

MEASUREMENT AND EVALUATION:
CRITERION VERSUS NORM-REFERENCED TESTING

Source: Huitt, W. (1996). Measurement and evaluation: Criterion- versus norm-referenced testing. *Educational Psychology Interactive*. Valdosta, GA: Valdosta State University. Retrieved [date], from <http://www.edpsycinteractive.org/topics/measeval/crnmref.html>

Many educators and members of the public fail to grasp the distinctions between criterion-referenced and norm-referenced testing. It is common to hear the two types of testing referred to as if they serve the same purposes, or shared the same characteristics. Much confusion can be eliminated if the basic differences are understood.

The following is adapted from: Popham, J. W. (1975). *Educational evaluation*. Englewood Cliffs, New Jersey: Prentice-Hall, Inc.

Dimension	Criterion-Referenced Tests	Norm-Referenced Tests
Purpose	<p>To determine whether each student has achieved specific skills or concepts.</p> <p>To find out how much students know before instruction begins and after it has finished.</p>	<p>To rank each student with respect to the achievement of others in broad areas of knowledge.</p> <p>To discriminate between high and low achievers.</p>
Content	<p>Measures specific skills which make up a designated curriculum. These skills are identified by teachers and curriculum experts.</p> <p>Each skill is expressed as an instructional objective.</p>	<p>Measures broad skill areas sampled from a variety of textbooks, syllabi, and the judgments of curriculum experts.</p>
Item Characteristics	<p>Each skill is tested by at least four items in order to obtain an adequate sample of student performance and to minimize the effect of guessing.</p> <p>The items which test any given skill are parallel in difficulty.</p>	<p>Each skill is usually tested by less than four items.</p> <p>Items vary in difficulty.</p> <p>Items are selected that discriminate between high and low achievers.</p>
Score Interpretation	<p>Each individual is compared with a preset standard for acceptable achievement. The performance of other examinees is irrelevant.</p> <p>A student's score is usually expressed as a percentage.</p> <p>Student achievement is reported for individual skills.</p>	<p>Each individual is compared with other examinees and assigned a score--usually expressed as a percentile, a grade equivalent score, or a stanine.</p> <p>Student achievement is reported for broad skill areas, although some norm-referenced tests do report student achievement for individual skills.</p>

The differences outlined are discussed in many texts on testing. The teacher or administrator who wishes to acquire a more technical knowledge of criterion-referenced test or its norm-referenced counterpart, may find the text from which this material was adapted particularly helpful.

Additional resources:

- Bond, L. (1996). Norm- and criterion-referenced testing. *Practical Assessment, Research & Evaluation*, 5(2). Retrieved September 2002, from <http://ericae.net/pare/getvn.asp?v=5&n=2>.
- Linn, R. (2000). Assessments and accountability. *ER Online*, 29(2), 4-14. Retrieved September, 2002, from <http://www.era.net/pubs/er/arts/29-02/linn01.htm>.
- Sanders, W., & Horn, S. (1995). Educational assessment reassessed: The usefulness of standardized and alternative measures of student achievement as indicators for the assessment of educational outcomes. *Education Policy Analysis Archives*, 3(6). Retrieved September 2002, from <http://olam.ed.asu.edu/epaa/v3n6.html>.