# Chapter 2
# RESEARCH AND ASSESSMENT

## Multiple-Choice Questions

1. Three of the following statements describe *ethical* practices in developmental research. Which one does *not*?
    a. Children participate in studies voluntarily, and only with their parents' consent.
    b. Researchers put the welfare of participants ahead of any desire to learn new information about child development.
    c. Researchers can publish data about specific participants in local newspapers if the descriptions are flattering ones.
    d. Researchers inform participants' families about the results and conclusions of their research.

2. Which of the following situations would *not* typically need written consent from the participants and their families?
    a. A researcher wants to interview tenth grade students about their study habits.
    b. A researcher wants to administer a survey to middle school students about their television viewing at home.
    c. A researcher wants to observe the natural play interactions of children on the playground in a public setting.
    d. A researcher wants to give a short questionnaire to twelfth grade students about their extracurricular activities.

3. Three of the following are typical components of the *scientific method* in developmental research. Which one is *not* typical?
    a. Designing a study that addresses a particular research question
    b. Collecting data from children who have agreed to participate in the study
    c. Drawing conclusions from patterns observed in the data
    d. Keeping the results and conclusions secret for at least five years

4. In developmental research, the *sample* is:
    a. Those individuals who are asked to participate and choose to do so
    b. The entire group about which the researcher is interested, including both participants and nonparticipants in a particular study
    c. The setting in which the research participants spend significant amounts of time, such as the classroom
    d. A subset of research participants whose data are particularly interesting or valuable to the outcome of the study
5. Imagine that you want to find out which extracurricular activities in a community's

after-school programs are of most interest to teenagers. Which data collection technique would be most useful for this purpose?

a. a self-report questionnaire
b. an experimental study
c. a measure of habituation
d. observation

6. One of the best ways to reduce the participants' likelihood of giving socially desirable answers is to:
    a. have participants answer questions in face-to-face interviews rather than typing their answers on a computer.
    b. encourage participants to think of the researcher as a friend and the interview as just a casual conversation.
    c. remind participants they are not being judged and that their answers are confidential.
    d. begin with general questions and then gently but persistently probe for additional information.

7. A first-time researcher wants to determine whether a new approach to teaching preschool is more effective than older, more traditional approaches. She is thinking that she might use one or more *tests* as a way of assessing the effectiveness of the new approach. As she reads about the benefits and disadvantages of tests as a means of collecting data, the researcher is most likely to discover that tests:
    a. Invariably involve paper and pencil, even for very young children
    b. Can be useful in obtaining information about children's cognitive processes
    c. Far surpass other techniques as a means of collecting research data
    d. Have little value as a basis for drawing inferences about educational practices

8. A researcher wants to know if young infants notice any differences between classical music and jazz music. Which data collection technique would be most useful for this purpose?
    a. a simple test with yes-no questions
    b. a series of MRI scans
    c. the habituation procedure
    d. observation of vocalizations when the music changes

9. Dr. Kim has noticed that many 4-year-olds are very kind and caring toward their younger siblings. She wants to find out if 4-year-olds who are especially kind at home

are equally kind and caring with their preschool classmates. Which data collection technique would be most useful for this purpose?

a. interviews
b. a paper-pencil test
c. one or more physiological measures
d. observation

10. Researchers often gain useful information from *observation* of children and adolescents. Three of the following suggestions are likely to improve the quality of observational data. Which one is *un*likely to do so?
    a. Keep a detailed record of what you see.
    b. Discuss your observations with other researchers.
    c. Carefully define the behaviors you want to categorize.
    d. Begin data collection almost as soon as you enter the research setting.

11. Developmental researchers need to be sure that any data collection method they use is actually assessing what it is supposed to assess. In other words, researchers need to be concerned about what aspect of their data-collection techniques?
    a. reliability
    b. practicality
    c. physiological basis
    d. validity

12. If we say that a particular data collection method has high *reliability*, we mean that it:
    a. Yields scores that fall on a bell curve
    b. Yields similar results on different occasions
    c. Predicts future success in academic or social settings
    d. Accurately determines whether children have met certain predetermined developmental goals

13. In which one of the following situations does a researcher definitely have a problem with the *reliability* of a data collection technique?
    a. Ms. Arthur assesses children's overall physical fitness on Monday; she then assesses it the following Monday. Children who perform well one week are not the same ones who perform well the following week.
    b. Mr. Benavidez uses a test of mechanical aptitude to determine which high school students are ready to take a calculus course. Later, he finds out that the students who got some of the lowest scores on the test are actually some of the best students in the calculus course.
    c. Mr. Candelaria distributes a questionnaire to a group of fifth graders without first obtaining their parents' permission.
    d. To determine the frequency with which young adolescents drink alcoholic

beverages, Ms. D'Amato conducts two-hour, one-on-one interviews with a sample of 200 middle school students.

14. Experimental research requires only one of the following. Which one is an *essential* component of an experimental study?
    a. Manipulating an aspect of the environment
    b. Being able to predict two or more variables
    c. Describing each variable in considerable detail
    d. Studying behavior in a laboratory rather than in a more naturalistic setting

15. Dr. Fitz wants to know which of three health programs is most effective in promoting children's physical well-being. With the consent of both the children and their parents, children who regularly attend a community center are randomly assigned to one of three 8-week programs. After the programs have ended, Dr. Fitz assesses the children's general physical wellbeing. Dr. Fitz's study can best be classified as which one of the following?
    a. experimental
    b. correlational
    c. cross-sectional
    d. quasi-experimental

16. Which one of the following conclusions can be firmly drawn *only* from an *experimental* study?
    a. Children grow taller as they get older.
    b. Boys are more likely than girls to engage in physical aggression.
    c. Some drugs administered during pregnancy affect a child's prenatal development.
    d. Children's muscular coordination and physical endurance improve as they grow older.

17. Which one of the following statements best describes a *quasi-experimental* study?
    a. Participants are randomly assigned to treatment and control groups.
    b. Treatment and control interventions are administered to pre-existing groups.
    c. Researchers examine children's behaviors in educational settings rather than in laboratories.
    d. Researchers are less concerned about the validity and reliability of their measures than is true in experimental studies.
18. A team of researchers wants to know whether a new crime prevention program is really effective in reducing crime in young adolescents. The researchers find two middle schools, Adams Middle School and Monroe Middle School, which serve similar kinds of students and report similar rates of theft, physical assault, and

vandalism. The researchers implement the program at Adams and use Monroe as a control group. Afterwards, they discover that crime has decreased at Adams but not at Monroe. This study is a good example of which type of design?

a. Correlational
b. Experimental
c. Cross-sectional
d. Quasi-experimental

19. Which one of the following best describes a *correlational* study?
    a. Multiple groups of participants are involved.
    b. Investigators look for naturally occurring associations.
    c. Participants are randomly assigned to treatment groups.
    d. Investigators can draw firm conclusions about cause-and-effect relationships.

20. You read in a professional magazine that the correlation between children's anxiety levels and their general effectiveness in social situations is –.30. You should conclude that:
    a. Children who are highly anxious are more skillful in social situations, almost without exception.
    b. Children who have low levels of anxiety are more skillful in social situations, almost without exception.
    c. Children who are highly anxious tend to be more skillful in social situations, but with many children being exceptions to the rule.
    d. Children who have low levels of anxiety tend to be more skillful in social situations, but with many children being exceptions to the rule.

21. You read a research article about abstract thinking and academic achievement in a professional journal. The researchers report a correlation of +.65 between the amount of abstract thought students demonstrate and the grade-point-averages they earn. You should conclude that:
    a. Students who think more abstractly are likely to have higher grade-point-averages than their classmates.
    b. Students who think more abstractly are likely to have lower grade-point-averages than their classmates.
    c. You can promote students' abstract thinking by helping them to earn high GPAs.
    d. You can promote students' academic achievement by helping them to think more abstractly.
22. A researcher asks a group of 10-year-olds how many hours a week they watch television and what kinds of programs they typically watch. The researcher also gives the children a questionnaire designed to assess their beliefs about gender stereotypes—that is, about what behaviors they believe are "appropriate" for males and females. The researcher then analyzes the data to see if children who have very traditional

gender stereotypes (e.g., men are strong and independent, women are weak and dependent) are related to certain television viewing preferences. Which one of the following research designs is the researcher using?

a. naturalistic
b. correlational
c. experimental
d. longitudinal

23. Imagine that a researcher finds that, on average, students who weigh more are better athletes. Which one of the following is an appropriate conclusion from this information?
    a. Parents should feed their children as much as possible.
    b. The school cafeteria should decrease the fat content of the food it serves.
    c. On average, students who eat more become stronger and more agile.
    d. There is a correlation between weight and athletic performance.

24. Dr. Lesgold finds that students in private schools perform better on achievement tests than do students in public schools. Which conclusion can Dr. Lesgold fairly draw?
    a. The difference is probably due to differences in family income.
    b. The difference is probably due to the fact that private schools have smaller classes.
    c. The difference is probably due to the fact that private schools are more likely to "teach to the test."
    d. Students' achievement test scores can be predicted to some extent by the kind of school they attend.

25. A school nurse wants to know if children's knowledge about nutrition increases over the course of the elementary years. To find out, she gives a test about nutrition to students in the first, third, and fifth grades. She then compares the test scores for the three grade levels. Which one of the following research designs does the nurse's study best reflect?
    a. experimental design
    b. longitudinal design
    c. cross-sectional design
    d. correlational design
26. A researcher wants to know if children's attitudes about cheating at school change as they get older. To find out, the researcher gives a questionnaire about cheating to 100 fourth graders, 100 seventh graders, and 100 tenth graders. Which one of the following research designs does this study best reflect?
    a. longitudinal design
    b. quasi-experimental design

c. cross-sectional design
d. correlational design

27. In a *longitudinal* study, a researcher:
    a. Collects data from several groups of children, preferably on the same day, so that the groups can be compared
    b. Examines how certain characteristics and behaviors change over time
    c. Is able to prove whether future behavior is determined by earlier behavior
    d. Observes two or more groups of children acting in a familiar setting

28. To find out how children's drawing skills improve with age, a researcher asks 50 four-year-olds to "Draw the best picture of a person that you can." In each of the next six years (until the children are ten years old), the researcher asks them once again to draw a picture of a person. The researcher then compares quality and detail of the pictures drawn at various ages. Which one of the following research designs does this study best reflect?
    a. experimental design
    b. correlational design
    c. cross-sectional design
    d. longitudinal design

29. A researcher wants to know how children's career aspirations change as they grow older. He asks a group of third graders, "What do you think you might want to be when you grow up?" Every year until they graduate from high school, the researcher contacts these same students and once again asks them about their career plans. The researcher's investigation is an example of a(n):
    a. longitudinal study
    b. cross-sectional study
    c. naturalistic study
    d. experimental study

30. Which one of the following statements best describes a *naturalistic* study?
    a. It takes place under well-controlled experimental conditions.
    b. It examines the behavior of people in their day-to-day environments.
    c. It examines and compares the behaviors of multiple groups of people.
    d. It focuses on newborn infants' behaviors, with the hopes that it can identify human beings' inborn tendencies.

31. John Nathan, who grew up in a relatively affluent family and attended private schools, has just accepted a job in a public middle school in a low-income school district. Realizing that his own experiences may not have prepared him to be successful in this setting, John decides to spend time in the neighborhood observing young adolescents as they go about their lives: playing sports, running errands, and just hanging out. He discovers that these youngsters are in some ways very different from, and yet in other ways very similar to, the kids with whom he grew up. John's inquiry most closely resembles which one of the following?
    a. A correlational study
    b. A longitudinal study
    c. An ethnographic study
    d. A grounded theory study

32. Which one of the following statements about developmental research is *true*?
    a. Experimental studies can be conducted only in the laboratory and under somewhat artificial conditions.
    b. Longitudinal studies yield the most information for making decisions about how best to foster children's development.
    c. Experimental studies enable us to draw conclusions about cause-effect relationships.
    d. Correlational research is more difficult and time-consuming than experimental research.

33. Mr. Jones, a physical education teacher, notices that some of his students are better basketball players than others. He wonders if having a basketball net at home fosters the development of basketball skills. He gives his students a short survey that asks them if they have a basketball net at home. Sure enough, Mr. Jones finds that the better basketball players are more likely to have a net at home. He concludes that having a basketball net at home facilitates the development of basketball skills. Is his conclusion appropriate?
    a. Yes, because he used random assignment.
    b. No, because he didn't conduct an experimental study.
    c. No, because his study wasn't conducted in a scientific laboratory.
    d. Yes, provided that his students responded truthfully to the survey.
34. Three of the following are important considerations when reading about and evaluating developmental research. Which one is *least* important?
    a. Whether a researcher is affiliated with a large research university
    b. Whether a study was described in a well-respected professional journal
    c. Whether a study showed dramatic (rather than small) differences between groups
    d. Whether a researcher's pre-existing beliefs might have led to distortions or misinterpretations of the findings

35. Ms. Winston notices that one of the boys in her preschool class is often aggressive toward one particular girl in the class. She occasionally writes down notes about these episodes to share with his parents during a conference. Ms. Winston is engaging in:
    a. action research.
    b. ethnographic research.
    c. formative assessment.
    d. informal assessment.

36. Final exams at the end of a course are an example of:
    a. summative assessment.
    b. formative assessment.
    c. standardized assessments.
    d. authentic assessments.

37. A major disadvantage of using a standardized achievement test as a summative assessment is that the test:
    a. may not be reliable in this setting.
    b. may not align well with the curriculum.
    c. must be norm-referenced to be valid.
    d. must be altered for use with students who have a developmental delay.

38. A number of test items unfairly penalize some individuals because of their language. Which of the following is the best term for this unfair penalty?
    a. Authentic bias
    b. Observational bias
    c. Cultural bias
    d. Validity bias

39. In an attempt to find out why 10-year-old Rosemarie has trouble working independently, a teacher aide quietly observes her one day as she works by herself at a "science center" set up in the corner of the classroom. The aide keeps a detailed narrative of what Rosemarie says and does during the 15-minute period she is at the center. Which one of the following observation techniques is the aide using?
    a. a running record
    b. an anecdotal record
    c. a checklist
    d. a rating scale

40. Mr. Patton makes a practice of writing short descriptions of his students' significant actions and statements. He usually writes these brief notes at the end of each day. Then, when he conferences with his students' families, he refers to these descriptions to share with the families. Which of the following is Mr. Patton most likely using?
    a. Rating scales
    b. Checklists
    c. Running records
    d. Anecdotal records

41. One very effective way of gathering information about children and adolescents is simply to *talk* to them. Three of the following should increase the quantity and quality of information you get when you talk with young people. Which one is *not* likely to be helpful?
    a. Make it clear that you really care what a youngster has to say.
    b. Try to be somewhat aloof so that you come across as an unbiased listener.
    c. When asking about a sensitive topic, ask what other children might think about it.
    d. Ask follow-up questions when you don't understand what a child is telling you.

42. Which one of the following is the best example of *action research*?
    a. A teacher gives her students a questionnaire that asks them to describe how often they study and what kinds of strategies they use when they study. She will use the results to develop several lessons on effective study skills.
    b. A graduate student quietly observes adolescents' behaviors in the school cafeteria. He plans to describe his observations in his master's thesis.
    c. A college professor recruits sixth graders to come to his lab, where she assesses their responses and reaction times in a variety of challenging problem-solving tasks. Her results will help her refine her theory about the development of children's problem-solving skills.
    d. All of the school districts in a particular state are instructed to give the same mathematics achievement test to all eleventh graders. The average test scores for each district will be presented in a report that will be released to the general public.

43. Three of the following are important ethical guidelines that teachers and other practitioners should keep in mind when conducting research with children or adolescents. Which one is *not* recommended?
    a. Practitioners should keep their supervisors informed about any research projects.
    b. Practitioners should keep their findings about individual children confidential.
    c. Practitioners should be ready and willing to draw firm conclusions from the data.
    d. Practitioners should administer and interpret specialized tests only after obtaining specific training in their use.

44. When conducting interviews with children, which practice is *not* recommended?
    a. Pause after asking a question.
    b. Make a request for information that is not in the form of a question.
    c. Ask a combination of open-ended and close-ended questions.
    d. Engage in quick question and answer exchanges.

45. A primary difference between action research and other types of research is that action research:
    a. does not require parental permission or approval from the school administration.
    b. allows teacher-researchers to discuss otherwise confidential details of the students with colleagues.
    c. involves identification and implementation of some new strategy.
    d. always involves a case study method.

46. Ms. Rodriguez notices that a large percentage of her students' spelling test scores are low. She wonders if a new individualized spelling approach will improve her second graders' spelling skills. She decides to use a differentiated spelling program that a colleague has shared with her and implements it during the second nine weeks of school. She keeps a record of her students' spelling test scores and talks with each student about their thoughts about the new spelling program. At the end of the nine weeks, she compares the spelling scores of the second nine weeks with the spelling scores of the first nine weeks. She finds that all of the students' scores have increased. She also sees from her conversations with her students that they enjoy the differentiated program and think that they are learning to spell better. She decides to continue the differentiated spelling program for the third nine weeks. What practice is Ms. Rodriguez using?
    a. Observation
    b. Action research
    c. Running records
    d. Anecdotal records

**Essay Questions**

47. Teachers and administrators at a particular school are concerned about a possible rise in bullying in recent months. Before deciding how to respond to the problem, they want to determine if, in fact, their perceptions are accurate. For example, they want to know how many students are considered to be bullies, how many students are victims of bullying, and how often students encounter bullying incidents at school. In three separate paragraphs, describe three different data collection techniques they might use to get the information they need.

48. A psychologist conducts a research study and finds that children who are abused have more difficulty in school than children who are not abused.

    a. Is this an experimental, correlational, cross-sectional, or longitudinal study? Justify your choice.

    b. Based on the study, the psychologist draws the conclusion that an abusive home life leads to poorer school performance in school. Is this conclusion justified? Why or why not?

49. Imagine that you are a teacher who has just learned about a new technique for teaching children better study habits, and you want to know how effective it is. Describe an action research study you might conduct in your classroom to address this question. As you write your response:

    a. Identify the type of research design you would use, and explain whether it would enable you to draw conclusions about a cause-effect relationship.

    b. List at least five different steps you should take in conducting the research.

50. When conducting research, it is imperative that all researchers—whether they be college professors, practitioners in the field, or graduate or undergraduate students—adhere to high ethical standards in their work. In three separate paragraphs, describe three different ethical standards that researchers should follow. Illustrate each one with a concrete example.

51. At the core of the research process is the scientific method. Explain the sequential steps of the scientific methods.

## Developmental Trends Table

The table below describes information collected about the experiences of five youngsters. For each of these experiences, the table identifies factors that affect interpretations about the information, offers an implication for making accurate conclusions about the information, or both.

Apply what you've learned about making accurate inferences about children and adolescents to fill in the empty cells in the table.

**Drawing Reasonable Conclusions about Children and Adolescents**

| Age | A Youngster's Experience | Developmental Concepts<br>Considering the Accuracy of Information | Implications<br><br>Drawing Appropriate Conclusions |
|---|---|---|---|
| **Infancy (Birth–2)** | An 18-month-old baby, Harriet, is drowsy when an unfamiliar adult tries to examine her recognition of common household words, such as ball. The girl fails to point to particular objects when the adult asks her to do so. | The fact that Harriet is not alert, the task is somewhat artificial, and the adult is a stranger raises questions about the task's validity as an indication of the child's ability. | |
| **Early Childhood (2–6)** | Four-year-old Seth takes a children's picture book, points at each page, and tells the teacher what each page says. | | The researcher realizes that more observations are needed to determine whether Seth can read. It may also be helpful to talk with the boy about his interests and abilities in reading. |
| **Middle Childhood (6–10)** | A teacher is conducting action research on her students' performance in mathematics. One 9-year-old boy, Ryan, turns in a blank paper each time the class does math worksheets. Ryan has recently moved from another state, and the teacher does not yet know what Ryan's skills are. He is very quiet. | The teacher examines each child's written work, talking with children individually about their interests in math and watching them as they perform mathematical operations. The teacher appreciates that she is just getting to know Ryan and that there are many reasons why he might not be completing the math problems. The inference that Ryan is not able to do the work may not be *valid*. | The teacher cannot draw firm conclusions about Ryan's mathematical skills. There are countless reasons why he is not doing well on the worksheets—perhaps he has not yet been exposed to multiplication, feels anxious about math, or is bored with the task. Alternatively, he might be shy and worried about being in the new classroom. The teacher realizes that she needs more information before she can draw any conclusions about Ryan's abilities. |
| **Early Adolescence (10–14)** | Twelve-year-old Mary completes a survey related to sexual harassment at school. In her responses to some items, Mary reports that she has been touched inappropriately while walking down the school hall and has been the recipient of unwanted comments about her physical appearance. On other items, Mary responds that she | The researcher notices that Mary's responses are not consistent (that is, not *reliable)* and therefore may not be *valid.* It is possible that Mary interprets some of the items differently than the researchers do or perhaps she completed the survey while distracted or | The researcher determines that it will be necessary to look at all students' responses before drawing conclusions about sexual harassment at school. The researcher may choose to implement other surveys or follow up with informal interviews among a few of the students. |

| | | | |
|---|---|---|---|
| | has not been a victim of sexual harassment. | unmotivated to give her honest responses. | |
| **Late Adolescence (14–18)** | Seventeen-year-old Melinda has had a brain scan. Her scan seems to show that some brain areas, especially those areas devoted to planning ahead and using good judgment, are less mature than those in typical adult brains. | Adolescent brains are undergoing continuous refinement as they change with maturational processes and experience. The results of a single brain scan should not be taken too seriously, however. Any single result *cannot* be assumed to be completely *valid* or *reliable*. | |