

TEST AND MEASUREMENT

Dr. Sudip Chaudhuri

M. Sc., M. Tech., Ph.D. (Sc.) (SINP, Cal), M. Ed.
CSIR-UGC NET, WBCSC SLET, I.I.T. GATE

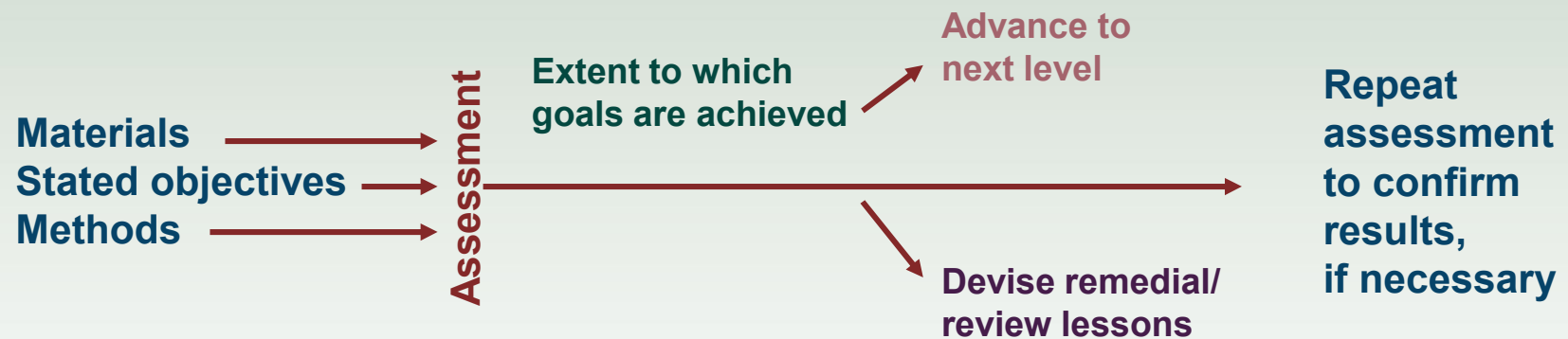
Assistant Professor-Stage-3 / Reader

Gandhi Centenary B.T. College, Habra, India,
Honorary Researcher, Saha Institute of Nuclear Physics, Kolkata

chaudhurisudip@yahoo.co.in

The Integration of Teaching and Assessment Activities

Figure 11.1



Spelling: Scoring Criteria and Standards

Figure 11.3

Accuracy	(0-1)	0 = incorrect spelling 1 = correct spelling Exemplary 90–100%, Satisfactory 70–89%, Inadequate 0–69%
Usage	(0-2)	0 = not used or used incorrectly 1 = acceptable basic use 2 = elaborative use (enriched vocabulary and language use, adjectives, etc.) Example: ate (0) He had ate books. (1) My dog ate his food. (2) She ate the delicious meal her father prepared. Exemplary 90–100%, Satisfactory 50–89%, Inadequate 0–49%
Punctuation	(0-3)	0 = no beginning capital letter or ending mark 1 = either beginning OR ending 2 = both beginning and ending 3 = both, plus additional punctuation (quotation marks, commas, etc.) Exemplary 90–100%, Satisfactory 67–89%, Inadequate 0–66%
Legibility	(0-2)	0 = generally illegible (majority) 1 = acceptable 2 = cursive, no trace overs Exemplary 90–100%, Satisfactory 50–89%, Inadequate 0–49%

Analytic Scoring Criteria for a Written Communication

Figure 11.7

CRITERIA FOR ANALYTICAL SCORING

	1	2	3	4	5
ORGANIZATION	Little or nothing is written. The essay is disorganized, incoherent, and poorly developed. The essay does not stay on the topic.		The essay is not complete. It lacks an introduction, well-developed body or conclusion. The coherence and sequence are attempted, but not adequate.		The essay is well-organized. It contains an introductory, supporting, and concluding paragraph. The essay is coherent, ordered logically, and fully developed.
SENT. STR.	The student writes frequent run-ons or fragments.		The student makes occasional errors in sentence structure. Little variety in sentence length or structure exists.		The sentences are complete and varied in length and structure.
USAGE	The student makes frequent errors in word choice and agreement.		The student makes occasional errors in word choice or agreement.		The usage is correct. Word choice is appropriate.

From Adams County School District #12, 11285 Highline Dr., Northglenn, CO 80203.

Analytic Scoring Criteria for a Written Communication

Figure 11.7 (Continued)

CRITERIA FOR ANALYTICAL SCORING

	1	2	3	4	5
MECHANICS	The student makes frequent errors in spelling, punctuation, and capitalization.		The student makes an occasional error in mechanics.		The spelling, capitalization, and punctuation are correct.
FORMAT	The format is sloppy. There are no margins or indentations. Handwriting is inconsistent.		The handwriting, margins, and indentations have occasional inconsistencies - no title or inappropriate title.		The format is correct. The title is appropriate. The handwriting, margins, and indentations are consistent.

From Adams County School District #12, 11285 Highline Dr., Northglenn, CO 80203.

Portfolios

Figure 11.8

Painting PORTRAITS with PORTFOLIOS

Look for patterns which allow you to discover...

- what students are attempting to achieve
- if students are being successful
- what changes students may need to make
- what students have learned
- how students view learning
- how students approach learning
- what skills and strategies students use
- what kind(s) of judgments students make
- what type(s) of learning students value
- what expectations exist for future learning
- what conditions enhance learning
- what instructional factors influence or alter learning

You may also discover clues as to students'...

- interests
- persistence
- cooperativeness
- confidence
- habits
- curiosity
- initiative
- willingness to take risks
- independence
- creativeness

Comparison of Teacher-Constructed and Standardized Tests

Table 11.1

	Standardized Achievement Tests	Teacher Constructed Achievement Tests
Learning outcomes and content measured	Measure outcomes and content common to majority of U.S. schools. Tests of basic skills and complex outcomes adaptable to many local situations; content-oriented tests seldom reflect emphasis or timeliness of local curriculum.	Well adapted to outcomes and content of local curriculum. Flexibility affords continuous adaptation of measurement to new materials and changes in procedure. Adaptable to various-sized work units. Tend to neglect complex learning outcomes.
Quality of test items	General quality of items high. Written by specialists, pretested, and selected on basis of effectiveness.	Quality of items unknown unless test item file is used. Quality typically lower than that of standardized because of teacher's limited time and skill.
Reliability	Reliability high, commonly between .80 and .95; frequently above .90.	Reliability usually unknown; can be high if carefully constructed.
Administration and scoring	Procedures <i>standardized</i> ; specific instructions provided.	Uniform procedures favored but may be flexible.
Interpretation of scores	Scores can be compared with those of norm groups. Test manual and other guides aid interpretation and use.	Score comparisons and interpretations limited to local school situation.

Reprinted with the permission of Simon & Schuster, Inc. from the Macmillan College text *Measurement and Evaluation in Teaching*, 7th ed. by Norman E. Gronlund and Robert L. Linn. Copyright © 1995 by Macmillan College Publishing Company.

The Employability Skills Profile for Organizing Portfolio Skills

Table 11.6

Academic Skills	Personal Management Skills	Teamwork Skills
<p>Read and understand written materials</p> <p>Understand charts and graphs</p> <p>Understand basic math</p> <p>Use mathematics to solve problems</p> <p>Use research and library skills</p> <p>Use specialized knowledge and skills to get a job done</p> <p>Use tools and equipment</p> <p>Speak in the language in which business is conducted</p> <p>Write in the language in which business is conducted</p> <p>Use scientific method to solve problems</p>	<p>Attend school/work daily and on time</p> <p>Meet school/work deadlines</p> <p>Develop career plans</p> <p>Know personal strengths and weaknesses</p> <p>Demonstrate self-control</p> <p>Pay attention to details</p> <p>Follow written and oral instructions</p> <p>Follow written and oral directions</p> <p>Work without supervision</p> <p>Learn new skills</p> <p>Identify and suggest new ways to get the job done</p>	<p>Actively participate in a group</p> <p>Know the group's rules and values</p> <p>Listen to other group members</p> <p>Express ideas to other group members</p> <p>Be sensitive to the group members' ideas and views</p> <p>Be willing to compromise if necessary to best accomplish the goal</p> <p>Be a leader or a follower to best accomplish the goal</p> <p>Work in changing settings and with people of differing backgrounds</p>

From Stemmer et al. (1992). *Educational Leadership*, 49, 78-81. (pub. ASCD).

Comparison of Various Types of Assessment

Table 11.7

	Objective Test	Essay Test	Oral Question	Performance Assessment
Purpose	Sample knowledge with maximum efficiency and reliability	Assess thinking skills and/or mastery of a structure of knowledge	Assess knowledge during instruction	Assess ability to translate knowledge and understanding into action
Typical exercise	Test items: Multiple-choice True/false Fill-in Matching	Writing task	Open-ended question	Written prompt or natural event framing the kind of performance required
Student's response	Read, evaluate, select	Organize, compose	Oral answer	Plan, construct, and deliver original response
Scoring	Count correct answers	Judge understanding	Determine correctness of answer	Check attributes present, rate proficiency demonstrated, or describe performance via anecdote

From: R.J. Stiggins, "Design and Development of Performance Assessments," EDUCATIONAL MEASUREMENT: ISSUES AND PRACTICE, 1987 6,3, p. 35. Copyright © 1987 by National Council on Measurement in Education. Reprinted by permission of the publisher.

Comparison of Various Types of Assessment

Table 11.7 (Continued)

	Objective Test	Essay Test	Oral Question	Performance Assessment
Major advantage	Efficiency—can administer many items per unit of testing time	Can measure complex cognitive outcomes	Joins assessment and instruction	Provides rich evidence of performance skills
Potential sources of inaccurate assessment	Poorly written items, overemphasis on recall of facts, poor test-taking skills, failure to sample content representatively	Poorly written exercises, writing skill confounded with knowledge of content, poor scoring procedures	Poor questions, students' lack of willingness to respond, too few questions	Poor exercises, too few samples of performance, vague criteria, poor rating procedures, poor test conditions
Influence on learning	Overemphasis on recall encourages memorization; can encourage thinking skills if properly constructed	Encourages thinking and development of writing skills	Stimulates participation in instruction, provides teacher immediate feedback on effectiveness of teaching	Emphasizes use or available skill and knowledge in relevant problem contexts

From: R.J. Stiggins, "Design and Development of Performance Assessments," EDUCATIONAL MEASUREMENT: ISSUES AND PRACTICE, 1987 6,3, p. 35. Copyright © 1987 by National Council on Measurement in Education. Reprinted by permission of the publisher.

Comparison of Various Types of Assessment

Table 11.7 (Continued)

	Objective Test	Essay Test	Oral Question	Performance Assessment
Keys to success	Clear test blueprint or specifications that match instruction, skill in item writing, time to write items	Carefully prepared writing exercises, preparation of model answers, time to read and score	Clear questions, representative sample of questions to each student, adequate time provided for student response	Carefully prepared performance exercises; clear performance expectations; careful, thoughtful rating; time to rate performance

From: R.J. Stiggins, "Design and Development of Performance Assessments," EDUCATIONAL MEASUREMENT: ISSUES AND PRACTICE, 1987 6,3, p. 35. Copyright © 1987 by National Council on Measurement in Education. Reprinted by permission of the publisher.