**Student Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Team Names\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date\_\_\_\_\_\_\_**

**Guidance and Worksheet**

**For Obtaining a Valid Cognitive Abilities Assessment**

Choosing a test to measure cognitive abilities can be complicated. While such tests often come with descriptive statistics about reliability and validity, even a test with appropriate diagnostic characteristics, may or may not be appropriate for the measurement of cognitive abilities and important decision-making for every child. It is important for decision-makers to be aware of the factors that contribute to obtaining a valid score of cognitive abilities for an individual child. It is essential to remember that important decisions need to be made based on multiple measures.

The current rule for identifying a student as having an Intellectual Disability can be found under [PI 11.36(1)(b)1](https://docs.legis.wisconsin.gov/code/admin_code/pi/11/36).

This worksheet is designed to provide guidance regarding team decision points and to provide spaces to document the team decision and the evidence considered when making the decision.

**Evaluator Credentials**

In education, cognitive assessment or cognitive testing refers to the evaluation of an individual’s general intellectual functioning and cognitive abilities using a cognitive or intellectual abilities test. These tests were once called IQ tests, named after the now obsolete metric which was once used to calculate the overall score (i.e., the intelligence quotient).

Publishers establish guidelines on the level of training needed to administer various assessments. Typically, school psychologists are the only school-employed professionals who are qualified to administer cognitive assessments. It is not possible for school psychologists to be trained in all cognitive assessments. If the school psychologist and the team decide the evaluation should include a test the psychologist has never given, it is incumbent on the psychologist to get appropriate training in the test in accordance with test publisher recommendations, or it is incumbent on the local educational agency to obtain the services of a school psychologist who is trained in the administration of the chosen test.

**Decision Errors**

…Society has high expectations that a member of a profession will exercise a higher level of professional responsibility and judgment in making decisions than an ordinary person would. This trust demands that members of a profession understand and think systematically, deeply, and seriously about the nature of high stakes decision making in working with individuals with [Intellectual Disabilities] and their families. (AAIDD, 2015)

Decision errors are costly. A child found eligible for special education in the area of Intellectual Disability (ID), when s/he does not have ID may lose the opportunity to be challenged at his/her appropriate level of learning. A child with ID who is not found eligible may lose a lifetime of support and specialized instruction.

The American Association on Intellectual and Developmental Disabilities states, “It must be stressed that the diagnosis of ID is intended to reflect a clinical judgment rather than an actuarial determination.” (2015, p.40) This means that whether using a standardized, norm-referenced test, a proxy, or other relevant data, the psychologist and the team evaluate comprehensively, and make eligibility decisions based on a thoughtful review of all relevant data.

**How do we decide whether a test of Cognitive abilities is valid for a student?**

Consider test characteristics:

Are there sufficient items at each level, and are there adequate floor or ceiling levels? For example, do more than 2-3 items exist for each subscale score? Are there sufficient items at the extreme end of the test to be able to adequately assess children who may be cognitively delayed?

Is the format well matched to student need? In the following decision tree, the evaluator considers both receptive and expressive language before choosing a primarily verbal or nonverbal assessment tool.

|  |
| --- |
| Does the student understand verbal instructions competently and reliably?  YES  NO  Use a cognitive assessment in which directions/ instructions are given nonverbally (e.g., Leiter).  Consider a cognitive assessment in which directions/ instructions are given verbally.  Does this student have sufficient verbal expression to be able to answer questions verbally?  YES  NO  Is a Primarily Verbal or NonVerbal Assessment required? A Decision Tree  Consider a cognitive assessment in which responses are given verbally.  Use a cognitive assessment in which responses are given nonverbally |

The examiner will ask certain questions: “Does the student need both a nonverbal response and nonverbal instructions in order to be assessed in a valid way?” Does the student have appropriate receptive language skills and needs only to provide nonverbal responses?” There are cognitive assessments that are essentially nonverbal (nonverbal instructions and responses) and partially nonverbal (verbal instructions and nonverbal responses).

Does the test include a lot of verbal content and verbal instructions? If so, it may not be valid for many culturally and linguistically diverse students. How does the team know this content matches the student’s communication style? How does the team consider his/her social, cultural, and linguistic background?

How does the team assess whether the test contains cultural content? It is not always easy to see the cultural loading of a test, especially when the cultural cues are congruent with our own culture. It may be helpful to review vocabulary and concepts from the perspective of a recent immigrant, who may have different cultural references. If the team is able to discern that the test contains cultural and linguistic content which may be unfamiliar to a newcomer, then it may not be possible to obtain a valid score of cognitive abilities for a student whose cultural and linguistic backgrounds differ from the perspectives represented in the test.

Are the test materials appropriately matched to student need? (Easels, stimuli of right size, response protocols, etc.?)

Does the normative sample include sufficient numbers of students similar to the student being tested? One answer to this question can be found in the technical manual of the test. However, the technical manual may not provide all the disaggregated or cross-tabulated data needed to make a determination. For example, often the manual does not tell us whether all children with disabilities or children of color in the normative sample came only from middle class homes or instead are represented across the economic spectrum. Were children with disabilities included in the normative sample? Were children with low incidence disabilities included in the normative sample? One cognitive assessment often used to assess Spanish speakers was normed entirely on mono-lingual Spanish speakers, with no English language learners among the normative sample. Since most testing of Spanish speaking children in Wisconsin is of English language learners, the use of this popular test is highly questionable. A totally nonverbal (instructions and responses) test may be more appropriate.

Does the test manual include data about differences in scores between various cultural/racial groups? Some tests show smaller gaps in scores than others. For example, some tests have a vastly different mean or standard deviation for black children compared to white children. Obtaining a valid score on such a test for a student of color would be questionable.

Was there a logical and representative process for choosing test item content? Were cultural representatives used to vet items for unfair content?

How old is the test? For example, was the normative data **collected** in the last decade?

Please use this space to document conversations and data as appropriate: We have **not yet ruled out** a comprehensive standardized norm-referenced assessment of cognitive abilities, based on consideration of the above factors. Our decision was based on the following evidence and reasoning: Click here to enter text.

**Is standardized, norm-referenced cognitive ability testing possible?**

When a student has significant communication, sensory or motor limitations that preclude certain forms of test presentation or responses, the test administrator and team should document the steps taken to determine the best alternative to a standardized, norm-referenced cognitive ability test.

**Communication Barriers Only**

When evidence indicates that the only challenge to cognitive assessment is one of oral communication, one may consider a standardized, norm-referenced, non-verbal test of cognitive abilities. There are a number of unidimensional nonverbal tests (progressive matrices, for example), which should be avoided for the purposes of determining eligibility for special education. Rather, a comprehensive (or multidimensional) nonverbal test of cognitive abilities should be chosen. There are a few such tests which have in common multiple measures of the overall construct of intelligence, but which differ in whether directions are given verbally or nonverbally. In addition, several of the more popular comprehensive tests of cognitive abilities have nonverbal domain (or factor) scores which may be considered.

|  |
| --- |
| Please use this box to document conversations and data as appropriate: We have decided that a nonverbal, standardized norm-referenced cognitive assessment is possible. We have decided that a valid assessment can be done when instructions are delivered:  \_\_\_verbally or \_\_\_nonverbally. Our decision was based on this evidence and reasoning: Click here to enter text. |

**Developmental Delays**

Not all skills develop uniformly at the same rate for all children. Minor developmental delays can be ordinary. Yet, it is important to take developing skills into consideration when choosing a cognitive assessment. The first consideration is to determine whether the student has the requisite skills needed for testing. This can be achieved through a semi-structured observation or assessment. Here are a few sample questions to answer.

Can the student follow verbal directions?

Does the student have the physical skills to manipulate small items?

Can the student use a pencil or crayon? Does s/he require hand-over-hand assistance?

Can the student visually track?

In other words, does the student have the skills to complete the test items? Parents and teachers can also help inform these questions.

If a student’s response consistency is poor, consider whether it is still possible to administer a norm-referenced test in a non-standardized manner. For example, if attention and response consistency are severely impaired, yet improved with positive feedback, a non-standard administration of a norm-referenced test may be considered. This choice should be explicitly documented in the official test report.

|  |
| --- |
| We have decided that a non-standardized administration of a norm-referenced assessment of cognitive abilities is possible. Our decision was based on the following evidence and reasoning:Click here to enter text. |

**Multiple Cognitive Assessment Measures:** Wisconsin Administrative Code allows that “more than one intelligence test may be used to produce a comprehensive result.” WI PI.11.36 (1)(b)1.

|  |
| --- |
| We have decided that more than one norm-referenced assessment of cognitive abilities is needed to produce a comprehensive result. Our decision was based on the following evidence and reasoning: Click here to enter text. |

If the student does not appear to have the requisite skills and those skills cannot be mastered prior to testing, the examiner and team may consider out-of-level testing with a developmental test. A developmental test would be considered a proxy measure for cognitive abilities. When using a proxy measure, such as a developmental test or adaptive measure, the team should gather information using multiple sources of data, such as the Review-Interview-Observe-Test and Instruction-Curriculum-Environment-Learner Matrix, better known as the RIOT / ICEL Matrix (see below). At this time, evidence does not support the use of adaptive measures with children of color as a proxy score for cognitive abilities.

|  |
| --- |
| We have decided that a comprehensive standardized norm-referenced assessment of cognitive abilities is **not** possible. We have decided to use a proxy measure. Our decision was based on the following evidence and reasoning: Click here to enter text. |

**Low Incidence Medical Conditions**

If the student has a medical diagnosis, especially when it is unfamiliar to the examiner, it is important to consult with those familiar with the student and with the diagnosis. Consider seeking out credible experts with the background to be able to comment on how the medical diagnosis may affect the child’s learning. Experts include the parents and, with parent permission, the child’s private medical provider, colleagues, outside experts, and a neutral professional. (Special Education Connection 2016)

Sometimes etiology is an important issue to consider. For example, the etiology of blindness can affect both behavioral and neurological responses. While few school psychologists are trained in cognitive assessment of children who are blind, such assessments are not out of the question. When such an assessment is needed, the school district may wish to consult with the Wisconsin Center for the Blind and Visually Impaired (Pete Dally, Center Director, [pete.dally@wcbvi.k12.wi.us](mailto:pete.dally@wcbvi.k12.wi.us)).

|  |
| --- |
| We have decided that a comprehensive standardized norm-referenced assessment of cognitive abilities is **not** possible. We have decided that due to limited communication, sensory, or motor limitations, any formal assessment of cognitive abilities is not possible *at this time.* We have decided to use other relevant data. Our decision was based on the following evidence and reasoning: Click here to enter text. |

**Using Multiple Measures of Other Relevant Data**

Multiple measures help obtain a full picture of the student, his/her strengths and needs. There is both statistical error and uncertainty inherent in all assessment, therefore using multiple measures helps to triangulate results. Diagnostic decision making cannot be viewed as only a single calculation. Decisions should be made after the gathering of rich data from multiple sources. See the matrix below:

Assessment: Multidomain, Multimethod, Multisource Matrix (**Christ & Arañas**, 2014)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | |  | | | |
| Review | Interview | Observe | Test |
|  | Instruction | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. |
| Curriculum | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. |
| Environment | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. |
| Learner | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. |

See below for examples of the types of data that may be included in each of the cells of the RIOT/ICEL Matrix.

**For More Information about:**

**Assessment of Intellectual Disabilities**

Armstron, K., Hanguaer, J. Nadeau, J. (2012) Use of Intellectual Tests in the Identification of Children with Intellectual and Developmental Disabilities, in D.P. Flanagan & P.L. Harrison (Eds.) *Contemporary Intellectual Assessment: Theories, Tests, and issues.*  New York: Guilford Press, 726-736.

**Reducing Bias in Special Education Assessment for American Indian and African American Students:**

The old manual can be found here:

<http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0ahUKEwi5_-O0vrHMAhVEr4MKHQQqADEQFggmMAE&url=http%3A%2F%2Feducation.state.mn.us%2Fmdeprod%2Fidcplg%3FIdcService%3DGET_FILE%26dDocName%3D040052%26RevisionSelectionMethod%3DlatestReleased%26Rendition%3Dprimary&usg=AFQjCNHHAMORv2T7ooTHJC_gouru5DNtUg&cad=rja>

2013 revised manual is available online only and is interactive with the previous version of the manual. <https://www.uwrf.edu/CSP/ReducingBias.cfm>

**Assessment of English Language Learners:**

Albers, C.A., & Martinez, R.S. (2015). *Promoting Academic Success with English Language Learners: Best Practices for RTI.* New York: Guilford Press.

Flanagan, D.P. Alfonso, V.C., & Ortiz, S.M. (2012). The Cross-Battery Approach: An Overview, Historical Perspective, and Current Directions, in in D.P. Flanagan & P.L. Harrison (Eds.) *Contemporary Intellectual Assessment: Theories, Tests, and issues.*  New York: Guilford Press, 459-483.

**Assessment of Low Incidence Disabilities**

Decker, S.L., Englund, J.A., & Roberts, A. M. (2012). Intellectual and Neuropsychological Assessment of Individuals with Sensory and Physical Disabilities and Traumatic Brain Injury, in D.P. Flanagan & P.L. Harrison (Eds.) *Contemporary Intellectual Assessment: Theories, Tests, and issues.*  New York: Guilford Press, 708-725.

**Use of RIOT – ICEL Matrix**

Christ, T. J., & Arañas, Y.A. (2014) “Best Practice in Problem Analysis,” in Patti L. Harrison & Alex Thomas (Eds) *Best Practices in School Psychology: Data-Based and Collaborative Decision-Making,*  National Association of School Psychologists: Bethesda MD, p. 87-97.

University of South Florida “Problem-solving using the ICEL/Riot Matrix,” Digital image (<http://www.floridarti.usf.edu/resources/training_modules/intensive_interventions/days4&5/GeneralSession/ICEL%20RIOT%20Matrix.pdf> : accessed September 2016).

University of South Florida, “RIOT by ICEL Completed Example,” Digital Image, (<http://flpbs.fmhi.usf.edu/MTSS_Classroom_Guide_2/Folder%202.%20Overview/File%20G%20RIOT%20by%20ICEL%20Example.pdf> : accessed September 2016).

Wright, J., (2010) “The RIOT/ICEL Matrix: Organizing Data to Answer Questions

About Student Academic Performance & Behavior,” Online resource, *Intervention Central* (<http://www.interventioncentral.org/sites/default/files/rti_riot_icel_data_collection.pdf> : accessed September 2016).

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