TESTING AND MEASUREMENT-AN OVERVIEW

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INTRODUCTION

How often we question the proper functioning of the bathroom scale when it gives a higher reading than we expect? How frequently we challenge the accuracy of the speed gun when we are stopped for a speeding violation? These two questions reflect how often all of us question most of the measures we encounter in the aspects of our daily lives, particularly whenever they yield results inconsistent with our hopes or expectations. But when achievement test results turn out to be lower than expected, the critical finger rarely is pointed first at the tests themselves.

ACHIEVEMENT TESTS

An achievement test is a systematic procedure for determining the amount a student has learnt. The main purpose of an achievement test is to assess how far a student has achieved specific objectives determined by the teacher or the institution of learning. Achievement testing is the most widely used method of assessing student achievement in classroom instruction. The process of realizing this aim is not always an easy one. Despite the widespread use of achievement testing and its importance in evaluating and guiding student learning, many teachers receive little or no training in how to construct good achievement tests. It is thus important that teachers have the knowledge and skill in constructing achievement tests so that these are valid and reliable.

Teachers have to ensure that the questions constructed truly measure the ability, skill or the desired performance which the teacher intends to measure. Every term and sentence used in the questions must be specific and accurate so that the student is not faced by any ambiguity while reading, comprehending and then answering the questions. The students' learning outcomes provide the basis of student evaluation by the teachers. The objective of teaching is to change the learning outcomes and to measure these changes. As with teaching, the main purpose of testing is to improve learning. In classroom teaching, a test becomes one of the tools used by teachers to form judgements on the position of students in the class and for evaluating student achievement. What is the conclusion that we can draw if a student receives only 20% in the English paper which he took for the very first time? Does this show that the student is weak in English or is there a possibility that somethhing is wrong with the test itself?

Levine argued (1976) that the achievement test has become so uncritically accepted among educators and the general public that its validity "as a measure of educational accomplishments is virtually unquestioned." Levine's argument seems to be consistent with the current practice using standardized achievement tests in schools and in institutes of higher learning. The standardized achievement test has become an institution inseparable from the school programs and activities it has been designed to serve.

However, it must be stated that good standardized achievement tests will continue to be required to help educators monitor the effectiveness of their efforts and to report the outcomes of those efforts to those to whom the educators are accountable. Careful test selection and wise test-score interpretation and use can make positive contributions to fulfilling these needs.

Planning of an achievement test

Test items cannot be constructed without any prior planning. Before a teacher constructs an achievement test, she should plan it systematically according to the following series of steps:

a) determine the purpose of the test
b) identify the intended learning outcomes
c) prepare the test specifications
d) construct relevant test items

The first consideration in test planning is therefore to determine the type of test to be prepared. This will help clarify what is to be measured and will aid in stating the test specifications in such precise terms that the test items can be constructed to call forth the desired performance. The learning outcomes to be measured by a test are most useful in test construction when they are stated as terminal performance that is observable. That is, they should clearly indicate the student performance to be demonstrated at the end of the learning experience. Tests can be used in an instructional program to assess entry behaviour (placement test), monitor learning progress (formative test), diagnose learning difficulties (diagnostic test) and measure performance at the end of instruction (summativetest). The learning outcomes measured by a test should reflect the objectives of instruction. Hence it is firstly essential to identify those instructional objectives that are to be measured by the test and then make certain that they are stated in a manner that is useful for testing.

Test planning should be done by building a 'Table of Specifications' or the 'Blueprint' which incorporates the content to be tested and the level at which it is situated in the cognitive domain of the taxanomy. The number and percentage of questions for every topic tested in a particular subject and every level of the cognitive domain of the taxanomy must also be shown in the Table of Specifications. The specific

learning outcomes for every course content outlined and the taxanomy level must also be stated.

The construction of a set of relevant test items is greatly simplified if the intended learning outcomes have been clearly defined and the test specifications carefully prepared. The quality of the test will then depend on how closely the test maker can match the specifications.

The two most important characteristics of a well constructed achievement test are validity and reliability. Most of our efforts in test construction are directed toward building tests that are highly valid and reliable.

CONCLUSION

There is currently much testing in education, but tests seldom contribute as much as they could to effective instruction. How much is learned in any particular course of instruction depends largely on how much the students want to learn and on how hard the teacher works to help them to learn it. These efforts by the students and by teachers depend, in turn, on the immediate and ultimate rewards that seem likely to result from their efforts. The increase in test use in recent years has not been accompanied by a proportionate increase in overall test quality or improved test-score interpretation. Tests can be used to provide recognitions and rewards for success in learning. They can be used to motivate and direct efforts to learn. They can be used, in short, to contribute substantially to effective instruction.

PRINCIPLES OF ASSESSMENT

1. The teacher takes responsibility for assessment within her own classroom. Better than anyone else, the experienced teacher knows her children "wholistically". To put it simply, the teacher learns about the learner first - this helps her to select tasks for learners which will provide information about a child's current processes, performances and potential.

2. Assessment procedures and materials should not present an entirely new face nor pose new problems to an 'at risk' child during assessment.

3. Assessment is something that does not happen only in formal, pre-determined circumstances. Indeed, rational and penetrating assessment may happen every time a teacher hears a child read, discuss a story and so on.

4. The most valid and reliable assessments are those that enable the teacher to compare a child's performance against his or her previous performances on the same tasks, not with someone else's on different or unfamiliar tasks.

(Max Kemp Nov. 1986)

BIBLIOGRAPHY

1. *Gronlund, Norman E., Constructing Achievement Tests; Prentice-Hall, 1968.*

2. *Bloom, B.S., Madaus, G.F., Hastings, J.T., Evaluation To Improve Learning; Mc Graw Hill Book Co., 1981.*

3. *Ebel, Robert L., Frisbie, David A., Essentials Of Educational Measurement; Prentice-Hall, 1986.*