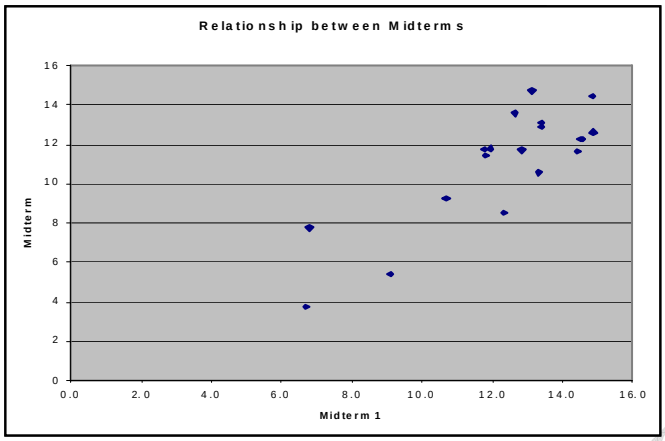
b) be precise (avoid ambiguous terms)

c) _____

d) _____

(there is also an (e), but you do not need to include it)

6. This figure shows the relationship between grades on the two midterm exams (excluding 3 students who did not write the second midterm).



(1 point)

a) This type of graph is called a _____.
b) The section of words that describe what this illustrates (and would appear underneath this graph in the final version of the journal article) would be called the: _____.

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7. Which one of the following does not belong?

(1 point)

a) nominal
b) ratio
c) guttman
d) ordinal

does not belong = ___; WHY? = _____

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8. What is archival data?

(1/2 point)

What is qualitative data?

(1/2 point)

9. fill in the blanks:

(1 point)

a) A scale that requires a mark along a continuous (e.g., 100mm) line is called a _____ scale

b) A scale that has the participants mark their level of agreement (typically on a five or seven point scale) is called a _____ scale.

c) The survey scale that is most likely to be used for testing young children is called a _____ scale

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10. In an investigation of the effectiveness of various memory strategies, 100 participants were randomly divided between two groups. One group received "imagery"-based memory instructions. The other group received "repetitive silent speech"-based memory instructions. After receiving the instructions, each participant was given a list of 36 words to remember. Each participant was then tested, allowed to study again, and then retested until they could recite the entire list without error. A week later the experimenter asked each participant to write down as many words as they could recall. The participants in the imagery group recalled an average of 25.2 words. The participants in the repetition group recalled an average of 21.1 words.

What "design" does this best exemplify? Why?

(1 point)

11. Consider an experiment in which each of sixteen participants rates the "attractiveness" of each of eight photographs. Each model appears in two photographs. In one version the model is wearing "unlabelled" clothing (e.g., a plain white collared shirt, plain tan khaki shorts, standard brown belt, and a pair of generic flip-flops). In the other photograph of each pair the participant is wearing "branded" clothing (e.g., Guess shirt; Calvin Klein Belt; Banana Republic Shorts; and Airwalk flip-flops). Each participant sees each of the eight models in a photo only once. Half of the pictures for each participant are the "unlabelled" clothing photos, the other half are the "branded" clothing photos.

(1 point)

(i) What is the likely experimental hypothesis being tested?

(ii) What is the independent variable?

(iii) What is one potential problem with this experimental design?

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12. The text (page 97) lists many indicators of CONSTRUCT validity. They include (fill in three additional types of validity that are indicators of construct validity [internal and external are NOT indicators of construct validity]):

(1 point)

a) FACE VALIDITY
b) CONTENT VALIDY
c) _____ VALIDITY
d) _____ VALIDITY
e) _____ VALIDITY

13. What type (or types) of observational methods are captured by this research design?

(1 point)

Investigators in a study examined the contents of personal "mate wanted" advertisements across four dating web-sites representing individuals from three geographically distinct cities. The advertisements were coded to determine if men and women differ in terms of how they describe themselves.

_____

14. Design a study that uses a **two wave panel study** to investigate smoking behavior. Be sure to include sufficient detail so that the purpose of the study is clear and that this form of longitudinal design is appropriate.

(1 point)

15. Counter-balancing and Latin-Squares differ because:

(1 point)

a. Latin squares do not use double-blind procedures
b. A Latin Square design will not necessarily present all possible conditions in all possible orders
c. Full counter-balancing will not necessarily present all possible conditions in all possible orders
d. In a Latin Square, all conditions are not necessarily presented equally often in every possible position

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16. An example of the problem of subject mortality (1 point)

(1 point)

a. Elderly subjects in your correlational, questionnaire study continually have to be taken to the hospital and thus delays when they finish filling in the questionnaire.

b. Some participants did not finish a cola-tasting experiment because the "lime-cherry surprise" cola tasted so awful they did not want to taste any other colas.

c. Forcing your subjects to ruminate about their futures can be too stressful and may violate ethical principles

d. "One-for-the-road" after a Christmas party

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17. The **threat to internal validity** that can appear if participants "know" how they "should" act based upon situational cues (and the participants choose to act in this way) is called:

(1 point)

a. A placebo effect

b. Experimenter bias

c. A demand characteristic

d. The Hawthorne effect

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18. Counter-balancing procedures are designed to protect against:

(1 point)

a) Interactions
b) Main effects
c) Order effects
d) Simple effects

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19. Random assignment (as opposed to random selection) is most closely associated with:

(1 point)

a. Sampling subjects from whole population
b. The design of the experiment
c. The allocation of participants to groups
d. Inferential statistics

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20. All of the following mean the same thing as "**Factor**" in a true **experimental design** EXCEPT:

(1 point)

a. Manipulated variable
b. Independent variable
c. Experimental manipulation
d. Outcome variable

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21. What is a "confidence interval" (be as precise as possible)? When would you use one? Why is it important?

(1 point)

22. When would I show response times using a bar-chart?

(1 point)

a. Overall mean response time (RT) for Men versus Women for their times in pressing a button in response to the onset of a light
b. In a frequency histogram
c. In a scatterplot
d. Anytime the variable on the abscissa is continuous.

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23. Consider a correlational design to investigate whether or not eating fast food influences the likelihood of having a heart attack.

(1 point)

a) what is the likely predictor variable?

b) what is the likely outcome measure?

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24. Define INTERNAL and EXTERNAL VALIDITY.

(1 point)

INTERNAL:

EXTERNAL:

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25. I want to examine whether people who drink "PEETS" are more introverted than those who drink "STARBUCKS". Thus, across many semesters, I develop a sample of 305 undergraduates who preferentially drink either PEETS or STARBUCKS.

(1 point)

(i) Identify the type of design:

(ii) Identify the variables

26. Why might a within-subject experiment be more powerful than a between-subject experiment?

(1 point)

Why might a between-subject experiment be better to use than a within-subject experiment?

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27. I want to investigate the effect of taking American Institutions courses on the political views of undergraduate students. I test the same people before and after they take the course(s) to satisfy their American institutions requirement. I compare the mean agreement ratings of the students on various statements with a conservative view versus the same participants mean agreement ratings on various statements with a more socialistic view. What is the design (use appropriate technical terms). Be as specific as possible and be sure to use technical terms. (it may help to draw a picture). It is important that I fully understand how you envision the data to be analyzed.

(1 point)

This type of design is best called a _____ design.

a) pretest-posttest
b) moderator variable
c) systematic observation
d) independent groups design
e) participant variable design

28. Consider the very Latin American drink of red wine mixed with cola. You will have participants rate the taste of the colas both with and without red wine. You will do this both for “Coca Cola” and “Inka Cola” (a gold-colored cola from Peru that was originally made with sugar cane). All participants will receive all conditions.

(1 point)

What is the design of the experiment?

What is the appropriate Latin Squares Counterbalancing for this design?

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29. What is meant by "POWER"?

(1 point)

BONUS POINT (TRY IT ANYWAY... IT CANNOT HURT YOU)

30. What is a "high frequency scale"? provide an example.

(1 point)