Using and Understanding Test Scores

By:

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Since the beginning of public schooling, educators have used some type of testing to measure student's skill. The product of testing is a score, a yardstick that compares an individual student with others and/or documents a student's progress. Teachers and other educators use test scores in a variety of ways:

- To provide a snapshot or profile of the entire class in a given subject such as reading;
- To identify students with specific strengths and weaknesses who might benefit from different instruction;
- To sort out a group for additional testing or special help;
- To evaluate the effectiveness of instruction;
- To illustrate student progress over time;
- To compare individual students or groups of students with some national or local standards.

Types of Tests and Test Scores

Most tests used in schools are either norm-referenced or criterion referenced.

Norm-referenced Tests

Norm-referenced tests compare an individual's performance to that of his or her classmates, thus emphasizing relative rather than absolute performance. Scores on norm-referenced test indicate the student's ranking relative to that group, such as that student's performance to other students his or her age or grade level. Typical scores can be given as follows:

- **Percentiles** – A percentile is a score that indicates the rank of the student compared to others (same age or same grade), using a hypothetical group of 100 students. A percentile of 25, for example, indicates that the student's test performance equals or exceeds 25 out of 100 students on the same measure; a percentile of 87 indicates that the student equals or surpasses 87 out of 100 (or

87% of) students. Percentiles are derived from raw scores using the norms obtained from testing a large population when the test was first developed. Percentiles are probably the most commonly used test score in education.

- **Stanines** – Stanines are essentially groups of percentile ranks, with the entire group of scores divided into 9 parts, with the largest number of individuals falling in the middle stanine scores, fewer students at the extremes. Few tests in common use today report stanine scores. These scores can be useful in understanding the relative range of a student's performance.

- **Standard Scores** – A standard score is also derived from raw scores using the normed information gathered when the test was developed. Instead of reflecting a student's rank compared to others, standard scores indicate how far above or below the average (mean) and individual's score falls, using a common scale, such as one with and average of 100. Standard scores also take variance into account, or the degree to which scores typically will deviate from the average score. Standard scores can be used to compare individuals from different grades or age groups because all scores are converted to the same numerical scale. Most intelligence tests and many achievement tests use some type of standard scores.

- **Age/Grade Equivalent Scores** – Some tests provide age or grade equivalent scores. Such scores indicate that the student has attained the same score (not skills) as an average student of that age or grade. For example, if Sally obtains a grade equivalent score of 3.6 on a reading comprehension test, this means that she obtained the same score as the typical student in the sixth month of third grade. Sally may or may not have acquired the same skills as other third graders. Age/grade scores seem to be easy to understand but are often misinterpreted and many educators discourage their use.

Criterion-referenced Tests

Criterion-referenced tests are used to measure student mastery of instructional objectives or curriculum (absolute performance), rather than to compare one student with another or to rank students. They are often used as end-of-unit tests in textbooks or as a benchmark to identify areas of strength or weakness in a given curriculum, readiness to move on to a different level of instruction, etc. Raw scores are used to reflect the number of correct responses, the number of completed objectives, etc. Such tests will often use percentages to reflect the level of mastery of a given instructional objective, such as setting a goal of 90% correct. Raw scores are converted to a percent correct.

Reporting Test Results To Parents

Parents are often overwhelmed by the test reports they receive from school personnel. In order to help parents understand test results there has to be good communications between parents and teachers. Student progress should be reported clearly, respectfully, and accurately. You should expect your school to provide test results that follow these guidelines:

- Simple, clear language free from educational and test jargon.
- Explanations of the purpose(s) of the tests used.
- Brief descriptions of the test procedures.
- Scores appropriate to the test's purpose.
- Clear explanations of the meaning of scores.
- Corroborating information from other sources.
- Opportunities for parents to ask questions about scores, testing, etc.
- Information about how the test results will be used.

Raw scores and percentiles are generally the most easily explained and understood. A visual reference such as a chart or graph may also be helpful, particularly in explaining the concept of "average". Numbers can be misleading and in some cases frightening. It is important that parents receive enough information to understand the limitations of any test or scores and that they receive a comprehensive picture of their child's performance, not just test results.

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