

# Output and Interpretation

## Informational Messages

Anyone wishing to calculate discrepancy using the Utah formula for LD determination must have access to three critical values. They should know the reliability of each test score and the correlation between those scores.

In many cases, these data have been made available by test publishers. When these data are available, ESTIMATOR uses them. Often, for a variety of reasons, these data are not available. When they are not, ESTIMATOR uses default values.

## Estimated Data

In certain cases, exact data on a test may not be known; however, an estimate can be made. For example, if a test's reliability at age 8 is known to be .95 and its reliability at age 10 is known to be .95, it is reasonable to assume that its reliability for age 9 is about .95. ESTIMATOR sends the following message to let the user know when estimates, rather than published data, are being used:

**“Exact data is not currently available on the internal reliability of the [Test Name] for the specified age.”**

or

**Exact data is not currently available on the correlation between the [Test Name] and the [Test Name] for the specified age.**

**The estimated value of [Value] is being used for the reliability correlation of this/these test/tests.**

## Averaged Data

There are rare cases when there is reliability or correlation data for periods of less than 1 year. In those cases, since ESTIMATOR currently stores that data for 1 year intervals, ESTIMATOR uses the average of the values. ESTIMATOR lets the user know when an averaged value is being used by sending the following message:

**Exact data is not currently available on the internal reliability of the [Test Name] for the specified age.**

or

**Exact data is not currently available on the correlation between the [Test Name] and the [Test Name] for the specified age.**

**The averaged value of [Value] is being used for the reliability / correlation of this/these test/tests.**

## Default Data

There are cases when we have no idea what the correlation between two tests is. In those cases, ESTIMATOR uses a default value of .50. ESTIMATOR lets the user know when a default value is being used by sending the following message:

**Data is not currently available on the correlation between the [Test Name] and the [Test Name] for the specified age.  
The default value of [Value] is being used for the correlation of these tests.**

## Discrepancy Cutoff Check

For any pair of tests entered, ESTIMATOR checks to determine if it is possible for the student to score low enough on the achievement test to reach the cutoff score needed to be 93 percent confident there is a discrepancy between actual and predicted achievement. To illustrate, consider a student age, 6 years, 0 months who is administered the Wechsler Intelligence Scale for Children - Fourth Edition (WISC-IV) and the Reading Comprehension Tests of the Woodcock-Johnson III Tests of Achievement (WJ-III). With a WISC-IV Full Scale IQ score of 90, ESTIMATOR determines that to reach the 93 percent cutoff on the WJ-III Reading Comprehension scale the student would need a score of 76. It next checks to determine the lowest possible score a student 6 years, 0 months can attain on the WJ-III Reading Comprehension scale. This score is determined to be 81; a student 6 years, 0 months with a raw score of 0 on the WJ-III Reading Comprehension scale attains a Reading Comprehension Standard Score of 81. Comparing the cutoff score, 76, with the lowest attainable score, 81, ESTIMATOR determines it is not possible for the student to reach the 93 percent cutoff score.

ESTIMATOR also checks to see if one can be 95 percent confident that the obtained score is above the lowest possible score. It

does this by adding two standard errors of measurement (SEM) to the lowest possible score and determining if the obtained score is lower than the sum. In the example, the lowest possible score is 81 and the SEM is 2.6. Thus,  $81 + 2 \times 2.6 = 86$ , the score where one can be 95 percent confident a score is greater than the lowest possible score of 81. Since the obtained score of 85 is less than 86, ESTIMATOR concludes one cannot be 95 percent confident the obtained score is above the lowest possible score. When one is 95 percent or more confident the obtained score is above the lowest possible score, one can also be at least 95 percent confident the obtained score is above the 93 percent cutoff score. However, when one cannot be 95 percent confident the obtained score is above the lowest possible score, the possibility of a floor effect arises. One cannot be sure that if another achievement test with a lower floor than the original test was given, that the student would (1) not score below the lowest possible score of the original test, and (2) not score low enough to reach the 93 percent cutoff score. When both of the conditions described above exist, ESTIMATOR sends the message:

For a child of this age, the lowest scaled score on the achievement test administered is above the 93 percent cutoff score. The cutoff score would need to be reached to demonstrate a severe discrepancy. Additionally, there is less than 95 percent confidence that the obtained score is greater than the lowest possible standard score. Therefore, the achievement test is inappropriate for this child and administering another achievement test with a lower floor is indicated (see the Estimator manual for additional explanation).

This check warns decision makers when inappropriately-scaled achievement tests are entered into discrepancy calculations, and helps avoid disqualifying students who might be qualified with more appropriately-scaled achievement tests.

### **Intellectual Versus Learning Disabilities**

Utah Special Education Rules specify that students must score above the intellectual disabilities range, two standard deviations below the mean, on individually administered tests of intellectual ability in order to be classified as learning disabled. When an aptitude (IQ) score within the intellectual disabilities range is input, ESTIMATOR sends the following message:

Utah Special Education Rules specify, "the team must document: ... That the student scored above the intellectual disability range on a standardized, norm-referenced, individually administered measure of intellectual ability." The aptitude (IQ) score entered does not meet this criterion; therefore, classification as a learning disabled student is not advised. [Utah State Board of Education Special Education Rules (2008), (300.309 (4) (h) (ii)), p 51]