**Boehm Test of Basic Concepts–Revised (BTBC-R)**

The Boehm Test of Basic Concepts–Revised (Boehm, 1986) differs somewhat in content from the original version. There are seven new items, one item was divided into two items, two items were deleted, and four items were moved to a downward extension of the test. Like the earlier edition, the BTBC-R is a group-administered, norm-referenced device that assesses knowledge of 50 abstract, relational concepts that occur frequently in preschool and primary curricula. The concepts are "both fundamental to understanding verbal instruction and essential for early school achievement" (Boehm, 1986, p. 1). The BTBC-R is intended primarily for use in identifying children who have not mastered the concepts and in identifying those concepts that a teacher should systematically teach. In addition, Boehm states that the test may be used as part of a battery to identify children who are at risk for learning problems and to evaluate the effectiveness of instruction in the concepts assessed. The test is available in two forms, C and D.

The 50 concepts are arranged in order of increasing difficulty in two booklets. Each booklet takes about 15 to 20 minutes to administer and includes three practice items. The testing format requires children to mark the picture that best answers the question read by the teacher (for example, "Mark the one where the boy is next to the horse"). The items can be categorized as spatial (for example, "next to"), quantitative (for example, "few"), temporal (for example, "after"), and miscellaneous (for example, "other").

*Scores*
Two types of scores are provided: pass or fail on each item and a percentile rank for the total score. In addition, tables give the percentage of children passing each item. The interpretive materials for the two types of scores are similar in several respects: Both provide normative data for kindergarten, grade 1, and grade 2; both provide separate norms for the beginning of the year and the end of the year; and both provide a means of comparing a student's performance with that of the total sample and that of other students at the same socioeconomic level.

Forms C and D have separate sets of norms for the percentage of students passing each item. The percentile norms, however, are for Forms C and D combined. This is troublesome because Forms C and D were standardized separately and were not equated for variations in the samples. Although Boehm claims that the two samples were selected to be comparable in ability, no specifics are given.

Norms

The standardization sample was intended to be broadly representative of the U.S. population, although it appears that only children from public school who attended general education classes were included. School-district size and geographic area were the bases of stratification. The obtained data were statistically weighted to make the sample conform to the national population with respect to the stratification variables.

Boehm claims that her sample is also representative of the socioeconomic levels of schools in the United States. "Participating districts were asked to select groups of
school buildings that, together, would provide a sample representative of the range of schools within the districts" (p. 45). Her data are not convincing, however.1

Reliability

Although not presented as reliability data in the test manual, information about alternate-forms reliability, based on the performances of 625 children, indicates poor reliability: .82 at kindergarten, .77 at first grade, and .65 at second grade. Twenty-four split-half reliability estimates (one for each form, grade/socioeconomic class, and total sample) are also presented. These range from .55 to .87; only ten coefficients exceed .80. Stability estimates (with an interval of one school year) are also given for each form at each grade. The six coefficients range from .55 to .88, with only two of the six exceeding .80.

Validity

Because the BTBC-R is essentially a specialized achievement test, its content validity is of primary concern. Substantial evidence is presented that the words in the test are commonly used, and some evidence is presented that they are important. Some evidence of predictive validity is also presented. The BTBC-R correlates modestly with achievement, assessed after one year. Boehm presents 17 coefficients of correlation with achievement tests that range from .38 to .64 (median .4). No evidence is presented,

1 To estimate the socioeconomic status (SES) of her sample, Boehm used the percentage of children in each school who received subsidized lunches. Schools were classified as high SES if no more than 10 percent of the students were eligible for subsidized lunches and as middle SES if 11–50 percent of the students were eligible.
however, to show that the BTBC-R can identify children who are at risk for learning problems.

Seven pages of the BTBC-R manual are devoted to a review of validity studies conducted with the BTBC. Because the content of the two devices is so similar—there is about 80 percent overlap between the two devices—many of these studies are applicable to the BTBC-R. Reported studies indicate that the BTBC had some criterion-related validity for achievement, readiness, and language and was sensitive to instruction in the concepts tested; the same studies found no gender differences but did find differences among SES and ethnic groups.

Summary

The BTBC-R is a group-administered test that assesses knowledge of 50 relational words. Although there is some evidence for the importance of the words (and hence for use of the test as a criterion-referenced device), the device has inadequate reliability and norms for purposes other than screening.