



New Hampshire

Department of Education

Suggested Tools for Determining Eligibility for Alternate Assessment (DLM): Cognitive and Adaptive Functioning Criteria For Most Significant Cognitive Disability

A student has the Most Significant Cognitive Disability when the student shows combined impairment across Cognitive and Adaptive functioning that is more than 2.5 standard deviations below age-based averages and the student performs substantially below grade-level expectations on the academic content standards for their grade-level even with the use of accommodations, and there is documented evidence that the student requires extensive, direct individualized instruction and substantial supports to achieve measurable gain across all content areas and settings.

Explanation:

On most valid measures, a standardized scale range is used where a score of 100=average or typical for students of the same age with a standard deviation score of +/- 15.

Range:

Based on the explanation above, standard scores for most students would fall generally between 115-85.

Most Significant Cognitive Disability Range:

This means that for most measures, standardized scores for students with the Most Significant Disability will be:

- Scaled Score of 3.0 Standard Deviations below the Mean = **55**
- Scaled Score of 2.5 Standard Deviations below the Mean = **60**

Scores with potentially clinical levels of impairment would be a Scaled Score 2 Standard Deviations below the Mean = 70.

Most Significant Cognitive Disability Levels:

These levels are based on scores that are more than 2.5 to 3.0 standard deviations below average the age or grade level on **psychometrically valid assessments of cognitive and adaptive functioning** (within the population prevalence range specified by ESSA and DSM-V, which is generally 1% to 1.2% of students or the 2nd percentile or lower).

- Scores that are 2.0 – 2.5 standard deviations below average (2nd to 3rd percentile range) on cognitive functioning measures, may signify clinical significance but alone may not reach the criteria of most significant cognitive disability unless there is additional evidence for a substantial impairment in adaptive behavior functions (2.5 or more standard deviations below average) and documented evidence that the student requires extensive, direct individualized instruction and substantial supports to achieve measurable gain across all content areas and settings.
- It is important to note that standard errors of measurement could adjust the student's true score to a small degree; for valid clinical assessment tools, standard errors usually range from +/- 2 to 3 points, though for non-verbal evaluation measures, they may range from +/- 4 points.
- Using Standardized Scores, where 100 usually represents the average functioning level for the population of students at a given age, and 1 standard deviation usually equals +/- 15 points, (and using the standard error to determine a threshold score), a valid score of less than 60 is safely more than 2.5 standard deviations below average.
- Based on this, standardized scores for **cognitive functioning** of 60 or less can safely be considered most significant.

Valid Cognitive/Intelligence Assessments:

Cognitive/Intelligence Assessments are measures of a student's relatively stable abilities to think, reason, plan, analyze, and synthesize information, and how easily or fluidly a student can organize, comprehend, or recognize patterns, and respond to and use information.

Because cognitive functioning assessments often use verbal communication to administer the instrument, students with hearing, communication, or verbal comprehension impairments, may present as more impaired than their cognitive abilities would suggest. Therefore, to compensate for the potential underestimation bias, a non-verbal or non-processing speed measure of cognitive functioning should be used when there is a reason to believe that the student has a hearing or verbal communication deficit.

Non-verbal measures of cognitive functioning should be used to reduce underestimation bias if:

- Measures of communication or verbal performance standardized scores are 80 or less
- The student receives extensive speech therapy services
- Has documented delays in expressive and/or receptive language
- Has a disability where verbal and communication delays are present
- Is non-verbal
- If English is a second language

Verbal Cognitive Functioning Measures (IQ Tests)

The following are examples of valid measures, but is not an exhaustive list:

WISC-5 (Wechsler Intelligence Scale for Children, 5th Edition)	Full Scale IQ (FSIQ) Mean = 100, Standard Deviation = 15 Subtest Scores Mean = 10, Standard Deviation = 3. (Verbal Comprehension, Visual Spatial, Fluid Reasoning, Working Memory, Processing Speed)
Woodcock-Johnson IV Test of Cognitive Abilities	Full Scale IQ (FSIQ) Mean = 100, Standard Deviation = 15 Subtest Scores Mean = 10, Standard Deviation = 3.
Stanford-Binet Intelligence Scales, 5th Edition	5 sub-dimensions: knowledge, quantitative reasoning, visual spatial processing, fluid reasoning, working memory. (knowledge and quantitative reasoning may conflate cognitive functioning with academic training)
Reynolds Intellectual Assessment Scales, 2nd Edition (RIAS-2)	Shorter test with some flexibility for remote assessment. Has a sub-test of non-verbal intelligence.
Kaufman Assessment Battery for Children, Second Edition (KABC-2)	For ages 3 to 18. Separate measures of fluid cognitive abilities and crystalized cognitive abilities.

Valid Measures of Cognitive Functioning For Younger Students:

WPPSI (Wechsler Preschool and Primary Scale of Intelligence)	Up to age 8. Full Scale IQ (FSIQ) Mean = 100 and Standard Deviation = 15. (A score below 70 is extremely low)
Developmental Assessment for Young Children, 2nd Edition (DAY-2)	Birth to age 5. 5 Domains: cognition, communication, social-emotional development, gross motor, and fine-motor. Standardized scores—Mean = 100 and Standard Deviation = 15.

Non-Verbal Measures of Cognitive Functioning (IQ Tests)

These can be used for students with hearing impairments, some motor impairments, non-verbal students, and communication impairments such as students receiving extensive speech services (more than annunciation and articulation), and students with Autism Spectrum Disorder. The following are psychometrically valid measures of non-verbal cognitive functioning:

Comprehensive Test of Nonverbal Intelligence (CTONI-2)	Standard Score Mean = 100 and Standard Deviation = 15. (Sub-test Mean = 10 with a Standard Deviation = 3. Sub-scores for pictorial, categorical classification, sequential reasoning, and analogical reasoning.
Test of nonverbal Intelligence (TONI-4)	Ideal for limited verbal skills. Standard Score Mean = 100 and Standard Deviation = 15.
Universal Nonverbal Intelligence Test (UNIT)	Overall composite full scale with Standard Score Mean = 100 and Standard Deviation = 15. Sub-categories and scores with a Mean = 10 and a Standard Deviation = 3. (Sub-score Composites: memory, reasoning, quantitative, abbreviated battery, standard battery with memory, standard battery without memory). Sub-test scores symbolic memory, quantity, analogic reasoning, spatial memory, numerical series, cube design.

The following have sub-tests that could be used as valid non-verbal assessment of cognitive functioning; however, they are less precise or have a higher rate of errors:

KABC-2 Assessment of Fluid Cognitive Abilities (4 sub-test scales and excludes the crystalized cognitive ability sub-test.

RIAS-2 Nonverbal Intelligence Index

WISC-5 Nonverbal Index

Valid Measures of Adaptive Skills

Students with the most significant cognitive disabilities will have significant impairment across their cognitive and adaptive functioning; therefore, adaptive skills must also be measured.

According to the DSM-5 and guidance from the American Association on Intellectual Developmental Disabilities (AAIDD), measures of adaptive functioning assess adaptive skills in 3 domains of daily living: conceptual, social, and practical.

Adaptive functioning data should come from a variety of sources.

Valid Adaptive Functioning Measures:

Vineland III Adaptive Behavior Scale (VABS)	Full Scale Score, or General Adaptive Composite where the Mean = 100 and the Standard Deviation = 15. Standard Error in any sub-score is ± 4 for shorter form, ± 2 for classroom form, and ± 3 for expanded survey form. (Communication, daily living skills, socialization, motor skills, maladaptive behavior)
Adaptive Behavior Assessment System, 2nd or 3rd Edition (ABAS-II or ABAS-III)	Birth to 89 years old. Full Scale Score, or General Adaptive Composite where the Mean = 100 and the Standard Deviation = 15. Standard Error of Measurement per each domain is ± 3 . (Conceptual, social, practical, home/school living, self-care, health and safety, work). Sub-test standard score Mean = 10, Standard Deviation = 3.
Scales of Independent Behavior Revised (SIB-R)	3-80 years old. Mean = 100 and the Standard Deviation = 15 with a standard error of ± 2 . (motor skills, social and communication skills, personal living skills, community living skills, maladaptive behavior).
Adaptive Behavior Scale Second Edition (ABS-II)	From the American Association on Intellectual and Developmental Disabilities (AAIDD) Standardized scores with a Mean = 100 and Standard Deviation = 15 and standard error of ± 3 .
Inventory for Client and Agency Planning (ICAP)	Less reliable than SIB-R but is normed regarding students with intellectual disabilities. Mean = 100 and the Standard Deviation = 15 with a standard error of ± 6 .

Complete other evaluations as required for determination of disability and alternate assessment eligibility.

(The information was gathered from National Center on Educational Outcomes (NCEO) and various state partners including Rhode Island, Illinois, and Michigan).