

1. This type of design includes the manipulation of a variable.
 - *a. Experimental
 - b. Quasi-experimental
 - c. Non-experimental
 - d. Correlational

2. Ella explains that for her study she has defined aggression as the number of hot peppers participants allocate to a fictitious competitor. This is her _____ definition of aggression.
 - a. Conceptual
 - *b. Operational
 - c. Independent
 - d. Dependent

3. This type of definition states the meaning of an abstract concept.
 - *a. A conceptual definition
 - b. An operational definition
 - c. An independent definition
 - d. A dependent definition

4. Scientific understanding of a specific construct includes description and
 - a. Statistics
 - b. Illustration
 - *c. Explanation
 - d. Measurement

5. Inferences of causality require all of the following EXCEPT
 - a. Temporal precedence
 - b. Covariation of the cause and effect
 - c. The elimination of alternative explanations
 - *d. The presence of alternative explanations

6. Dr. Martin notices that every time his patient takes a specific drug, his patient breaks out into a rash. When the drug is absent, his patients never get rashes. Dr. Martin has shown
 - a. Temporal precedence
 - *b. Covariation of the cause and effect
 - c. The absence of alternative explanations
 - d. The presence of a confound

7. Program evaluation studies are best categorized as

- a. Basic, non-experimental research studies
- b. Basic, experimental research studies
- c. Applied, experimental research studies
- *d. Applied, non-experimental research studies

8. Applied research differs from basic research by focusing on problems of

- *a. Practical relevancy
- b. Abstraction
- c. Fundamental scientific significance
- d. Theoretical importance

9. The research process objective begins with

- a. The formation of a question
- b. Measurement
- *c. Description and definition
- d. Determining causality

10. Unlike an empirical article, a review article

- a. Is peer-reviewed
- b. Includes a literature review
- c. Focuses on popular science
- *d. Examines several studies

11. Research ideas can come from many places and science often comes from

- *a. Simple observation
- b. Survey data collection
- c. Program evaluation
- d. Chance

12. This type of article begins with an Abstract, followed by an Introduction, Method section, Results section, and a Discussion section.

- a. Peer-reviewed articles
- *b. Empirical articles
- c. Review articles
- d. Book chapters

13. Candice assists her professor with research for a book chapter that summarizes numerous studies on anxiety. This book chapter is an example of a

- a. Peer-reviewed source
- b. Empirical source
- c. Primary source
- *d. Secondary source

14. Maria used scholar.google.com to locate a journal article for her literature review. The article was not available for free, but Maria was able to access it through her university which has a subscription to the journal's website. The journal's website is best described as

- a. Private
- b. Open
- *c. Proprietary
- d. Collaborative

15. Kelly uses appropriate skepticism when reading journal articles. As she reads a study's methodology, she _____ the researchers' choices.

- a. Accepts
- *b. Questions
- c. Validates
- d. Comprehends

16. The first general criterion for evaluating a study is

- a. Consider the study method
- b. Consider the findings
- *c. Consider the source
- d. Consider the limitations

17. Ned is conducting an experimental study. To test predictions based on cognitive dissonance theory, he is now collecting data. He is using *this* type of research approach.

- *a. Deductive
- b. Inductive
- c. Quantitative
- d. Qualitative

18. A theory performs three major functions. Which of the following is NOT one of the main functions?

- a. Organization
- b. Evaluation
- *c. Explanation
- d. Prediction

19. Researchers translate generalizations into testable predictions about the relation between two or more variables. These testable predictions are called

- *a. Hypotheses
- b. Theories
- c. Laws
- d. Observations

20. Inductive reasoning begins with _____ and leads to _____.

- a. Prediction; explanation
- b. Explanation; prediction
- c. Theory development; data collection
- *d. Data collection; theory development

21. Charlotte predicts that the higher an individual's blood pressure the fewer vegetables that individual will tend to eat. This predicted association is what type of research?

- a. Theoretical
- b. Basic
- *c. Experimental
- d. Correlation

22. Random assignment is used to determine which value of the _____ variable each research participant receives in true experiments.

- *a. independent
- b. dependent
- c. control
- d. confound

23. Jan is using a driving simulation to study driving errors when distracted. The extent to which Jan's simulation approximates the real-life act of driving is referred to as her experiment's

- a. Reliability
- b. Internal validity
- *c. Ecological validity
- d. Ecological reliability

24. Inductive reasoning involves reasoning from particular _____ to a general _____.

- a. measure; prediction
- *b. data; theory

- c. observation; measure
- d. data set; population

25. Descriptive statistics summarize and present data in a meaningful way; which of the following is not an example of a descriptive statistic of a data set?

- a. Average
- *b. Probability
- c. Mode
- d. Demographics

26. Non-experimental correlations studies do not tell us about causation.

- *a. True
- b. False

27. Theories are directly testable.

- a. True
- *b. False

28. A review article examines several articles of a particular phenomenon.

- *a. True
- b. False

29. Meta-analysis is a statistical tool that provides an objective metric to weigh the strength of results from individual studies.

- *a. True
- b. False

30. A study's external validity tells us the extent to which its results can be generalized to the broader population.

- *a. True
- b. False

31. Lisa can now infer that A causes B because she has shown that A (the expected cause) occurs before B (the event).

- a. True
- *b. False

32. Descriptive statistics are used to summarize data, while inferential statistics help us determine if our results were likely due to chance.

- *a. True
- b. False

33. "Noble gases are stable, Neon is a noble gas; therefore Neon is stable" is an example of deductive research.

- *a. True
- b. False

34. Inductive and deductive research have separate goals when it comes to understanding psychological phenomena.

- a. True
- *b. False

35. A control variable is a potential source of influence on the dependent variable that researchers attempt to hold constant.

- *a. True
- b. False

36. Maria wishes to show that exercise increases the positivity of individuals' moods. What evidence must she show in order to infer causality and why?

Correct Answer:

Maria must show temporal precedence, covariation of the cause and effect, and the elimination of alternative explanations (p. 34). Temporal precedence means that the cause precedes the effect. If Maria is expecting exercise to have an effect on mood, exercising must precede mood change. This rules out the possibility that mood is having an effect on exercise. She then needs to show that exercise and mood vary together: when the cause is present, the effect occurs and when it is absent the effect does not occur. This covariation of the cause and effect is necessary to show the connection between exercise and mood. Finally, Maria will wish to rule out alternative explanations for her result. If a third variable is varying with her independent variable, it can be a confound if it influences the dependent variable. She should do her best to control for extraneous variables that may explain her results.

37. What are the sections of an empirical article and what is the goal of each section?

Correct Answer:

An empirical article begins with the abstract, a brief summary of the goals, methods, findings, and conclusions of a research study (p. 42). The introduction starts the body of the article by providing a research-based background for the problem under investigation. The introduction provides a clear rationale for investigating the problem, describes relevant theoretical frameworks, and introduces the researchers' hypotheses (p. 42). The method section clearly describes the way in which the study was conducted. This includes details about the participants, operational definitions of all variables, and the exact procedures (p. 42). Next, the results section contains all relevant descriptive and inferential statistics. Finally, the discussion section evaluates the results by placing them into the broader context of the literature, explaining any unintended findings, and delineating limitations in the study's internal or external validity (p. 43).

38. Compare and contrast primary source articles and secondary source articles. Which is preferred in literature searches and why?

Correct Answer:

A primary source article is a first-hand account of a research study that is published in a peer-reviewed journal, while a secondary source article is someone else's (e.g., the media's) summary or interpretation of a research study (p. 33). The results and findings that we read in primary source articles are more trustworthy than those found in secondary source articles because peer-reviewed articles are held to certain standards of internal and external validity. Primary source articles are therefore preferred in literature searches.

39. When defining the levels of an independent variable, why do researchers often include a control group?

Correct Answer:

A control group is a group of participants that do not receive any manipulation or intervention (p. 24). Researchers compare values obtained on the dependent measure across levels of the independent variable. In order to understand how the independent variable is affecting the dependent variable, researchers need a baseline comparison level. The control group provides a baseline for comparison.

40. Which suits qualitative research and experimental research best, an inductive or deductive approach? Why?

Correct Answer:

Inductive research moves from observation and data to theory production and is therefore the type of research strategy generally used by qualitative researchers. Naturalistic observation, for example, is used by qualitative researchers as an inductive research strategy aimed at understanding context, meaning, and experience (p. 28). While inductive and deductive research strategies have the same goal of describing and explaining psychological phenomena, deductive research takes the opposite approach and moves from theory to data. This is the approach taken in experimental research, because experimental research has a

primary goal of indirectly testing theories by translating generalizations into directly testable hypotheses (p. 28).

41. Define independent variable, dependent variable, control variable, and confound. In experimental research, how do these variables contribute to inferences of causality?

Correct Answer:

In experimental research, an independent variable is a variable with two or more levels that an experimenter controls and manipulates. In experimental research, the goal is to determine if changes in an independent vary cause changes in a dependent variable, which is the variable that is measured or observed. The independent variable must be experienced before the dependent variable in order to meet the criterion of temporal precedence, which is necessary for inferences of causality. A control variable is an extraneous variable that researchers have identified as a potential source of influence on the dependent variable and they therefore control its effects, typically by holding it constant (p. 24). Controlling variables supports a researcher's ability to infer causality by reducing one or more other alternative explanations for the results. When an extraneous variable is not controlled, varies with the independent variable, and affects the dependent variable, it is said to be a confound. Confounds provide alternative explanations for a study's results and therefore reduce a study's validity. Confounds, therefore, reduce researchers' ability to infer that their independent variable caused changes in the dependent variable.

42. What is the goal of research and what is the research circle? Describe the research circle and discuss how the circle components work to achieve the goal of research.

Correct Answer:

Research aims to describe and explain psychological phenomena. The research circle shows how the process of conducting research is dynamic, moving from theory to data back to theory (p. 32). A theory is a set of propositions that explain a variety of occurrences (p. 30). Theories are not testable (p. 30). From a broader theory, one or more specific generalizations can be translated into hypotheses, which allow for a direct test of the relation between two or more variables. Researchers collect data, or empirical observations, to test their hypotheses with a goal of broadening their understanding of a theory. This approach, starting with a theory and testing its predictions using data, is called deductive research (p. 30). Alternatively, researchers can begin with observation and collection of data and then produce theory. This approach is called inductive research (p. 28). While deductive research moves from theory to data, inductive research aims to describe a phenomenon and form empirical generalizations, which describe patterns found in the data. From empirical generalizations, researchers build theories. Both inductive and deductive research have the same goals: to build effective theories that organize and explain data or generate predictions for data not yet obtained (p. 28). They are both necessary to achieve the goals of research.

43. Suppose your literature search produces a fascinating article about self-esteem published in an APA journal. Clearly specify THREE criteria you would use to evaluate the research.

Correct Answer:

There are several criteria against which all research information should be evaluated. The first criterion for evaluating a study is that the study comes from a quality source; an APA journal requires peer-review, meaning it has been reviewed by researchers and has met the standards of the journal (p. 36). Review who are authority (e.g., Who wrote it?), publishing body (e.g., Who is the sponsor of the site?), point of view or bias (e.g. Does the website advocate a point of view or sell media products, such as books, pamphlets, videos, etc.), connection to the scientific literature (e.g., Does it cite references to peer-reviewed articles?), verifiability and transparency (e.g., Is the methodology open to public scrutiny and able to be reproduced?), and timelines (e.g., What is the date, and does the information get updated?).