



A Testing Brief
Types of Tests

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What is a test and what are some of the types of tests in use today?

A test is, in its simplest terms, a sample of behavior. The behavior being tested, sometimes called the construct, may include a person's learning, potential to learn, or current mental state. In addition, a test is usually standardized so that extraneous and irrelevant factors can be ruled out when evaluating test results. This standardization typically includes the format and style of the test booklets and answer documents, administration time, allowable administration accommodations, permissible modes of administration as well as other factors that might impact a person's responding.

There are many types of tests and one can classify tests in many different ways including but not limited to: group, individual, intelligence, aptitude, vocational, clinical, educational, and achievement. Educational testing is our primary area of interest. We can further classify most of our business into achievement testing. In educational testing today, a test is typically a measure of student learning given a set of academic standards. There are several types of tests that a student, teacher, or parent might encounter in an educational setting today.

Diagnostic Tests: are usually administered on an individual basis. That is, the test is administered to a single student in a one-on-one basis. These tests are very good for determining problems in learning for individual students. An example would be the Woodcock Johnson III (WJ-III) series. Typically, these types of tests are administered by the school psychologist, counselor, or someone trained in its administration and scoring.

Formative Tests: can be administered to a group of students or to individual students. These tests can be developed locally or purchased from various test vendors. Typically these tests are related to small units of instruction. They can be given in a pre-post test method or a post test only method. The pre-post method typically has the students take a form of the test before instruction and a different test form after instruction is given. The post only method administers a test form after instruction. The purpose is to inform instruction before moving to the next unit of instruction. That is, did the students learn the material well enough, if students did not, typically teachers would go back and instruct the weak areas and test again. This type of test is sometimes referred to a diagnostic test because of the increase *instructional sensitivity*.

Summative Tests: can be administered to groups of students or to individual students. These tests are typically custom developed for state wide testing programs but there are off-the-shelf test products available. The purpose of summative tests is simply to measure how much of specific set of content a student has learned. Summative test results may be used for program

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decisions about curriculum effectiveness, comparing various approaches to instruction, comparing school or districts, and for accountability purposes. Under the No Child Left Behind Act (NCLB), summative tests used for accountability should provide diagnostic information. This is a bit of a misnomer as most summative tests provide information on student achievement at fairly large granular level compared to truly diagnostic tests like the WJ-III. Summative tests can be a norm-referenced test or a criterion-referenced test. Summative indicates how the test score(s) will be used and the decisions that may flow from the aggregated data.

Criterion-Referenced Tests (CRT): With the advent of standards-based education in the 1990s, criterion-referenced tests began to be the predominant test developed for measuring student achievement. With the passage of the No Child Left Behind Act (2001), CRTs became the primary means of measuring student achievement for state accountability. Sometimes these tests are referred to as criterion-reference tests or as standards-based tests. These tests are typically developed to measure a specific set of *standards* or *objectives*. These standards could be fairly global (e.g., mathematical reasoning or reading literature) or quite specific (e.g., student's will be able to convert between metric and standard units of length or student's will identify, understand, and explain the author's purpose and perspective in writing his/her composition). Regardless of the level of specificity of the criterion, the test is developed and/or selected so that the items and test design match closely the content a student has the *opportunity to learn*.

Norm-Referenced Tests (NRT): With a long history of research and development behind them, norm-referenced tests were used as the primary method of measuring student achievement prior to the 1990s. Norm-referenced tests; however, lost favor with the advent of standards-based education and the passing of NCLB. The major difference between a CRT and NRT is that the norm-referenced test is developed to a general *test design* that may or may not be similar to a state's academic standards. This design usually relates to some theoretical construct of what students at a given grade should be able to know and do in a given content area. The scores from NRTs also differ from those of a CRT in that students taking the test are compared to a group of students used to establish the tests score scales. That is, students are compared to a *norm group* rather than to some criterion level of ability on a known set of standards or objectives. Thus, an average student would receive a score on an NRT somewhere in the middle of the score scale. That is, the student should score around the 50th *percentile*.

Augmented Norm-Referenced Tests (NRT-A): This is a relatively new type of test. This test is a hybrid of the NRT and the CRT and provides both CRT and NRT scores. NRT-As are now being allowed under NCLB but the federal

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government through its peer review process is closely monitoring the NRT-A to ensure it meets the requirements of the NCLB testing requirements.