

Chapter 2: RESEARCH METHODS

Critical Thinking Questions

- 1) Describe how the use of research designs protects us from heuristics and cognitive biases.

Answer: Answers will vary but should contain the following information for full credit.

--Student should mention that research requires that we make our predictions beforehand so that the hindsight bias does not lead us to exaggerate our abilities to correctly understand a complex world.

--The research studies use techniques that focus on recording or gathering information so that our intuitions are not allowed to bias the results (such as avoiding availability and representativeness heuristics).

--Designs themselves have limitations so that further research is needed to establish the reliability and validity of our findings.

Question ID: Lil 3ce 2.5-1

Diff: 2

Type: ES

Page Ref: 45–46

Topic: How We Can Be Fooled: Two Modes of Thinking

Skill: Applied/Conceptual

- 2) Use your knowledge of the case study and naturalistic observation to show why they are better devices for identifying important topics for further study rather than being designs that allow for theory building and testing.

Answer: Answers will vary but should contain the following for full credit.

--Both are examples of descriptive research designs (identifying and organizing information about general patterns of behaviours) rather than examples of either predictive (i.e., correlational) or causal (i.e., experimental) designs.

--Both lack important elements of more complex designs that allow theory testing (lack of controls, inability in most cases to separate elements to allow greater understanding of what is necessary and what is not for a behaviour to occur, studying a few people that may not be representative of larger population).

--Direct interaction by researcher with people may strongly influence the data they provide to us (which is often minimized by other methods).

Question ID: Lil 3ce 2.5-2

Diff: 3

Type: ES

Page Ref: 47–49

Topic: Naturalistic Observation: Studying Humans “In the Wild” & Case Study

Designs: Getting to Know You

Skill: Applied/Conceptual

- 3) Discuss why researchers need to be familiar with both descriptive and inferential statistics.

Answer: Answers will vary but should contain the following ideas for full credit.

--Student needs to mention that each gives a different kind of information because each has differing goals (organization and summarization for descriptive and generalization for inferential).

--Techniques in each can be misused in different ways to make effects appear that really are not accurate or appropriate.

--Often both are used in conjunction by the researcher rather than being two types that are chosen between (e.g., using the means of the groups to help see the statistically significant group differences).

Question ID: Lil 3ce 2.5-3

Diff: 3

Type: ES

Page Ref: 70–72

Topic: Descriptive Statistics: What’s What? & Inferential Statistics: Testing

Hypotheses

Skill: Applied/Conceptual