Chapter 2: Research Methods

The Scientific Method: A Toolbox of Skills

1. Political polls taken before major elections are examples of _____ research.
   a. correlational
   b. experimental
   c. case study
   d. survey
   Answer d % correct 92 a = 4 b = 1 c = 3 d = 92 *r* = .21

2. Observing behavior as it happens in real-life natural settings without imposing laboratory controls is known as the _____.
   a. naturalistic observation method
   b. experimental method
   c. correlational method
   d. psychometric approach
   Answer a % correct 97 a = 97 b = 2 c = 1 d = 1 *r* = .20

3. A detailed, well-researched biography of a famous historical person is technically an example of the _____ method of research.
   a. psychometric
   b. naturalistic observation
   c. case study
   d. correlational
   Answer c % correct 83 a = 5 b = 9 c = 83 d = 2 *r* = .18

4. When you watch dogs play in the park or watch how your professors conduct their classes, you are engaging in a form of _____.
   a. case study research
   b. survey research
   c. naturalistic observation
   d. psychometric study
   Answer c % correct 99 a = 1 b = 0 c = 99 d = 0 *r* = .0

5. The degree of relationship between two or more variables is _____.
   a. correlation
   b. validity
   c. reliability
   d. a hypothesis
   Answer a % correct 97 a = 97 b =0 c = 1 d = 2 *r* = .09

6. The degree of relationship between two or more variables is:
   a. correlation.
   b. validity.
   c. reliability.
   d. a hypothesis.
   Answer a % correct 96 a = 96 b = 1 c = 2 d = 1 *r* = .29

7. A researcher wished to study the relationship between high school grades and college grades. Of the following research methods, which would be the most appropriate?
   a. case study
   b. correlation
   c. experiment
   d. survey
   Answer b % correct 37 a = 22 b = 37 c = 10 d = 31 *r* = .31

8. A correlation of .00 means:
   a. you made a mistake in calculation.
   b. you did not find out anything about the relationship between the two variables.
   c. the two variables are unrelated.
   d. everyone who scored low on one variable scored high on the other variable, and vice versa.
   Answer c % correct 56 a = 2 b = 26 c = 56 d = 17 *r* = .25

9. The greatest disadvantage of correlation is:
   a. it has a limited range of values, being only –1 to +1.
   b. it does not enable cause-and-effect conclusions.
   c. its value can be negative.
   d. its value can be zero.
   Answer b % correct 85 a = 11 b = 85 c = 4 d = 1 *r* = .44

10. A correlation tells us:
    a. whether a cause-effect relationship exists.
    b. whether two variables are related
    c. whether or not a test is efficient.
    d. if people are responding to demand characteristics.
    Answer b % correct 87 a = 9 b = 87 c = 4 d = 0 *r* = .35

11. A psychologist uses the correlational method to _____.
    a. explain the effects of one variable on another
    b. compare two groups of subjects
    c. determine what causes a variable to change
    d. identify relationships between variables
    Answer d % correct 73 a = 11 b = 14 c = 2 d = 73 *r* = .42

12. The survey method of research is _____ in nature.
    a. correlational
    b. experimental
    c. field experimental
    d. both correlational and field experimental group
    Answer a % correct 31 a = 31 b = 9 c = 16 d = 43 *r* = .22

13. As children grow older, their discretionary income usually increases. The best conclusion to draw about the variables age and income are that they are:
    a. causally related
    b. uncorrelated
    c. negatively correlated
    d. positively correlated
    Answer d % correct 92 a = 1 b = 3 c = 4 d = 92 *r* = .31

14. A large group of people whom you want to know about is called a _____.
    a. control group
    b. treatment group
    c. population
    d. sample
    Answer c % correct 79 a = 3 b = 3 c = 79 d = 16 *r* = .30

15. In an experiment to test the effects of anxiety on performance, the dependent variable is the _____.
    a. amount of anxiety
    b. age of the person
    c. person's performance
    d. cause of the anxiety
    Answer c % correct 76 a = 18 b = 1 c = 76 d = 5 *r* = .30

16. A scientist, conducting a research study on sleep and learning, questions her own objectivity and decides to let a third person, not associated with conducting the experiment, score the tests. The scientist is probably trying to eliminate _____.
    a. experimenter bias
    b. sample bias
    c. control bias
    d. treatment bias
    Answer a % correct 95 a = 95 b = 2 c = 3 d = 1 *r* = .25

17. Psychologists use research techniques based on _____.
    a. inductive reasoning
    b. objective introspection
    c. deductive reasoning
    d. the scientific method
    Answer d % correct 86 a = 6 b = 3 c = 5 d = 86 *r* = .36

18. Research in which a carefully selected group of people is asked a set of predetermined questions in interviews or through questionnaires is known as _____.
    a. correlational research
    b. case study research
    c. survey research
    d. experimental research
    Answer c % correct 83 a = 4 b = 13 c = 83 d = 0 *r* = .20

19. In an experiment, a researcher manipulates one variable to see how it affects a second variable. The second variable, which is observed for any possible effects, is called the _____.
    a. dependent variable
    b. control variable
    c. independent variable
    d. hypothetical variable
    Answer a % correct 78 a = 78 b = 8 c = 9 d = 4 *r* = .47

20. A psychologist, studying pilot trainees, picks a select group of trainees who are hopefully representative of all other trainees. The group of trainees being studied by this psychologist are collectively known to researchers as a _____.
    a. sample
    b. population
    c. target group
    d. control group
    Answer a % correct 81 a = 81 b = 8 c = 7 d = 4 *r* = .46

21. Expectations by the experimenter that might influence the results of an experiment or their interpretation are called _____.
    a. experimental blinds
    b. experimenter bias
    c. sample bias
    d. treatment bias
    Answer b % correct 97 a = 1 b = 97 c = 1 d = 1 *r* = .29

22. In a controlled experiment, the group subjected to a change in the independent variable is called the _____ group.
    a. independent
    b. experimental
    c. dependent
    d. control
    Answer b % correct 77 a = 2 b = 77 c = 9 d = 12 *r* = .34

23. A scientist, conducting a research study on sleep and learning, questions her own objectivity and decides to let a third person, not associated with conducting the experiment, score the tests. The scientist is probably trying to eliminate _____.
    a. experimenter bias
    b. sample bias
    c. control bias
    d. treatment bias
    Answer a % correct 96 a = 96 b = 0 c = 4 d = 0 *r* = .21

24. A subset of cases selected from a larger population is a _____.
    a. control group
    b. target group
    c. treatment group
    d. sample
    Answer d % correct 89 a = 1 b = 9 c = 1 d = 89 *r* = .28

25. If explanation of the causes of thoughts, feelings, and behavior is a psychologist's goal, then the _____ method of research should be used.
    a. correlational
    b. experimental
    c. survey
    d. naturalistic observation
    Answer b % correct 45 a = 15 b = 45 c = 14 d = 26 *r* = .52

26. In a controlled experiment, the group not subjected to a change in the independent variable, and used for comparison with the group receiving the experimental change, is the _____ group.
    a. independent
    b. experimental
    c. dependent
    d. control
    Answer d % correct 90 a = 3 b = 4 c = 4 d = 90 *r* = .42

27. A research method in which the real-life behavior of a pre-selected person or a group is studied at an in-depth level for some time through the use of observation, interviews, and writings (such as letters) is the _____ method of research.
    a. survey
    b. psychometric
    c. case study
    d. naturalistic observation
    Answer c % correct 95 a = 3 b = 1 c = 95 d = 2 *r* = .20

28. In an experiment, a researcher manipulates one variable to see how it affects a second variable. The manipulated variable is called the:
    a. dependent variable.
    b. experimental variable.
    c. independent variable.
    d. placebo.
    Answer c % correct 80 a = 14 b = 5 c = 80 d = 1 *r* = .45

29. A group of students was asked to write an essay in support of the legalization of marijuana. They were paid $.50. Another group of students received $2.00 for the same task. It was subsequently found that those students who received only $.50 developed a more positive attitude towards the legalization of marijuana. The experiment in this study was using (the)_____.
    a. correlational method
    b. experimental method
    c. naturalistic observation
    d. survey research
    Answer b % correct 44 a = 47 b = 44 c = 1 d = 8 *r* = .31

30. A sample that does not truly represent the population in question is known as a _____ sample.
    a. random
    b. chance
    c. biased
    d. representative
    Answer c % correct 85 a = 13 b = 1 c = 85 d = 2 *r* = .36

31. A weakness of _____ is that subjects participating in the research often report, consciously and unconsciously, inaccurate information.
    a. naturalistic observation
    b. surveys
    c. field experiments
    d. laboratory experiments
    Answer b % correct 80 a = 2 b = 80 c = 10 d = 8 *r* = .24

32. To obtain objective information, researchers sometimes must deceive their subjects. Ethically, research involving deception must always _____.
    a. pay participants
    b. maintain subject anonymity
    c. use double-blind control
    d. explain the deception to the subjects after the data are collected and obtain their informed consent to use the information obtained
    Answer d % correct 95 a = 0 b = 3 c = 3 d = 95 *r* = .34

33. As part of an assignment, Bill's class was asked to complete an anonymous questionnaire on prejudice. Which research method was Bill's professor using?
    a. field experiment
    b. survey
    c. naturalistic observation
    d. laboratory experiment
    Answer b % correct 98 a = 1 b = 98 c = 1 d = 1 *r* = .24

34. To determine if sugar-rich diets affect hyperactivity in kids, a researcher prepared two daily menus that children would receive for a 30-day period. A high-sugar diet was given to the boys, while the girls had a menu that seemed identical but was not a high sugar diet. At the end of 30 days, the boys and girls were evaluated to determine their levels of hyperactivity. In the study, the high-sugar diet is the _____.
    a. placebo
    b. independent variable
    c. dependent variable
    d. control group
    Answer b % correct 65 a = 8 b = 65 c = 13 d = 14 *r* = .51

35. Using both independent and dependent variables is associated with which of the following types of research used in psychology?
    a. experimentation
    b. naturalistic observation
    c. correlation
    d. correlation and experimentation
    Answer a % correct 55 a = 55 b = 1 c = 5 d = 39 *r* = .23

36. Manipulating an independent variable in a real-life setting is _____.
    a. an experiment
    b. an example of naturalistic observation
    c. a field experiment
    d. unethical
    Answer c % correct 65 a = 17 b = 11 c = 65 d = 6 *r* = .45

37. Almost all research done in psychology is analyzed _____.
    a. visually
    b. using correlational techniques
    c. statistically
    d. at the .1 level
    Answer c % correct 51 a = 13 b = 31 c = 51 d= 4 *r* = .34

38. As part of an assignment, Bill's class was asked to complete an anonymous questionnaire on sexual discrimination. Which research method was Bill's professor using?
    a. field experiment
    b. survey
    c. naturalistic observation
    d. laboratory experiment
    Answer b % correct 97 a = 2 b = 97 c = 1 d = 0 *r* = .27

39. Collecting objective data without interference in the subject's normal environment is associated with _____.
    a. survey research
    b. applied research
    c. laboratory research
    d. naturalistic observation
    Answer d % correct 95 a = 1 b = 1 c = 2 d = 95 *r* = .23

40. Experimenter bias can best be controlled using _____.
    a. a placebo
    b. double-blind control
    c. randomization
    d. subjects who do not know the purpose of the study
    Answer b % correct 79 a = 2 b = 79 c = 16 d = 4 *r* = .46

41. A researcher, based on her review of relevant scientific studies, believes that there is a relationship between the frequency of a baby's crying and whether it was nursed at set intervals or on a demand schedule. If this belief were tested by experimentally manipulating feeding schedules, the feeding schedule would be called the:
    a. independent variable.
    b. dependent variable.
    c. extraneous variable.
    d. control factors.
    Answer a % correct 76 a = 76 b = 17 c = 1 d = 6 *r* = .44

42. One of the main reasons for using a laboratory for psychological research is to:
    a. prevent subjects from escaping.
    b. study behavior in a natural setting.
    c. do large-scale studies.
    d. allow the researchers to control certain factors.
    Answer d % correct 98 a = 0 b = 0 c = 2 d = 98 *r* = .33

43. The process of establishing causal relationships is associated most with:
    a. naturalistic observation.
    b. experiments.
    c. correlation.
    d. surveys.
    Answer b % correct 33 a = 45 b = 33 c = 14 d = 9 *r* = .43

44. A researcher tests the hypothesis that students who study in the room where they take their tests will perform better on the tests than students who study in other rooms. She requires one group to study in the classroom where the exam is given and another group to study in the library. All students take the test in the classroom, and their test performance is compared. In this example, where students study is the:
    a. independent variable.
    b. dependent variable.
    c. manipulation.
    d. hypothesis.
    Answer a % correct 64 a = 64 b = 22 c = 10 d = 3 *r* = .27

45. In psychological studies, randomization is used to ensure that:
    a. there will be an independent and dependent variable.
    b. each person has an equal chance of being assigned to each group.
    c. the control group does not know the purpose of the study.
    d. the experimenter won't know who is in each group.
    Answer b % correct 84 a = 5 b = 84 c = 3 d = 7 *r* = .33

46. A "fake treatment" is one way to define a _____.
    a. decoy
    b. demand characteristic
    c. control group
    d. placebo
    Answer d % correct 81 a = 7 b = 6 c = 6 d = 81 *r* = .39

47. In an experiment, a researcher manipulates one variable to see how it affects a second variable. The manipulated variable is called the _____.
    a. dependent variable
    b. control variable
    c. independent variable
    d. hypothetical variable
    Answer c % correct 83 a = 12 b = 4 c = 83 d = 1 *r* =.46

48. The method of psychological research which utilizes a control group, a dependent variable, and an independent variable is
    a. the experiment.
    b. the survey.
    c. the case study.
    d. naturalistic observation.
    Answer a % correct 93 a = 93 b = 0 c = 4 d = 3 *r* = .21

49. Professor McSpell designed an experiment to test her hypothesis that exercise will increase spelling ability. She divided children into three groups and had one group do 10 minutes of exercises, one group do 30 minutes of exercises, and the third group do no exercise. She then tested all three groups of children to see how many words they could spell correctly on a spelling test. In this experiment, the scores on the spelling test serve as the
    a. dependent variable.
    b. independent variable.
    c. control group.
    d. reliability measure.
    Answer a % correct 85 a = 85 b = 8 c = 0 d = 7 *r* = .46

50. Which of the following is a strength of experiments?
    a. They cannot be repeated by anyone other than the experimenter.
    b. They allow for the establishment of cause-effect relationships.
    c. They are not subject to demand characteristics since the subjects do not know they are being observed.
    d. They allow us to draw definitive conclusions about behavior in the natural environment based on subjects' behavior in the laboratory.
    Answer b % correct 71 a = 0 b = 71 c = 5 d = 23 *r* = .25

51. In an experiment, the "measurable aspect of the behavior of the subject" is called the _____ variable.
    a. dependent
    b. focal
    c. independent
    d. control
    Answer a % correct 76 a = 76 b = 1 c = 20 d = 3 *r* = .47

52. The purpose of an experiment is to discover whether there is a relationship between the _____ and the _____.
    a. independent variable; control variable
    b. dependent variable; control variable
    c. control group; experimental group
    d. independent variable; dependent variable
    Answer d % correct 69 a = 4 b = 3 c = 24 d = 69 *r* = .30

53. Cause-and-effect conclusions can be drawn from the results of an experiment because:
    a. it is almost always performed in a laboratory setting.
    b. statistical analysis can be applied to data from an experiment.
    c. the independent variable is manipulated while other possible causes of change in the dependent variable are held constant.
    d. several groups of subjects, not just one sample, are typically investigated in a laboratory experiment.
    Answer c % correct 68 a = 4 b = 15 c = 68 d = 13 *r* = .28

54. In an experiment on the effects of level of motivation on the performance of typists, the researcher randomly assigned one third of her subjects to each of three levels of motivation (and then induced different levels of motivation in the three groups). She measured the average words typed per minute by each group, and found that performance was highest under medium motivation, average under low motivation, and worst under high motivation. What was the independent variable in this experiment?
    a. motivation
    b. typing speed
    c. variation in typing speed
    d. manipulation of typing speed
    Answer a % correct 85 a = 85 b = 10 c = 3 d = 2 *r* = .40

55. A psychologist wanted to see if people are more prone to seek the company of others when anxious than when calm. He randomly assigned half of his subjects to an anxiety group and then told them that, as part of the study, they would receive electric shocks. He did not frighten the other group of subjects. Finally, he recorded how many subjects in each group chose to be "tested" in a group setting and how many chose to be "tested" alone. What was the independent variable in this study?
    a. tendency to desire the company of others
    b. level of shock
    c. level of anxiety
    d. the anxious group
    Answer c % correct 54 a = 15 b = 22 c = 54 d = 9 *r* = .30

56. In an experiment, four groups of college students used different memorizing strategies to learn the material in one chapter of a textbook. Then each group was given the same multiple-choice test on the material. What was the dependent variable in this study?
    a. the students' performance on the test
    b. the four different groups
    c. the four different memorizing strategies
    d. manipulation of memorizing strategies
    Answer a % correct 79 a = 79 b = 7 c = 9 d = 5 *r* = .58

57. A psychologist wanted to see if people are more prone to seek the company of others when anxious than when calm. He randomly assigned half of his subjects to an anxiety group and then told them that, as part of the study, they would receive electric shocks. He did not frighten the other group of subjects. Finally, he recorded how many subjects in each group chose to be "tested" in a group setting and how many chose to be "tested" alone. What was the dependent variable in this study?
    a. the two groups
    b. the level of anxiety
    c. preference for being alone or in a group
    d. manipulation of anxiety
    Answer c % correct 77 a = 4 b = 10 c = 77 d = 10 *r* = .64

58. A psychologist wanted to see if people are more prone to seek the company of others when anxious than when calm. He randomly assigned half of his subjects to an anxiety group and then told them that, as part of the study, they would receive electric shocks. He did not frighten the other group of subjects. Finally, he recorded how many subjects in each group chose to be "tested" in a group setting and how many chose to be "tested" alone. In this study, the group that was NOT frightened would be called the _____ group.
    a. experimental
    b. control
    c. placebo
    d. test
    Answer b % correct 90 a = 8 b = 90 c = 2 d = 0 *r* = .27

59. The purpose of a control group in an experiment is to:
    a. serve as a check on the interpretation of results.
    b. increase the ability to generalize the findings.
    c. manipulate the dependent variable.
    d. represent the general, non laboratory population.
    Answer a % correct 59 a = 59 b = 5 c = 6 d = 30 *r* = .28

60. In an experiment, the group of subjects to which the experimental group is compared is called the:
    a. comparison group.
    b. standard group.
    c. confederate group.
    d. control group.
    Answer d % correct 97 a = 2 b = 1 c = 0 d = 97 *r* = .21

61. In an experiment concerning the effect of auditory feedback on accuracy in writing computer programs, one group hears a computer-simulated voice say each character or symbol that they type in as they are writing their programs. The second group does not receive the auditory feedback as they type their program lines. This second group is the _____ group.
    a. experimental
    b. control
    c. placebo
    d. confederate
    Answer b % correct 79 a = 16 b = 79 c = 3 d = 3 *r* = .25

62. Why is it essential that the experimental and control groups be treated identically in every respect but one?
    a. so that the dependent variable can be accurately measured
    b. so that the results will apply outside the laboratory setting.
    c. so that if the behavior of the two groups differs, the difference can be credited to the one thing that distinguished the groups from one another.
    d. so that if the behavior of the two groups differs, that difference can be used to establish a functional relationship between the independent and dependent variables.
    Answer d % correct 40 a = 9 b = 1 c = 50 d = 40 *r* = .26

63. In an experiment, a researcher manipulates one variable to see how it affects a second variable. The manipulated variable is called the _____.
    a. dependent variable
    b. control variable
    c. independent variable
    d. hypothetical variable
    Answer c % correct 77 a = 17 b = 6 c = 77 d = 0 *r* = .40

64. In an experiment, a researcher manipulates one variable to see how it affects a second variable. The second variable, which is observed for any possible effects, is called the _____.
    a. dependent variable
    b. control variable
    c. independent variable
    d. hypothetical variable
    Answer a % correct 83 a = 83 b = 2 c = 14 d = 1 *r* = .45

65. As part of an assignment, Ricks' class was asked to complete an anonymous questionnaire on female sexual harassment. Which research method was Bill's professor using?
    a. field experiment
    b. survey
    c. naturalistic observation
    d. laboratory experiment
    Answer b % correct 97 a = 1 b = 97 c = 1 d = 0 *r* = .26

66. Collecting objective data without interference in the subject's normal environment is associated with:
    a. survey research.
    b. applied research.
    c. laboratory research.
    d. naturalistic observation.
    Answer d % correct 94 a = 1 b = 2 c = 3 d = 94 *r* = .25

67. To determine if sugar-rich diets affect hyperactivity in kids, a researcher prepared two daily menus that children would receive for a 30-day period. A high-sugar diet was given to the boys, while the girls had a menu that seemed identical but was not a high sugar diet. At the end of 30 days, the boys and girls were evaluated to determine their levels of hyperactivity. In the study, the high-sugar diet is the _____.
    a. placebo
    b. independent variable
    c. dependent variable
    d. control group
    Answer b % correct 82 a = 3 b = 82 c = 9 d = 5 *r* = .49

68. An experiment was run in which group A was given 3 minutes to study a word list, while group B was given 10 minutes to study the same list. Later, both groups were asked to recall words from the list. In this study, the number of words recalled is the _____.
    a. independent variable
    b. dependent variable
    c. placebo
    d. control group
    Answer b % correct 82 a = 10 b = 82 c = 5 d = 3 *r* = 40.

69. Dr. Welsh is doing experiments using drugs. He is concerned that his subjects will respond to demand characteristics. He may want to control for this by using which of the following?
    a. stratification
    b. two independent variables
    c. a placebo
    d. randomization
    Answer c % correct 70 a = 4 b = 5 c = 70 d = 21 *r* = .33

70. Mr. Marshall hired June to collect data from a group of subjects. Neither June nor the subjects were aware of the independent variable that Mr. Marshall had manipulated. This is an example of _____.
    a. randomization
    b. a placebo
    c. double-blind control
    d. experimenter bias
    Answer c % correct 97 a = 2 b = 1 c = 97 d = 1 *r* = .20

71. Which of the following is NOT a strength of the experiment as a research method?
    a. Cause-and-effect relationships can be established.
    b. Experimental conditions usually seem realistic to subjects.
    c. Experiments can usually be replicated if the findings are valid.
    d. Variables can be analyzed carefully because of the degree of control over them.
    Answer b % correct 72 a = 11 b = 72 c = 2 d = 15 *r* = .23

72. Keeping responses anonymous helps researchers avoid the ethical problem of _____.
    a. deception
    b. experimenter bias
    c. invasion of privacy
    d. animal rights violations
    Answer c % correct 70 a = 7 b = 21 c = 70 d = 2 *r* = .41