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**STUDENT PROJECTS**

During a one-semester course it is usually possible to have students develop a complete test and assessment construction project and critically review one or more standardized tests or assessments in their teaching fields. If the course is being offered for a shorter period of time, or as part of another course, it may be desirable to use a series of shorter projects.

**Complete Test and Assessment Construction Project**

Each student is asked to select some course, or unit of work within a course, and develop a test and assessment construction project that includes the following:

1. A list of 5 to 15 important learning outcomes to be assessed.

2. A list of subject-matter topics to be covered in the instruction.

3. A set of specifications for the test items and assessment tasks as described in Chapter 6.

4. A 40-item test using a combination of selection-type and short-answer, supply-type items which includes: (a) complete directions, (b) test items that are appropriate for the specific learning outcomes being measured, and (c) a scoring key. Each test item should be keyed to a specific learning outcome.

5. Four extended-response assessment tasks using either the essay question format discussed in Chapter 10 or the performance-based task approach described in Chapter 11. The assessment tasks should include complete directions, including specification of any special resources (e.g., equipment, books) available to students and a scoring guide. Each task should include a brief description of the learning outcomes the task is intended to measure and why those outcomes would be difficult or impossible to measure with items like those used in the 40-item test.

6. A bibliography of books and other source materials used in completing the project.

This project is fairly time consuming but it takes the student through the major steps of constructing tests and assessments that are emphasized in the textbook. Since the steps in the project closely parallel the sequence of the chapters in the textbook, it is possible for students to start on it early in the semester and to work on each phase of it as it is discussed in class.

The above project can be reduced in scope by reducing the number of objectives, the number of test items, or the number of performance assessment tasks.

**Brief Test and Assessment Construction Projects**

1. Have students select a chapter in the textbook and do the following:

1. State the learning outcomes stressed in the chapter.
2. Construct 10 objective test items and one essay question or performance-based assessment task.
3. Indicate the learning outcome measured by each item and task.

2. Have student construct one multiple-choice item to measure each of the following learning outcomes.

1. Knowledge of a specific term.
2. Knowledge of a specific test.
3. Knowledge of a method or procedure.
4. Understanding of a fact, principle, or procedure.
5. Ability to apply a fact, principle, or procedure.

3. Construct an interpretive exercise for each of the following.

1. A paragraph of written material.
2. Some type of pictorial material.

4. Construct a performance-based assessment task that could be completed in one class period that would measure the ability to apply critical course concepts in a realistic setting.

## Portfolio Construction Project

Have students construct guidelines for a portfolio intended to display progress to parents during the school year. Allow students to choose the subject area and grade for the portfolio. The guidelines should specify:

1. The purpose of the portfolio.
2. Who will have access to the portfolio.
3. The number and types of entries students are expected to include.
4. The role of collaboration in developing portfolio entries.
5. The inclusion of self-evaluations of the entries.
6. The evaluation criteria to be employed.

**Critical Evaluation of Published Tests**

Have each student critically evaluate one or more of the following tests, using Chapter 18 of the textbook.

1. Achievement test battery.

2. Achievement test in a specific content area.

3. Reading test (readiness, diagnostic, or survey type).

4. Scholastic aptitude test or multiaptitude test.

5. Test in a special area (art, music, creativity).

**Item Analysis Project**

Provide students with responses to a set of items (possibly one of your own tests) and have them conduct an item analysis and interpret the results. Access to an easy-to-use item analysis package for a personal computer would facilitate this project as well as show students how to use such software.

**Construction of Rating Scales and Checklists**

Have student select an appropriate area and construct either a rating scale or a checklist.

# Chapter 1 Educational Testing and Assessment: Context, Issues, and Trends

# Exercise 1-A

## HISTORY OF TEST-BASED REFORM

LEARNING GOAL: Identifies trends in the use of tests in educational reform efforts.

*Directions:* Indicate whether the following statements about the use of tests in reform efforts during the past forty years are **true (T)** or **false (F)** by circling the appropriate letter.

T F 1. The current emphasis on accountability in education has resulted in increased school testing.

T F 2. The rapid growth of minimum-competency testing requirements in the 1970s and early1980s was stimulated by the widely-held belief that high school graduates often lacked essential skills.

T F 3. There is public support for the use of test results to compare schools academically.

T F 4. Concerns that accountability leads to teaching to the test have contributed to calls for increased reliance on performance-based assessments.

T F 5. Content standards specify the minimum score required to pass a test.

LEARNING GOAL: Distinguishes between the purposes and characteristics of content standards and performance standards.

*Directions:* List the defining features of content standards and of performance standards. Distinguish between and describe the primary purposes of these two types of standards.

Content Standards:

Performance Standards:

Note: Answers will vary

## Exercise 1-B

## PERFORMANCE ASSESSMENTS

LEARNING GOAL: Identifies characteristics of and rationales for the use of performance assessments.

*Directions:* Indicate whether measurement specialists would **agree (A)** or **disagree (D)** with each of the following statements concerning performance assessments by circling the appropriate letter.

A D 1. The belief that testing and assessment shapes instruction has led to increased emphasis on performance assessments.

A D 2. The best way to achieve authentic assessment in the classroom is through performance assessments.

A D 3. Many proponents of performance assessments accept the idea that “what you test is what you get.”

A D 4. Tasks requiring extended responses have been the target of most criticisms of testing and assessment.

A D 5. Anything that can be measured by a performance assessment task could also be measured by a multiple-choice test.

LEARNING GOAL: Identifies advantages and disadvantages of performance-based assessments.

*Directions:* List some of the major advantages and disadvantages of performance-based assessments.

Advantages:

Disadvantages:

Note: Answers will vary

Exercise 1-C

## NATIONAL AND INTERNATIONAL ASSESSMENT

LEARNING GOAL: Identifies characteristics and limitations of national and international assessments.

*Directions:* Indicate whether the following statements about national and international assessment are **true (T)** or **false (F)** for circling the appropriate letter.

T F 1. The National Assessment of Educational Progress (NAEP) enables schools to compare the performance of their students to the nation as a whole.

T F 2. NAEP provides a means of monitoring trends in the achievement of a student over 25 years.

T F 3. In addition to national results, NAEP now provides results for state-by-state comparisons on a voluntary basis.

T F 4. NAEP collects achievement data for students by both age and grade level.

T F 5. Comparisons of nations based on international assessments are as trustworthy as comparison of regions of the country based on NAEP results.

T F 6. Comparability of results in international assessments is assured by translating assessments to the languages spoken in different countries.

LEARNING GOAL: Identifies influences at the national level that may influence the role and nature of testing and assessment in the future.

*Directions:* Briefly describe actions of the federal government that are likely to influence testing and assessment in the future.

Note: Answers may vary.

##### Exercise 1-D

**CURRENT TRENDS IN EDUCATIONAL MEASUREMENT**

LEARNING GOAL: Identifies factors related to current trends in testing and assessment.

*Directions:* Indicate whether measurement specialists would **agree (A)** or **disagree (D)** with each of the following statements concerning current trends in testing and assessment by circling the appropriate letter.

A D 1. Computers are especially useful for adaptive testing.

A D 2. Computer-administered simulations of problems enable the measurement of complex skills not readily measured by paper-and-pencil tests.

A D 3. Despite concern about the quality of school programs, there has been a demand for **less** testing and assessment.

A D 4. Computerized adaptive tests increase efficiency by reducing the number of items that need to be administered to achieve reliable measurement for a given test taker.

A D 5. The focus on the consequences of testing and assessment has decreased in recent years.

A D 6. The computer provides the potential to present simulations that can measure the processes that student use to solve problems.

LEARNING GOAL: Describes advantages and limitations of expanded uses of computer-based tests and assessments.

*Directions:* Briefly describe some of the important advantages and major limitations of expanded uses of computer-based tests assessments.

Advantages:

Limitations:

Note: Answers may vary

Exercise 1-E

**CONCERNS AND ISSUES IN TESTING AND ASSESSMENT**

LEARNING GOAL: Identifies factors related to concerns and issues in testing and assessment.

*Directions:* Indicate whether test specialists would **agree (A)** or **disagree (D)** with each of the following statements describing concerns and issues in testing and assessment by circling the appropriate letter.

A D 1. Many of the criticisms of testing are the result of misinterpretation and misuse of test scores.

A D 2. A common misinterpretation of scores on tests and assessments is to assume they measure more than they do.

A D 3. Testing can only benefit students.

A D 4. If a particular group of students receives lower scores on a test, it means the test is biased against members of that group.

A D 5. It is good practice to post scores on standardized tests so that students in a class can see how their performance compares to that of their peers.

A D 6. Test anxiety may lower the performance of some students.

LEARNING GOAL: Lists the possible effects of students and parents examining school testing and assessment results.

*Directions:* List the advantages and disadvantages of the legal requirement that students and parents must be provided with access to school testing and assessment records.

Advantages:

Disadvantages:

Note: Answers may vary

**Answers to Student Exercises**

**1-A 1-B 1-C 1-D 1-E**

1. T 1. A 1. F 1. A 1. A

2. T 2. D 2. T 2. A 2. A

3. T 3. A 3. T 3. D 3. D

4. T 4. D 4. T 4. D 4. D

5. T 5. D 5. F 5. D 5. D

6. F 6. A 6. D

**Chapter 1**

**Educational Testing and Assessment: Context, Issues, and Trends**

1. Externally mandated testing and assessment programs are often appealing to policy makers because they
2. are popular with teachers.
3. are written by teachers in the child’s given school or school system.
4. indicate whether a given school or school district is effective.
5. indicate high or low teacher quality.
6. Content standards are intended to specify which of the following?
7. instructional approaches to use in teaching specific content
8. the curriculum for all subjects and grade levels
9. what students are expected to learn in a subject or course
10. lists of curriculum materials that should be used in lessons

3. Accountability programs for educational reform have put pressure on schools to make which of the following decisions?

1. abolish the use of published tests and assessments for test preparation
2. reduce the number of classroom aides working in schools
3. increase the use of a variety of tests and assessments to prepare students
4. offer financial incentives such as scholarships for high-performing students

4. When externally mandated tests are used to measure current student achievement and progress, the tests are being used as

1. a barometer
2. a lever
3. a method of formative assessment
4. a process to test teacher efficiency and quality.

5. Which of the following best summarizes the findings in the report “A Nation at Risk”?

1. children tended to be tested too much, especially in later grades
2. tests should be administered beginning in the upper elementary or middle school grades
3. children in the USA scored better than students in most European countries but lower than most students in Asian countries
4. the quality of American education was mediocre compared with other countries

6. One negative influence of the pressures of accountability on schools is that it encourages teachers to

1. show students how to make educated guesses on difficult multiple choice test questions.
2. put less emphasis on important instructional topics not on the test.
3. stress the importance of test scores on students’ overall academic career.
4. organize into grade level teams in order to co-teach curriculum.

7. Which of the following would likely be a possible danger of the accountability movement on the local school program?

1. a narrowing of objectives
2. a neglect for basic skills
3. an expansion of the curriculum
4. an overemphasis on performance objectives

8. Which of the following events followed **shortly** after the publication of “A Nation at Risk”?

1. Many teachers and administrators were fired and/or transferred to other positions.
2. All 50 states introduced some form of educational reform.
3. No Child Left Behind was enacted.
4. One standardized test was adopted for use by all 50 states.

9. Which of the following summarizes the main difference between content standards and performance standards?

1. Content standards define what will be learned while performance standards define how things will be learned.
2. Content standards define how things will be learned while performance standards define what will be learned.
3. Content standards measure student effort while performance standards measure the quality of the student performance.
4. Content standards are gender specific while performance standards are specific to certain minority groups.

10. Computerized testing can increase the efficiency of testing by incorporating

1. adaptive testing procedures.
2. conventional test layout and formats.
3. informal teacher-made tests.
4. more essay questions.

11. Test critics have focused much of their attention on which of the following?

1. how essay tests are administered
2. how math and science tests are scored
3. the use of multiple-choice items
4. printing tests other languages for nonnative English speaking students

12. Abolishing all published tests would most likely yield which of the following results?

1. quicker administrative staffing decisions
2. less effective educational decisions
3. a more objective assessment of accountability programs
4. more opportunities for individuals to succeed on merit

13. Misuse of published tests probably can best be prevented by more careful

1. administration.
2. interpretation.
3. scoring.
4. collation.

14. Which of the following would serve as a particularly well founded criticism of standardized tests?

1. they are used to evaluate teachers rather than children’s achievement levels
2. they measure only limited characteristics of an individual
3. they require excessive time to administer
4. they result in an overemphasis on complex reasoning skills

15. Critics of externally mandated tests argue that these tests cause anxiety for children. Which of the following arguments might a proponent of externally mandated test likely counter with?

1. Moderate test anxiety can lead to student motivation to learn and do well on tests.
2. Students with test anxiety tend score well on these tests because they are awarded extra time.
3. Giving students positive rewards for doing well on tests negates most test anxiety.
4. Test anxiety may be present for older students but is virtually nonexistent for younger students.

16. Which of the following is of particular concern regarding the **interpretation** of students’ test scores?

1. that students were given adequate time to take the test
2. that the test did not contain any open-response questions
3. that the test was administered in the morning
4. that the test results do not lead to stereotyping or labeling students

17. Mr. Johnson has told Billy that he “can do better” while admitting to Monica that she is probably doing “as well as can be expected.” Which of the following acts is Mr. Johnson likely guilty of?

1. alienating parents
2. reinforcing a self-fulfilling prophecy
3. relying too much on test results
4. not taking into account that some tests may contain gender bias

18. Ms. Smith is using an assessment to gauge how well James is learning day-to-day class material as well as devising educational programs designed to help students learn the classroom material better. Which of the following types of assessment would be most beneficial to Ms. Smith?

1. externally mandated
2. summative
3. formative
4. arbitrary

19. Briefly explain, in 4–6 sentences, the mandates of No Child Left Behind and how it relates to the inclusion or exclusion of testing children with disabilities.

**Chapter 1: Answer Key**

1. C

2. C

3. C

4. A

5. D

6. B

7. A

8. B

9. A

10. A

11 C

12. B

13. B

14. B

15. A

16. D

17. B

18. C

19. According to NCLB, all students regardless of disability must indicate proficiency in mastering learning goals. Only students with the most severe disabilities may obtain a waiver from this requirement and such waivers must be arrived at the district level. However, in achieving State proficiency standards, allowance and accommodations must be allowed for students with disabilities. The requirement for such accommodations states that a student’s disability cannot be an impediment or the cause of his/her inability to demonstrate competency in learning goals. An example of this would be allowing a student with learning disabilities to have extra time to take the State mandated tests.

**Chapter 2 The Role of Measurement and Assessment in Teaching**

Exercise 2-A

**PRINCIPLES AND PROCEDURES OF CLASSROOM ASSESSMENT**

LEARNING GOAL: Distinguishes between sound and unsound principles and procedures.

*Directions:* Indicate whether each of the following statements represents a **sound (S)** or **unsound (U)** principle or procedure of classroom assessment by circling the appropriate letter to the left of the statement.

S U 1. The first step in measuring classroom learning is to decide on the type of test to use.

S U 2. Classroom assessment should be based on objective data only.

S U 3. The type of classroom assessment used should be determined by the performance to be measured.

S U 4. Effective classroom assessment requires the use of a variety of assessment techniques.

S U 5. Assessment techniques should replace teacher observation and judgment.

S U 6. Error of measurement must always be considered during the interpretation of assessment results.

LEARNING GOAL: State the meaning of test, measurement, and assessment.

*Directions:* In your own words, state the meaning of each of the following terms.

Test:

Measurement:

Assessment:

Note: Answers will vary.

Exercise 2-B

**CLASSROOM ASSESSMENT AND**

**THE INSTRUCTIONAL PROCESS**

LEARNING GOAL: Identifies how classroom assessment functions in the instructional process.

*Directions:* Indicate whether the textbook authors would **agree (A)** or **disagree (D)** with each of the following statements by circling the letter to the left of the statement.

A D 1. The main purpose of classroom assessment is to improve student learning.

A D 2. The first step in both teaching and assessment is to determine the intended student learning outcomes.

A D 3. Classroom assessments should not be given until the end of instruction.

A D 4. Instructional objectives should aid in selecting the types of assessment instruments to use.

A D 5. Assessment results should be used primarily for assigning grades.

LEARNING GOAL: Describes the role of instructional objectives.

*Directions:* Describe the role of instructional objectives in classroom assessment.

Note: Answers will vary.

Exercise 2-C

**MEANING OF PLACEMENT, FORMATIVE, DIAGNOSTIC, AND SUMMATIVE ASSESSMENT**

LEARNING GOAL: Classifies examples of classroom assessment procedures.

*Directions:* For each of the following descriptions, indicate which **type of assessment** is represented by circling the appropriate letter using the following key.

KEY P = Placement F = Formative

D = Diagnostic S = Summative

P F D S 1. An achievement test is used to certify student mastery.

P F D S 2. Students are given a ten-item test to determine their learning progress.

P F D S 3. A teacher observes the process used by a student solving arithmetic problems.

P F D S 4. Algebra students take an arithmetic test on the first day of class.

P F D S 5. Course grades are assigned.

P F D S 6. An assessment is given at the beginning of a new unit.

LEARNING GOAL: State examples of types of assessment procedures.

*Directions:* For each of the following types of assessment state one specific example that illustrates its use in some subject area.

Placement:

Formative:

Diagnostic:

Summative:

Note: Answers will vary.

Exercise 2-D

**MEANING OF CRITERION-REFERENCED**

**AND NORM-REFERENCED INTERPRETATIONS**

LEARNING GOAL: Distinguishes between examples of each type of interpretation.

*Directions:* Indicate whether each of the following statements represents a **criterion-referenced (C)** interpretation or a **norm-referenced (N)** interpretation by circling the appropriate letter.

C N 1. Erik obtained the highest score on the reading test.

C N 2. Carlos can identify all of the parts of a sentence.

C N 3. Connie can type 60 words per minute.

C N 4. John earned an average score on an arithmetic test.

C N 5. Tonia defined only 20 percent of the science terms.

C N 6. Maria set up her laboratory equipment faster than anyone else.

LEARNING GOAL: Writes statements representing each type of interpretation.

*Directions:* Write three statements that represent **criterion-referenced** interpretations and three statements that represent **norm-referenced** interpretations.

Criterion-referenced interpretations:

Norm-referenced interpretations:

Note: Answers will vary.

Exercise 2-E

**MEANING OF CONTRASTING TEST TYPES**

LEARNING GOAL: Distinguishes between contrasting test types.

*Directions:* For each of the following test descriptions indicate which **test type** is represented by circling the letter to the left of each description using the following key.

KEY A = Informal C = Mastery E = Speed G = Objective I = Verbal

B = Standardized D = Survey F = Power H = Subjective J = Performance

A B 1. A test using national norms for interpretation.

C D 2. A test used to measure many skills with just a few items for each skill.

E F 3. A test with many items, most relatively simple.

G H 4. A test on which different students obtain the same score results.

I J 5. A test requiring students to set up laboratory equipment.

LEARNING GOAL: Describes a test representing a given test type.

*Directions:* In the spaces below, write a brief description of a specific test representing each of the test types.

Survey test:

Mastery test:

Power test:

Objective test:

Note: Answers will vary.

**Answers to Student Exercises**

**2-A 2-B 2-C 2-D 2-E**

1. U 1. A 1. S 1. N 1. B

2. U 2. A 2. F 2. C 2. D

3. S 3. D 3. D 3. C 3. E

4. S 4. A 4. P 4. N 4. G

5. U 5. D 5. S 5. C 5. J

6. S 6. P 6. N

**Chapter 2**

**The Role of Measurement and Assessment in Teaching**

1. Classroom assessment of students should primarily focus on which of the following?

1. behavior
2. grading
3. learning
4. feedback

2. Which of the following terms is the most limited?

1. Assessment
2. Measurement
3. Testing
4. Quantitative description

3. Which of the following forms of assessment is the most effective way to determine whether students are making satisfactory progress?

1. diagnostic
2. formative
3. norm-referenced
4. summative

4. Measurement always involves which of the following?

1. numbers
2. testing
3. performance
4. value judgments

5. When teachers use tests and assessments in the classroom, the highest priority should be given to which of the following factors?

1. assigning course grades
2. improving instruction
3. maintaining adequate school records
4. reporting student progress to parents

6. Which of the following is one of the most important issues to consider when selecting an assessment technique?

1. accuracy
2. convenience
3. objectivity
4. relevance

7. The first step in measuring student achievement is to determine the

1. date of testing
2. difficulty of the test
3. current student averages
4. method of assessment

8. Measures of maximum performance most likely would include which of the following?

1. mid-term tests
2. attitude scales
3. student journals
4. personality measures

9. Which of the following would be evaluated by using a measure of typical performance?

1. Arithmetic computation
2. Arithmetic problem solving
3. Writing a friendly letter
4. Reading comprehension

10. Which of the following methods of assessment would most likely be given at the beginning of instruction?

1. Contextual
2. Formative
3. Diagnostic
4. Summative

11. Formative assessment is used primarily for which of the following purposes?

1. grading students
2. monitoring student progress
3. placing students in groups
4. selecting students for awards

12. Summative assessments are most appropriate for which of the following?

1. determining the extent to which instructional goals have been
2. achieved
3. diagnosing student strengths and weaknesses
4. measuring entry learning skills in students from various backgrounds
5. measuring progress during learning

13. Assessments may be classified as norm-referenced and criterion-referenced on the basis of the types of

1. directions used.
2. interpretations to be made.
3. learning outcomes measured.
4. test items used.

14. Which of the following types of assessments would most likely be norm-referenced?

1. Diagnostic
2. Mastery goal attainment
3. Readiness
4. College entrance exam

15. Which of the following factors is likely to differ when constructing norm-referenced and criterion-referenced tests?

1. Arrangement of items
2. Item difficulty
3. Types of items
4. Relevance to objectives

16. Which of the following is most likely to be used in a criterion-referenced interpretation?

1. Average score in a group
2. Highest score in a group
3. Percentage correct score out of 20
4. Percentile score of 80

17. Norm-referenced and criterion-referenced tests are best viewed as

1. standardized tests.
2. similar tests with similar intents.
3. two different types of tests.
4. valid measures of student learning.

18. Which of the following best represents an untimed test that has items arranged in increasing order of difficulty?

1. Diagnostic test.
2. Standardized test.
3. Performance assessment.
4. Power test.

19. Which of the following tests is likely to measure many skills with only a few items for each skill?

1. Diagnostic test
2. Mastery test
3. Performance assessment
4. Survey test

20. A test is referred to as objective when it meets which of the following criteria?

1. Different scorers obtain the same results
2. It is constructed using a variety of question types
3. It measures a clearly defined set of standards
4. There is a standard procedure for interpreting the results

21. Which of the following would best describe most teacher-made tests?

1. Informal, power.
2. Formal, speed.
3. Standardized, power.
4. Standardized, speed.

22. Which of the following represents a norm-referenced interpretation?

1. Henry wrote over 500 words for each of his essay questions.
2. Jane defined 70 percent of the items correctly.
3. Bruce’s score was near the top of the class.
4. Emily completed 30 of the 40 math problems correctly.

23. Mr. Rich is a new teacher and is concerned about his class understanding the material being taught. Which of the following types of assessment would best monitor his instruction?

1. A pretest at the beginning of the class.
2. Frequent class quizzes.
3. Standardized achievement tests.
4. Aptitude tests.

**Chapter 2: Answer Key**

1. C

2. C

3. B

4. A

5. B

6. D

7. D

8. A

9. C

10. C

11. B

12. A

13. B

14. D

15. B

16. C

17. C

18. D

19. D

20. A

21. A

22. C

23. B