

Test Bank
for

Educational Psychology
Active Learning Edition
Twelfth Edition

Anita Woolfolk
The Ohio State University

Prepared by
Gypsy Denzine
Northern Arizona University

PEARSON

Boston Columbus Indianapolis New York San Francisco Upper Saddle River
Amsterdam Cape Town Dubai London Madrid Milan Munich Paris Montreal Toronto
Delhi Mexico City Sao Paulo Sydney Hong Kong Seoul Singapore Taipei Tokyo



This work is protected by United States copyright laws and is provided solely for the use of instructors in teaching their courses and assessing student learning. Dissemination or sale of any part of this work (including on the World Wide Web) will destroy the integrity of the work and is not permitted. The work and materials from it should never be made available to students except by instructors using the accompanying text in their classes. All recipients of this work are expected to abide by these restrictions and to honor the intended pedagogical purposes and the needs of other instructors who rely on these materials.

Copyright © 2014, 2011, 2008, 2005, 2002, by Pearson Education, Inc. All rights reserved. Manufactured in the United States of America. This publication is protected by Copyright, and permission should be obtained from the publisher prior to any prohibited reproduction, storage in a retrieval system, or transmission in any form or by any means, electronic, mechanical, photocopying, recording, or likewise. To obtain permission(s) to use material from this work, please submit a written request to Pearson Education, Inc., Permissions Department, One Lake Street, Upper Saddle River, New Jersey 07458, or you may fax your request to 201-236-3290.

Instructors of classes using Woolfolk's *Educational Psychology: Active Learning Edition*, 12e may reproduce material from the test bank for classroom use.

10 9 8 7 6 5 4 3 2 1

ISBN-10: 0-13-30911-20

ISBN-13: 978-0-13-30911-20

PEARSON

www.pearsonhighered.com

Table of Contents

Cluster 1: Learning, Teaching, and Educational Psychology Modules 1-2	1
Cluster 2: Cognitive Development Modules 3-6	15
Cluster 3: The Self, Social, and Moral Development Modules 7-10	33
Cluster 4: Learner Differences and Learning Needs Modules 11-13	57
Cluster 5: Language Development, Language Diversity, and Immigrant Education Modules 14-16	77
Cluster 6: Culture and Diversity Modules 17-19	91
Cluster 7: Behavioral Views of Learning Modules 20-21	106
Cluster 8: Cognitive Views of Learning Modules 22-23	128
Cluster 9: Complex Cognitive Processes Modules 24-26	155
Cluster 10: The Learning Sciences and Constructivism Modules 27-29	174
Cluster 11: Social Cognitive Views of Learning and Motivation Modules 30-31	190
Cluster 12: Motivation in Learning and Teaching Modules 32-35	202
Cluster 13: Creating Learning Environments Modules 36, 37	226

Cluster 14: Teaching Every Student	248
Modules 38-40	
Cluster 15: Classroom Assessment, Grading, and Standardized Testing	270
Modules 41-43	

Cluster 1: Learning, Teaching, and Educational Psychology

MODULE 1: LEARNING AND TEACHING TODAY

Multiple-Choice Questions

1) 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: Understanding

2) According to James Popham, the law No Child Left Behind

- A) will not affect teachers in secondary education schools.
- B) will shorten the length of the school year.
- C) will affect the lives of teachers every day.
- D) relates to only teachers who teach in rural areas.
- E) will go into effect after January 2009.

Answer: C

Explanation: C) By the end of the 2005-2006 school year, all teachers must have core academic subjects and be "highly qualified." The NCLBA will affect the lives of teachers everyday.

Page Ref: 6

Skill: Understanding

3) According to the law No Child Left Behind

- A) research is not important for improving schools.
- B) states have some say in defining "proficiency" for students.
- C) initial hypotheses about education which have not been tested can still improve educational practices.
- D) mandates all teachers must conduct a research project on an annual basis.

Answer: B

Explanation: B) According to NCLBA scientifically based research based on rigorous research can produce valid and reliable results for improving education.

Page Ref: 6

Skill: Knowledge

Completion Questions

1) Schools are evaluated based on test schools, which indicate if their students are making _____.

Answer: Adequately Yearly Progress (AYP)

Page Ref: 6

2) Many educators believe that the mark of an expert teacher is the ability to be _____, demonstrated by frequently asking, "How am I doing?"

Answer: reflective

Page Ref: 11

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

Answer: reality shock

Page Ref: 11

True/False Questions

1) Sanders and River's (1996) research shows that the effects of good teaching produce additional achievement gains for lower-achieving students.

Answer: TRUE

Explanation: Researchers have found the effects of good teaching are cumulative and residual and have the most benefits for lower-achieving students.

Page Ref: 7

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

Answer: TRUE

Page Ref: 11

3) The major concern of new teachers is that their knowledge of their subjects is limited.

Answer: FALSE

Page Ref: 11

Short Answer Questions

1) Discuss the problems or issues that most concern beginning teachers today. Which of those 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: 11

MODULE 2: RESEARCH AND THEORY IN EDUCATIONAL PSYCHOLOGY

Multiple Choice Questions

- 1) 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 the laboratory.

Page Ref: 14

Skill: Understanding

- 2) 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* or 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: 15

Skill: Understanding

- 3) 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 overlooked.

Page Ref: 15

Skill: Knowledge

- 4) Wong's research 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: 16

Skill: Knowledge

- 5) Research on acceleration for bright children suggests that acceleration is generally
- A) beneficial for these children both academically and socially.
 - B) beneficial for younger children but detrimental for older children.
 - C) detrimental for younger children but beneficial for older children.
 - D) harmful for children at all age/grade levels.

Answer: A

Explanation: A) Research summarized by Colangelo, Assouline, and Gross (2004) suggests that acceleration (skipping grades) is generally *beneficial (and, at least, not harmful) for bright children*.

Page Ref: 15

Skill: Knowledge

- 6) 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: 16

Skill: Understanding

- 7) 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: 16

Skill: Knowledge

- 8) 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: 16

Skill: Knowledge

- 9) 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.

Page Ref: 16

Skill: Understanding

- 10) 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: 16

Skill: Understanding

- 11) 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: 16-17

Skill: Knowledge

- 12) 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: 16

Skill: Understanding

- 13) 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: 16

Skill: Understanding

- 14) 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: 16

Skill: Understanding

15) 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: 16

Skill: Understanding

16) 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: 16-17

Skill: Understanding

17) 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: 16

Skill: Understanding

18) 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: 16

Skill: Understanding

19) 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.

Page Ref: 17

Skill: Knowledge

20) 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.

Page Ref: 17

Skill: Understanding

21) 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: 17

Skill: Understanding

22) 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: 17

Skill: Knowledge

23) 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: 17-18

Skill: Understanding

- 24) 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: 17-18

Skill: Understanding

- 25) 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 behavior or human functioning, such as how we remember what we have learned or why we are motivated to do something.

Page Ref: 20

Skill: Knowledge

- 26) According to the Point/Counterpoint discussion in Chapter 1, the following statement is true about what kind of research should guide education
- A) Some researchers challenge the idea that educational research should be similar to research in medicine because humans in school settings are much too complex and function in frequently changing social environments.
 - B) Researchers agree educational research should be based on experimental trials, similar to medical studies.
 - C) Most researchers agree children in schools are over studied and too much research is taking place in school settings.
 - D) Most educational researchers agree teaching is an art and cannot be based on scientific research.

Answer: A

Explanation: A) David Olson (2004), Patti Lather (2002), and David Berliner (2004) are a few educational researchers who challenge the idea that educational research should be similar to research in medicine.

Page Ref: 21

27) 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.

Page Ref: 20

Skill: Knowledge

Completion Questions

1) The study of the processes of teaching and learning is the focus of the discipline of _____.

Answer: educational psychology

Page Ref: 14

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

Answer: descriptive

Page Ref: 16

3) 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: 16

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

Answer: correlational

Page Ref: 16

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

Answer: experimental

Page Ref: 17

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

Answer: random

Page Ref: 17

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

Answer: significant

Page Ref: 17

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

Answer: theories

Page Ref: 20

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

Answer: principle

Page Ref: 20

True/False Questions

1) Rigorous scientifically based research has been through a review by a journal or panel of experts.

Answer: TRUE

Explanation: Reliable and valid results come from studies in which an independent group of experts review and evaluate the research question, methodology, and results.

Page Ref: 20

2) The major concern of new teachers is that their knowledge of their subjects is limited.

Answer: FALSE

Page Ref: 11

3) Negative correlations are typically weaker than positive correlations.

Answer: FALSE

Page Ref: 17

4) A correlational study is a specific type of descriptive research.

Answer: TRUE

Page Ref: 16

5) Correlations provide a basis for making cause-effect interpretations.

Answer: FALSE

Page Ref: 17

6) A key element in a research experiment is random assignment of participants to groups.

Answer: TRUE

Page Ref: 17

7) A statistically significant result in experimental research indicates that the result is a true finding.

Answer: FALSE

Page Ref: 17

8) Principles are the product of consistency in research findings over time.

Answer: TRUE

Page Ref: 20

9) A theory is an explanation of occurrences in a given field.

Answer: TRUE

Page Ref: 20

10) According to Woolfolk, there are three theories available today to explain human development, motivation, and learning.

Answer: FALSE

Page Ref: 20

11) A correlational study is useful for helping to understand if one event causes another event to occur.

Answer: FALSE

Page Ref: 17

12) 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

Page Ref: 17

Short Answer Questions

1) 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 develop 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: 20-21

2) 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.

Page Ref: 14-15

3) Differentiate between descriptive and experimental research orientations with regard to purpose, methods, and the interpretation of results.

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 described by correlations. Experimental research involves randomization and use of a dependent variable (outcome) and independent variable (treatment). Experimental research may indicate cause-and-effect relationships, for example, would provide a teacher with directions or basic guidelines for how to react to different problems that occur. [The theory would not, however, dictate specific solutions, because every situation is unique.]
Page Ref: 16-17

4) 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."
Page Ref: 18

Case Studies

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.
Page Ref: 11

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.
Page Ref: 11

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).

Page Ref: 17

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).

Page Ref: 16

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 $+0.70$ or higher).

Page Ref: 16

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.

Page Ref: 16-17

