Woolfolk et al., Educational Psychology, 6th Canadian Edition
Chapter 1: Learning, Teaching, and Educational Psychology

Multiple Choice Questions

1. Considering the recent statistics on Canadian student diversity presented in the Woofolk et al. text, which of the following statements is TRUE?

   A) Participation of children in religions other than Christianity has decreased since 2006.
   B) Children who are regular users of food banks are on the decline.
   C) Children may live with family members other than just a mom and dad.
   D) Children with disabilities spend the majority of their day in a Special Education class.

   Answer: C

   Explanation: C) Students come from increasingly *diverse families*. Their families may include a mom and dad, but they may only live with one parent. Some may live with two moms or two dads, with families also including members of the extended family such as grandparents, or aunts and uncles. The number of children accessing food banks as regular users has *increased* by 86 percent since 1989. Children also come from a wide range of religious communities, with participation in religions other than Christianity *doubling* since 2006. Inclusive policies have resulted in children with disabilities spending the majority of their school day in *general education* classrooms.

   Page Ref: 3
   Skill: Knowledge

2. Which relationship BEST describes the impact of teacher preparation and quality of teaching?

   A) There is no relationship between teacher preparation and quality of teaching.
   B) Teacher preparation and certification were the strongest predictors of student engagement.
   C) A teacher teaching outside of their major in their teaching field has no significant relationship with student achievement in math and in reading.
   D) The higher the percentage of teachers teaching outside their field, the lower students' achievement tends to be.

   Answer: D

   Explanation: D) Research conducted by Linda Darling-Hammond (2000) examined the ways in which teacher qualifications are related to student achievement using data from several U.S.-based courses. Measures of teacher

preparation and certification were by far the strongest predictors of student achievement in reading and mathematics, both before and after controlling for student poverty and English language proficiency. Therefore the higher the percentage of teachers who are teaching outside their field, the lower their students' achievement tends to be.

Page Ref: 4-5
Skill: Understanding

3. According to the Woolfolk et al. text, which would be the biggest limitation facing student teachers?

A) Student teaching does not allow prospective teachers to be as reflective about their teaching as they could be.
B) Student teaching often occurs during periods when prospective teachers are busy with their own coursework.
C) Student teaching does not prepare prospective teachers very well for starting off a school year with a new class.
D) Student teaching is often carried out in classrooms that utilize classroom management strategies that a prospective teacher may not believe in.

Answer: C

Explanation: C) Consistent with the "reality shock" experienced by new teachers as they take their first job and face all the responsibilities of their responsibilities with their new class, student teachers too are not really prepared for the beginning of a school year with a new class.

Page Ref: 9
Skill: Knowledge

4. According to the Woolfolk text, which of the following is true of expert teachers?

A) They are more likely than novices to ignore students' wrong answers.
B) They take more time to solve problems.
C) They judge their success based on their students' achievements.
D) They have a limited and focused knowledge base.

Answer: C

Explanation: C) It is **NOT** true that experts deal with new events as new problems. In fact, the opposite is true in the sense that experts employ their prior knowledge to come up with efficient solutions to new problems. They also make good use of students' wrong answers, are reflective about decisions, and have different ways of understanding the subject matter.

Page Ref: 11
Skill: Knowledge

5. The concerns of educational psychology are distinctive in that they

A) are limited to the classroom.
B) do not overlap those of other fields of study.
C) have no place in the laboratory.
D) relate to improving learning and instruction.

Answer: D

Explanation: D) The concerns of educational psychology relate to *improving learning and instruction.* To achieve this objective, educational psychologists draw from other disciplines (e.g., psychology and sociology) and conduct research in both the classroom and laboratory.

Page Ref: 11
Skill: Understanding

6. The use of the "common sense" approach to teaching is viewed by educational psychologists as
A) appropriate in most circumstances.
B) inappropriate unless supported by research.
C) more reliable than scientific judgments.
D) the main factor that differentiates experts from novices.

Answer: B

Explanation: B) Educational psychologists view the "common sense" approach to teaching as inappropriate and potentially misleading unless supported by research. As illustrated by the examples in the textbook, common sense ideas often do not work in the expected manner when applied in classrooms.

Page Ref: 11-12
Skill: Understanding

7. Research by Ogden, Brophy, and Evertson (1977) on selecting primary-grade students to read aloud suggests that the best method is to

A) ask for volunteers to read.
B) call on students in a prescribed order.
C) call on students at random.
D) have students read as a group (choral response).

Answer: B

Explanation: B) Research by Ogden, Brophy, and Evertson (1977) indicated that *first graders achieved better when they were called upon to read in a prescribed order*. Their interpretation was that the children would spend more time rehearsing when they were aware of the sections that they would be asked to read and would get more practice reading because they were not over-looked.

Page Ref: 11
Skill: Knowledge

8. Wong (1987) indicated that when individuals read a research result, they tended to

A) become resistant toward using the strategy involved.
B) find the results more obvious than originally thought.
C) put the results into practice immediately.
D) seek more information on the subject.

Answer: B

Explanation: B) Wong (1987) demonstrated that when subjects in her study were shown research results (whether or not correct) in writing, they had a greater tendency to believe that the results were *obviously true*.

Page Ref: 12
Skill: Knowledge

9. When studies are based only on observations, the results should be expressed as

A) cause-and-effect relationships.
B) descriptions.
C) principles.
D) theories.

Answer: B

Explanation: B) When studies are based only on observations, the results must be expressed as *descriptions of events. Descriptive studies rely on observational and subjective data.* Correlational studies identify the relationship(s) among two or more variables for a specific group of people. Experimental studies require controlled, objective data in order to establish causal relationships.

Page Ref: 13
Skill: Understanding

10. A case study is an investigation of

A) a small group of people with similar backgrounds.
B) different groups of people over a period of time.
C) one person or group over a specific period of time.
D) people from one geographic area.

Answer: C

Explanation: C) Case studies involve an intensive examination of real-life contexts (such as schools or classrooms) through direct observations, biographical data, school records, test results, peer ratings, and a wide variety of other observational tools. The researcher would investigate *one person or a group of people intensively over a relatively long period of time*.

Page Ref: 13
Skill: Knowledge

11. A correlation is a statistical description indicating the

A) direction but not the strength of a relationship.
B) direction and strength of a relationship.
C) strength and direction of a treatment effect.
D) strength but not the direction of a relationship.

Answer: B

Explanation: B) Correlation coefficients indicate *both the strength and direction of relationships* (e.g., strong positive or weak negative). Treatment effects are not involved in correlational research.

Page Ref: 13
Skill: Knowledge

12. A researcher participates in a class over a two-month period and analyzes the strategies the teacher employs to maintain discipline. This research is an example of what specific type of research study?

A) Cross-sectional
B) Ethnography
C) Experimental
D) Longitudinal

Answer: B

Explanation: B) *Ethnographic studies* involve an intensive examination of real-life contexts (such as schools or classrooms) through observations. In this

example, the researcher spent two months observing the teacher and recording descriptions of the discipline techniques employed. There is no indication that the researcher is a participant observer in the research.

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Skill: Understanding

13. A researcher concludes from his study that, on a typical school day, students spend only 50 percent of their time engaged in learning. What specific type of research must have been conducted in order for this conclusion to be valid?

A) Single-subject design
B) Participant-observer
C) Descriptive
D) Experimental

Answer: C

Explanation: C) *Descriptive methods* would be used by a researcher to study how much time is spent on learning activities during a typical day. This would require observations for a number of days and might include students' self-reports and/or teacher ratings in order to identify a pattern for the amount of time actually spent in learning activities.

Page Ref: 13-15
Skill: Understanding

14. A positive correlation between two factors indicates that the factors

A) are NOT necessarily related.
B) are strongly related.
C) decrease proportionately.
D) tend to increase or decrease together.

Answer: D

Explanation: D) A positive correlation indicates that two factors *increase or decrease together*. As one increases so does the other; as one decreases so does the other. Therefore, the two factors for a positive correlation vary in the same direction. If the correlation is negative, one factor increases while the other factor decreases. [Note that, unless it is perfect, the correlation only suggests a tendency or pattern.]

Page Ref: 13
Skill: Knowledge

15. What size or direction of correlation coefficient is likely to be obtained between children's ages (from five to 13 years) and the distance that they can long jump?

A) Close to zero
B) Either +1.00 or -1.00
C) Negative
D) Positive

Answer: D

Explanation: D) A *positive relationship* is likely to exist between children's ages and the distance they can long jump. Due to their greater physical size, strength, and agility, older children will generally be able to jump farther than younger children. As age increases, jumping distance tends to increase, at least through adolescence.

Page Ref: 13
Skill: Understanding

16. Which one of the following correlation coefficients indicates the strongest relationship?

A) -0.03
B) -0.78
C) +0.56
D) +0.70

Answer: B

Explanation: B) The strongest correlation of the four choices is represented by -0.78. It is **NOT** the sign (direction) that determines strength; it is the closeness of the correlation to either +1.00 or -1.00. A *correlation of -0.78 represents a fairly strong negative relationship* between the factors being correlated.

Page Ref: 13
Skill: Understanding

17. What type of correlation coefficient is likely to be obtained between reading ability and running ability of high-school students?

A) Close to zero
B) Either +1.00 or -1.00
C) Strong positive
D) Weak negative

Answer: A

Explanation:
A) A *correlation close to zero* is likely to exist between reading ability and running ability. The two factors are relatively independent. Better readers are not likely to be faster or slower runners than others and slower readers are not any better at running than their fast-reading peers.

Page Ref: 13
Skill: Understanding

18. When a correlation coefficient of -0.80 is found between factor A and factor B, the most accurate interpretation is that

A) a decrease in factor A is strongly related to a decrease in factor B.
B) a decrease in factor A is strongly related to an increase in factor B.
C) there is NO significant relationship between the two factors.
D) there is a very weak relationship between the two factors.

Answer: B

Explanation: B) A correlation of -0.80 indicates a strong negative relationship. *Decreases in factor A will be associated with increases in factor B.* Decreases in both factors will result in a positive relationship.

Page Ref: 13
Skill: Understanding

19. A correlation study indicates that teachers' interest in teaching and the amount of the day their students are engaged in learning correlate at +0.46. This coefficient would indicate that

A) as teacher interest decreases, engaged time increases.
B) as teacher interest increases, engaged time tends to increase.
C) interest in teaching leads to a large increase in engaged time.
D) there is virtually **NO** relationship between the two variables.

Answer: B

Explanation: B) The +0.46 correlation coefficient suggests a *moderately strong positive relationship* between teaching interest and engaged time. Teachers who have more interest in teaching tend to have students who are more engaged in learning, and vice versa.

Page Ref: 13
Skill: Understanding

20. A correlation coefficient of 0.90 indicates that

A) one event has been caused by another event.
B) one event is strongly related to another event.
C) the two events are related 10 percent of the time.
D) the two events are related 90 percent of the time.

Answer: B

Explanation: B) A correlation of 0.90 indicates a *strong positive relationship*. Correlations do not imply cause and effect, only that the two variables or factors are related.

Page Ref: 13
Skill: Understanding

21. A researcher reports that students who have the highest test scores in school tend to be more involved in extracurricular activities than are other students. What specific type of research study must have been conducted?

A) Correlational
B) Descriptive
C) Ethnographic
D) Experimental

Answer: A

Explanation:
A) The researcher conducted a *correlational study*. The purpose is to determine the relationship between test scores and extracurricular activities. Ethnographic studies are another specific type of descriptive research. **NO** treatment is being manipulated; thus, the research is **NOT** experimental.

Page Ref: 13-15
Skill: Understanding

22. Random assignments would be most critical in what type of research?

A) Case study
B) Correlational
C) Descriptive
D) Experimental

Answer: D

Explanation: D) By randomly assigning subjects to treatments and evaluating the

treatments, *experiments are designed to study cause and effect*. Unlike descriptive studies, changes made in an experimental study can be attributed to the treatments introduced, because all other relevant factors are intended to be controlled. In correlational studies, usually only one group of subjects is studied on a variety of factors. A cross-sectional study typically involves several groups of subjects who are then compared on a variety of factors. Such studies are not experimental.

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Skill: Knowledge

23. Which one of the following instances is **MOST** like a random sample for a class of thirty students?

A) A coin is tossed in order to select students alternately one by one into the experimental and control groups.
B) The first ten students who enter the classroom are placed into the experimental group and the next ten into the control group.
C) The first twenty volunteers are selected from the physics class and alternately placed
into experimental and control groups.
D) The twenty students with the highest GPAs are selected and alternately placed into experimental and control groups.

Answer: A

Explanation:
A) A random sample is one in which each subject has an equal opportunity to be selected for any group. The three situations described in the alternative answers to this question all concern special, rather than randomly composed, groups of students. Thus, identifying the experimental groups by *coin tossing* is the method that most closely approximates a random selection.

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Skill: Understanding

24. When a result from a research project involving an experimental design is reported in the literature as significant, this result

A) contradicts the prevailing theoretical views.
B) is unrelated to theory development.
C) is unlikely to have occurred by chance.
D) will indicate its practical importance.

Answer: C

Explanation: C) Statistical significance means that the result is *unlikely to have*

occurred by chance. It does **NOT** necessarily imply that the result has either practical or theoretical importance.

Page Ref: 14
Skill: Understanding

25. What type of research participants should researchers use for studies of cause-and-effect relationships?

A) Controlled samples
B) Random samples
C) Related samples
D) Skilled samples

Answer: B

Explanation: B) *Random assignments* are critical for establishing cause-effect relationships. If such assignments are **NOT** employed, the researcher will be unable to determine whether treatment differences are caused by the treatments themselves or by the treatment groups being different in some important way that is related to the outcome being studied.

Page Ref: 14
Skill: Knowledge

26. Dr. Patterson concludes from her research that using a systematic study strategy **CAUSED** good grades for students assigned to a particular group. For this conclusion to be valid, the type of research that was performed must have been what type of study?

A) Correlational
B) Descriptive
C) Experimental
D) Observational

Answer: C

Explanation: C) Dr. Patterson can infer cause and effect only from *experimentation*. Correlational research and observational research provide descriptive results that do not support causal relations. However, these latter two types of research can often lead to questions that can be studied by means of experimental research.

Page Ref: 13-14
Skill: Understanding

27. A researcher finds that students who were given computers to use at home demonstrated greater independent learning skills than a comparable group that was not selected to receive home computers. What type of research study was probably designed for this conclusion to be valid?

A) Correlational
B) Descriptive
C) Experimental
D) Observation

Answer: C

Explanation: C) Apparently, an *experimental* approach was employed. The key factor is the manipulation and then comparison of different treatments: having computers vs. not having them.

Page Ref: 13-14
Skill: Understanding

28. An explanation of how we remember things that we have learned is called a

A) construct.
B) correlation.
C) principle.
D) theory.

Answer: D

Explanation: D) A *theory is an explanation of behaviour or human functioning*, such as how we remember what we have learned or why we are motivated to do something.

Page Ref: 17
Skill: Knowledge

29. Which is usually established first?

A) theory
B) principle
C) scientific explanation
D) consistent findings

Answer: D

Explanation: D) Consistent findings are established first as they form the basis of arriving at a principle. Given a number of established principles, educational

psychologists develop theories to describe the relationship among a number of variables or even whole systems of relationships.

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Skill: Understanding

30. According to Woolfolk et al., good theories

A) explain and predict perfectly.
B) are less scientific compared to ten years ago.
C) give you a new way of thinking about problems
D) offer all the answers.

Answer: C

Explanation: C) Few theories are able to explain and predict perfectly or offer all the answers. A good theory however, will provide a new framework for thinking about problems. For example, a good theory of classroom management might provide new insights about discipline problems, give you tools for creating solutions to many different problems and for predicting what might work in new situations (i.e., different classroom contexts, different populations of students etc.)

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Skill: Understanding

31. According to Woolfolk, over time theories

A) have returned to the core ideas set forth years ago by Sigmund Freud.
B) have become less important in educational research and practice.
C) have become more systematic and scientific.
D) are less scientific compared to ten years ago.

Answer: C

Explanation: C) Theories are based on systematic and scientific research; they are the beginning and ending points of the research cycle.

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32. Microgenetic studies:
A) intensively study cognitive processes in the midst of change.
B) apply a ABAB experiment design.
C) are employed to assess cause and effect relationships.
D) typically utilize many children as study participants.

Answer: A

Explanation:
A) The goal of microgenetic studies is to intensively study cognitive processes in the midst of change – as the change is actually happening. They explore the underlying mechanisms of that change. This form of research is expensive and time consuming, so often one or a few children are studied. ABAB experimental design has nothing to do with microgenetic studies, but is a form of single-subject experimental design.

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Skill: Knowledge
Difficulty: 2

33. Action research:
A) is a form of research that puts an observed behavior "under a microscope."
B) is a form of research that employs teachers as researchers.
C) is a form of research that studies development by observing subjects over many years.
D) is a form of research that focuses on groups of subjects at different ages.

Answer: B

Explanation: B) Action research involves the systematic observation or testing of methods conducted by teachers or schools to improve the teaching and learning for their own students.
A) describes microgenetic studies. C) describes longitudinal studies, and D) describes cross-sectional studies.

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Skill: Knowledge

34. Which of the following statements are TRUE of longitudinal studies?
A) They are time consuming and expensive.
B) They are more commonly used than experimental and cross-sectional studies.
C) They involve researchers following students over the course of a few days.
D) They utilize teachers directly in the research process.

Answer: A

Explanation: Longitudinal studies are interested in the cognitive development of their subjects over several months or years. Even though they are informative, they are time-consuming, expensive, and infrequently used as they require following subjects over years. D) captures action research most accurately.

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Skill: Knowledge

35. An ethnography:

A) is a personalized account on either teaching or learning experiences.
B) involves studying naturally occurring events in the life of a group.
C) involves studying cause and effect relationships.
D) involves examining the relationships between variables.

Answer: B)

Explanation: B) Ethnographic studies are conducted around the course of naturally occurring events in the life of a group.

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Skill: Knowledge

36. At Greendale Public School, four teachers each set out to conduct a research study in his or her classroom. Which study would be LEAST likely to involve the use of a correlational analysis?

A) Mrs. Tang, who studied amount of reading and spelling test scores
B) Mr. Lacroix, who studied activity level in gym and degree of academic self-concept
C) Mr. Nucci, who studied frequency of praise and rate of homework completion
D) Miss Gann, who studied types of seating arrangements and number of disruptions

Answer: D

Explanation: D) As correlations are numbers that indicate both the strength and the direction of a relationship between two events or measurements, seating arrangements are neither and therefore D) is least likely to be studied by a correlation. D) is more likely studied through conducting descriptive research.

Page Ref: 13
Skill: Understanding

37. A researcher reports that students who have the highest achievement in school tend to be more involved in extracurricular activities compared to students with lower achievement. What specific type of research was most likely conducted to inform this finding?

A) descriptive
B) correlational
C) ethnographic

D) experimental

Answer: B

Explanation: B) As correlations are numbers that indicate both the strength and the direction of a relationship between two events or measurements (e.g., GPA and # of extracurricular activities), a correlational study would most likely be conducted.

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Skill: Understanding

True/False Questions

38. As teachers' experience grows, they tend to become more likely to judge their success by their students' successes.

Answer: TRUE

Explanation: As a teacher becomes more experienced, rather than asking about their own performance, they ask, "How are the children doing?" (see Codell, 2001, p. 191).

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39. The major concern of new teachers is that they do not know the subject material they have to teach.

Answer: FALSE

Explanation: Beginning teachers concerns include how to maintain classroom discipline, motivate students, accommodate differences among students, evaluation students' work, deal with parents, and get all with other teachers (Conway & Clarke, 2003; Melnick & Meister, 2008; Veenman, 1984).

Page Ref: 9

40. Compared to experimental studies, descriptive studies are usually conducted in settings that are more realistic.

Answer: TRUE

Explanation: The purpose of descriptive studies is to describe events in a particular class or several classes. In experimental studies, the investigators introduce changes and note the results, therefore the environment is manipulated in some way (and not naturally occurring).

Page Ref: 13-14

41. Correlations may be included within a descriptive study.

Answer: TRUE

Explanation: Often the results of descriptive studies include reports of correlations.

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42. Correlations provide the basis for interpretations about cause and effect.

Answer: FALSE

Explanation: Correlations do not prove cause and effect but can indicate the strength and direction of a relationship between variables.

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43. Theories explain and predict all occurrences in a given field.

Answer: FALSE

Explanation: Theories are integrated statements of principles that attempt to explain specific phenomena and to make predictions. No theory offers all the answers to a given field.

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44. Negative correlations are typically weaker than positive correlations.

Answer: FALSE

Explanation: The strength of a correlation is independent of the direction of the correlation. Because a correlational is negative, it may also be strongly negative (e.g., a correlation of -1.00 would be strongly negative).

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45. Microgenetic studies intensively study cognitive processes in the midst of change.

Answer: TRUE

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46. A theory can be characterized as a guess or a hunch.

    Answer: FALSE

    Explanation: This would be a common-sense notion of theory, but not how it is intended in the scientific meaning. A theory is an integrated statement of principles that attempts to explain a phenomenon and make predictions.

    Page Ref: 17

47. If a statistically significant difference is found between the math scores of two groups, we can conclude the difference was due to a chance occurrence.

    Answer: FALSE

    Explanation: If something is statistically significant, then it is not likely to be due to a chance occurrence.

    Page Ref: 14

48. E. L. Thorndike wrote the first educational psychology text and founded the *Journal of Educational Psychology.*

    Answer: TRUE

    Page Ref: 11

49. Action research is a form of educational research typically conducted by anthropologists.

    Answer: FALSE

    Explanation: Action research utilizes teacher as researcher, as the focus is on teachers or schools conducting systematic observations or tests of methods to improve teaching and learning for their students.

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Completion Questions

50. When beginning teachers confront everyday classroom life, they often experience _____.

    Answer: reality shock.

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51. They study of the processes of teaching and learning is the focus of the discipline of _____.

Answer: educational psychology

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52. The type of research that attempts to record what happens in classrooms without attempting to manipulate any variables is called _____ research.

Answer: descriptive

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53. A researcher who becomes a working member of a class over a period of time in order to record and gain understanding of the class dynamics is a(n) _____.

Answer: participant observer

Page Ref: 13

54. Research that is designed to determine the relations between two variables is a(n) _____ study.

Answer: correlational

Page Ref: 13

55. The type of research that attempts to establish cause and effect relationships is a(n) _____ study.

Answer: experimental

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56. Each person is given an equal opportunity to be in a treatment or control group by means of _____ sampling.

Answer: random

Page Ref: 14

57. Findings considered statistically unlikely to have occurred by chance are described as _____.

Answer: significant

Page Ref: 14

58. Broad frameworks that attempt to explain relationships between sets of variables are called _____.

Answer: theories

Page Ref: 17

59. When findings in a given area repeatedly support the same conclusion, a(n) _____ can be derived.

Answer: principle

Page Ref: 15

60. You pick names from a hat to determine which group you should assign each subject to. This is a _____ assignment.

Answer: random

Page Ref: 13

61. Weight of clothing and outside temperature are _____ correlated.

Answer: negatively

Page Ref: 13

62. If researchers wanted to study the development of students over many years as change occurs, they would likely be conducting a _____ study.

Answer: longitudinal

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Short Answer Questions

63. Discuss the problems or issues that most concern beginning teachers today. Which concerns would be the most important to you personally? Explain your choice(s).

Answer:

New teachers may worry about their teaching skills, being liked by peers and students, making a good impression, and basically surviving. Specific concerns are maintaining discipline, motivating students, accommodating individual differences, evaluating students, and dealing with parents.

Page Ref: 9-10

64. Differentiate between descriptive and experimental research with regard to purpose and methods.

Answer:
Descriptive research cannot show cause-and-effect relationships; it does not involve a change or treatment, and it uses observation to characterize things as they exist. Relationships between variables are often described by correlations. Experimental research involves randomization, control of some variables, and a dependent variable (outcome) and independent variable (treatment). Experimental research may indicate cause-and-effect relationships.

Page Ref: 13-14

65. The local secondary school board is interested in finding a way to reduce the number of times students arrive late for class. At the last committee meeting, someone came up with an idea that at the end of the month, the school could give a movie pass to each student who arrived late no more than once during the month. To explore the effectiveness of giving movie passes to reduce lateness, explain which type of research would be most appropriate, and outline one advantage and one disadvantage of this type of research.

Answer:
The objective here would be to determine if frequency of lateness is reduced by giving out movie passes as opposed to some other variable, such as time of year or homework load. Therefore, the most appropriate type of research would be experimentation, so that one would be better able to conclude that giving out movie passes caused students to be late fewer times. One advantage of experimentation is that the researchers can control when the movie passes are to be given out and therefore, better identify a cause-and-effect relationship. The disadvantage of experimentation is that because the school environment is controlled somewhat (e.g., the movie passes, assigning subjects to groups), the results may not be the same as what would be found in a natural setting in which noting was controlled or manipulated.

Page Ref: 13-14

66. Explain the notion of "common sense answers" in educational research. Use an example to illustrate how common sense knowledge answers differ from answers based on research.

Answer:

Common sense dictates that when students repeatedly get out of their seats without permission, the teacher should remind them to remain in their seats. The repeated reminders would help the overactive students remember the rule and show the rest of the class that the teacher is serious about the rule. Research on this particular behavior has shown that the more often a teacher tells a student to sit down when they are out of their seats, the more often the students got out of their seats without permission. When the teacher ignored students who were out of their seats and praised students who were sitting down, the rate of out-of-seat behavior dropped greatly. This was repeatedly shown to be the case, when the teacher returned to the previous system of telling students to sit down, the rate of out-of-seat behavior increased once again.

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67. Explain how principles and theories are derived. Discuss how knowledge of a theory (e.g., classroom management) can be helpful to a classroom teacher.

Answer: Principles come from seeing patterns in situations or research findings. For example a teacher may derive a principle after noticing the effect of a specific classroom management strategy on student achievement. A theory is a teacher's explicit explanation about a phenomenon. For example, a teacher might development a prediction about why the classroom management impacts student achievement. Principles help in solving specific problems, whereas, theories provide a more broad framework for deriving new solutions to problems.

Page Ref: 15, 17-18

68. Discuss the purposes and procedures of the discipline of educational psychology today. What are the interests of educational psychology with regard to theory vs. application and learning vs. teaching?

Answer: Educational psychology is concerned primarily with (A) understanding the processes of teaching and learning and (B) developing ways to improve these processes. Educational psychologists are interested in both learning and teaching. They recognize the distinction between learning as it is researched in the laboratory and teaching as it takes place in actual classroom settings. For this reason, they advocate testing the validity of learning theories outside the laboratory.

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69. If a teacher wanted to collaborate with a researcher to better understand why one student was having difficulty adding two fractions, would you recommend they use an experimental design or conduct a microgenetic investigation?

Answer:
A microgenetic study would allow the research team to analyze what strategy the student used to try to add two fractions. The research might observe the student trying to solve the math problem, interview the student about his or her strategies, and examine in careful detail the student's notes and submitted work. As noted by Woolfolk, the student's behavior would be "put under a microscope".

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Case Studies

A) Jill received her Bachelor of Arts Degree in education in June and will be meeting her first class of second graders tomorrow at Briarview Elementary School. Her classroom will be adjacent to one assigned to Ms. Ferguson, a veteran first-grade teacher considered to be one of the most knowledgeable and skilled in the district. Ms. Ferguson will be starting her tenth year of teaching.

1) What are likely to be Jill's major concerns about her first months of teaching? Explain your choices.

Answer:
As a novice teacher, Jill's primary concerns will most likely be related to classroom management. She may also be concerned about motivating students and teaching students with individual differences. Knowing how to evaluate student work and dealing with parents may be issues of concern for Jill.

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2) Discuss how the two teachers might differ in using achievement results as information about (
A) student learning and (b) their own success in teaching.

Answer:
Compared to Jill, Ms. Ferguson is more likely to use information about student achievement to evaluate the extent to which her new teaching methods or materials allowed her to meet her instructional objectives. Whereas Jill might view her own success as a well-disciplined classroom environment, Ms. Ferguson is likely to view her own teaching success in relation to the achievements of her students.

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B) Ninth-grade teachers at Farmington Junior High School are interested in knowing whether using cooperative learning will increase student understanding of mathematics. They would like to conduct a research study to investigate whether this is truly the case.

3) Design an experimental study (basic elements, not detailed procedures) that could be used to answer the teachers' research question.

Answer:
The researcher would randomly assign students to either the cooperative learning condition or the traditional lecture condition. Thus, the teacher is changing his or her approach and will note the results from the change. In this case, the change or "treatment" is the inclusion of cooperative learning. The traditional lecture group serves as the "control" condition. The researchers' goal is to compare the mathematical achievement scores from students in the cooperative learning condition with scores from students in the traditional lecture condition. If a difference between the two groups exists, then the researcher explores whether or not the difference is more than one might expect by chance (i.e., significance testing).

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4) How might descriptive research also be used in the above study? Describe an example.

Answer:
The researcher would collect many types of information regarding the characteristics and background of the students in the cooperative learning situation. The researcher might report students' mathematics scores by gender, ethnicity, number of previous math courses, and students' level of math anxiety. The researcher could describe in detail the distribution of scores (how many earned very high or low math scores).

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5) One teacher speculates that students who are more social than others are likely to have greater appreciation of the cooperative learning method. What research approach should be used to answer this question? Use an example to illustrate an application of this type of research.

Answer:
To answer this question the researcher would want to utilize a correlational design for the research project. The researcher could report how often and how much students socialize with other students during recess. Having a measure of social interaction, the research would explore whether mathematics scores for students in a cooperative learning setting relates to students' level of social ability. The hypothesis may be that students who are highly social will also have math test scores when they are taught in a cooperative learning setting. If this were to be true, we would expect a

high and positive correlation coefficient (perhaps +.70 or higher).

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6) Briefly describe a study that would support a causal interpretation of the results. Explain why your study could be a cause-effect study.

Answer:
A teacher may hypothesize that students' increase in math scores is not due to the cooperative learning situation, but that it is more closely related to students' reading ability. In this example, students would be randomly assigned to a cooperative learning group or a traditional lecture setting. In addition, students would be randomly assigned to a reading condition. In one reading condition the students had no additional reading assignments, while in the other condition students were required to read at least two books per week at home. Thus, the researcher can explore whether the cause of the difference in math scores is due to the teaching condition (cooperative learning or traditional lecture) or to the difference in reading.

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