

Best Practice Guidelines for the Assessment of African American Students' Cognitive Processes

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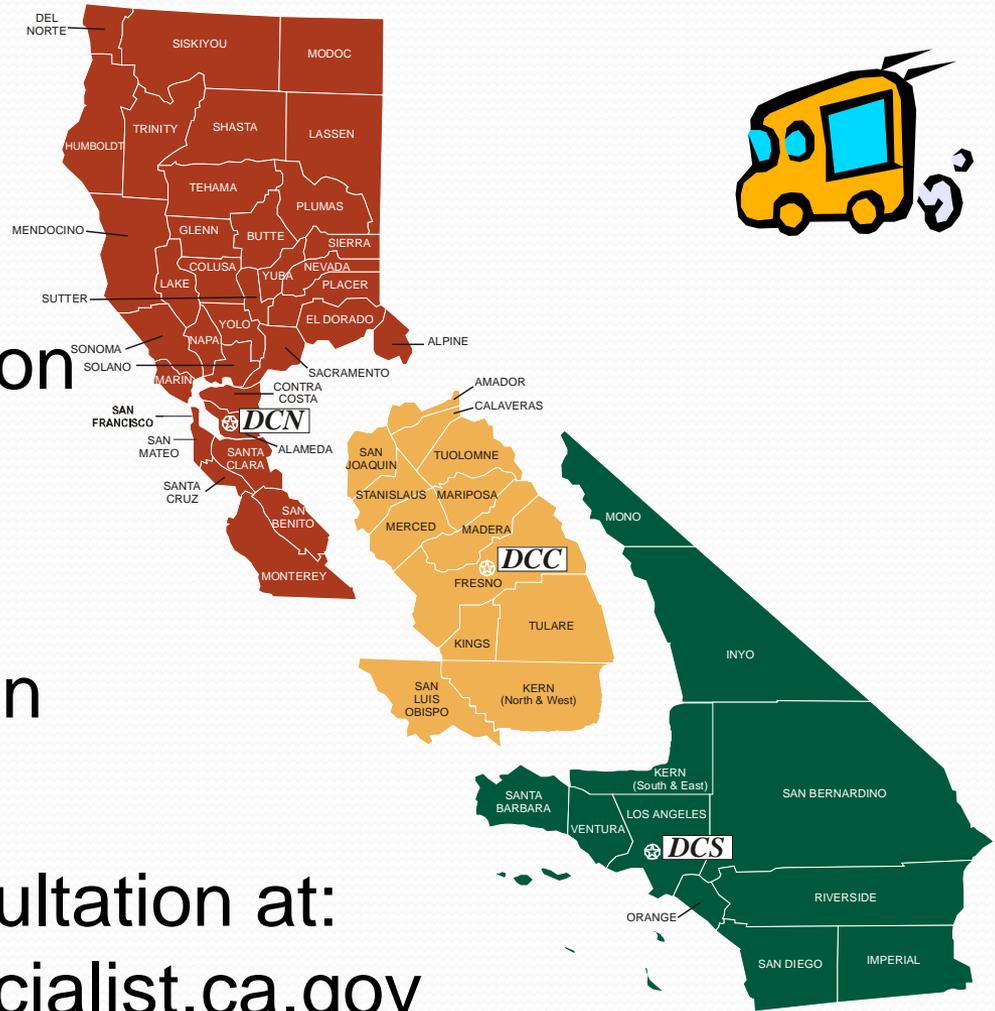
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Welcome

Welcome to Diagnostic Center North's (DCN) "Ask A Specialist" Discussion Forum. DCN is pleased to offer these monthly forums featuring Assistive Technology/Augmentative and Alternative Communication, Attention Deficit Hyperactivity Disorder, Autism, Behavior, Mental Health, School Related Medical Issues, and Secondary Issues where suggestions and advice are provided. Our specialists are known throughout California as experts in their fields.

The specialists will select and respond to one question from those submitted. Responses will be posted on the website monthly.

- To submit a question, please click on the topic link to the left.
- Each link will take you to the designated page where you can ask your question and review previous submissions.

We regret that not all questions can be answered.

Search the Ask a Specialist website

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About James Hiramoto

- Graduate of California Public Education Elementary to Graduate School
- Approaching 20 years working in public education
- Substitute Teacher, School Psychologist, Assistant Professor, Director for Masters and Doctoral Programs, Twice Elected School Board Member
- Worked in large SF Bay Areas Districts (primarily Santa Clara Unified)
- For fun, enjoys spending time with family, photography and playing music



OBJECTIVES

We want you leave this workshop with:

- Examine the elements of a comprehensive special education evaluation for African American students in light of Larry P and understand why it is still with us today
- Introduce the MATRIX process, a system DCN has developed to meet the demands of a Comprehensive Assessments for determining eligibility for special education for African American Students
- Explain how DCN use Informal Assessments as a vital tool to fill out a comprehensive assessment for determining eligibility

OBJECTIVES

We want you leave this workshop with:

- Provide an opportunity to actively engage with peers utilizing informal assessment techniques, by exercising and sharing your professional judgment, on what cognitive skills can be observed in everyday activities, especially in play
- Develop some healthy skepticism of relying on standardized tests and some guidance on what district need to consider when determining if a test is OK to use
- Learn how informal assessments can reveal information that standardized assessments cannot answer

OBJECTIVES

We want you leave this workshop with:

- Understand how to use data on cognitive strengths and weaknesses to make a determination of eligibility
- How to put all of this information into a report
- Develop a renewed confidence in your own expertise in the field

Disproportional Identification in California

So well over 30 years after
the original Larry P
decision...

How do you think we are
doing?



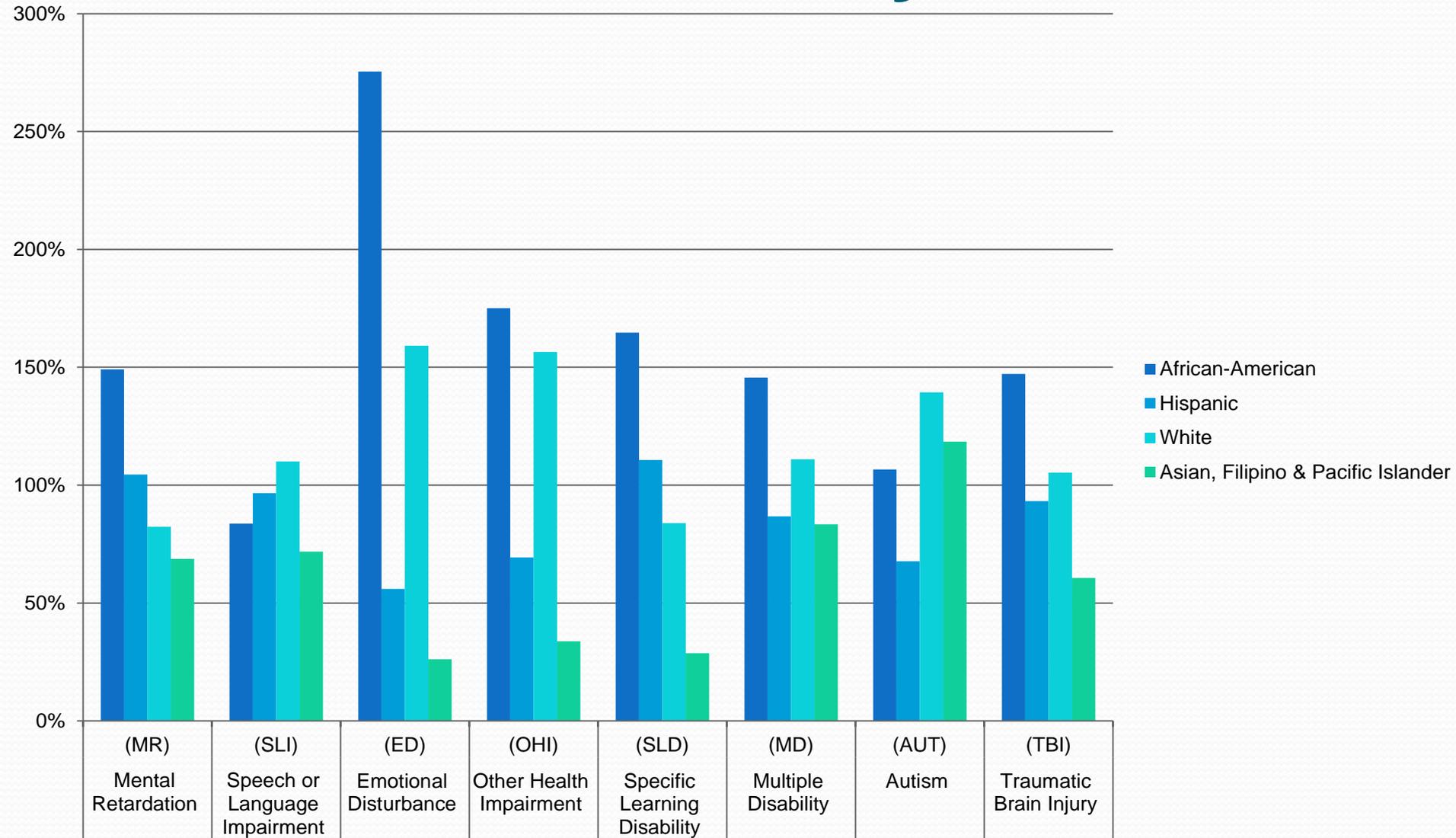
For this we'll need data...

- **Easily obtainable from...**

<http://data1.cde.ca.gov/dataquest>

Disproportionality Chart

Risk Index by E%





What does this chart really say?

- African Americans are:
- 150% over represented in ED.
- 75% over represented in OHI.
- 65% over represented in SLD.
- 50% over represented in MR (ID)
- and 45% over represented in Multiple Disability and TBI



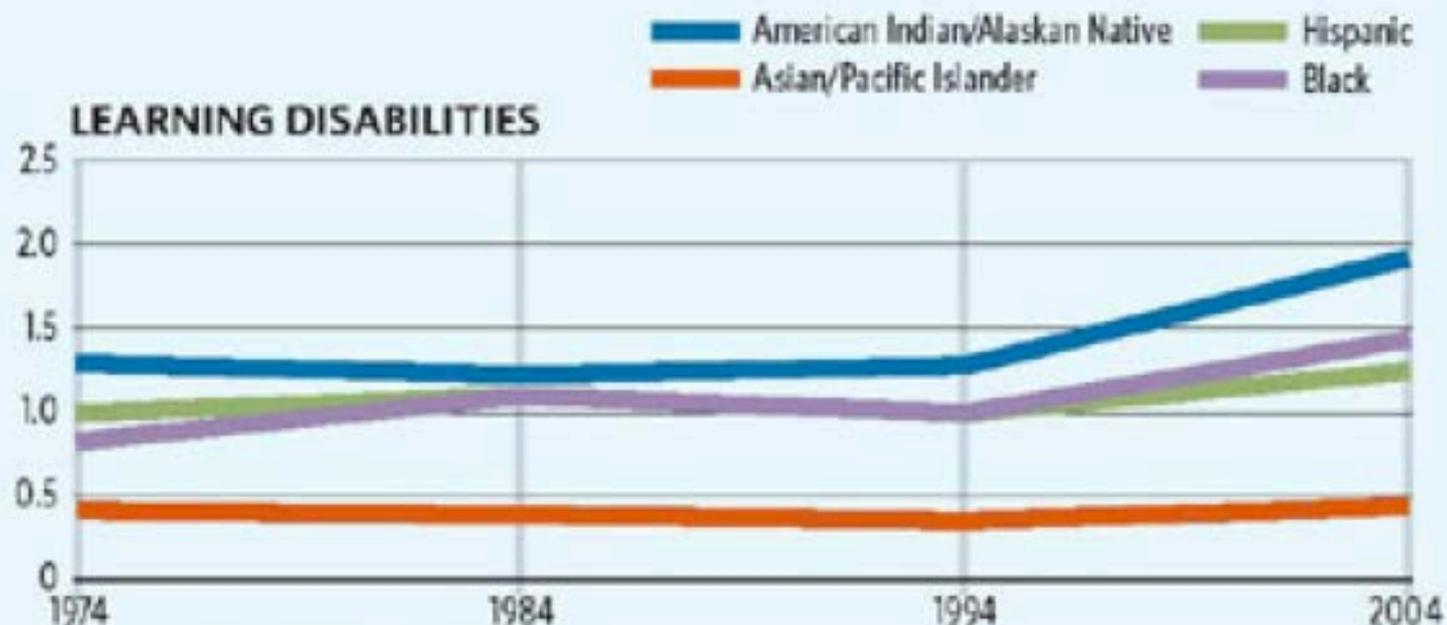
So using IQ testing is vindicated because we are still disproportionate right?

The answer is No.

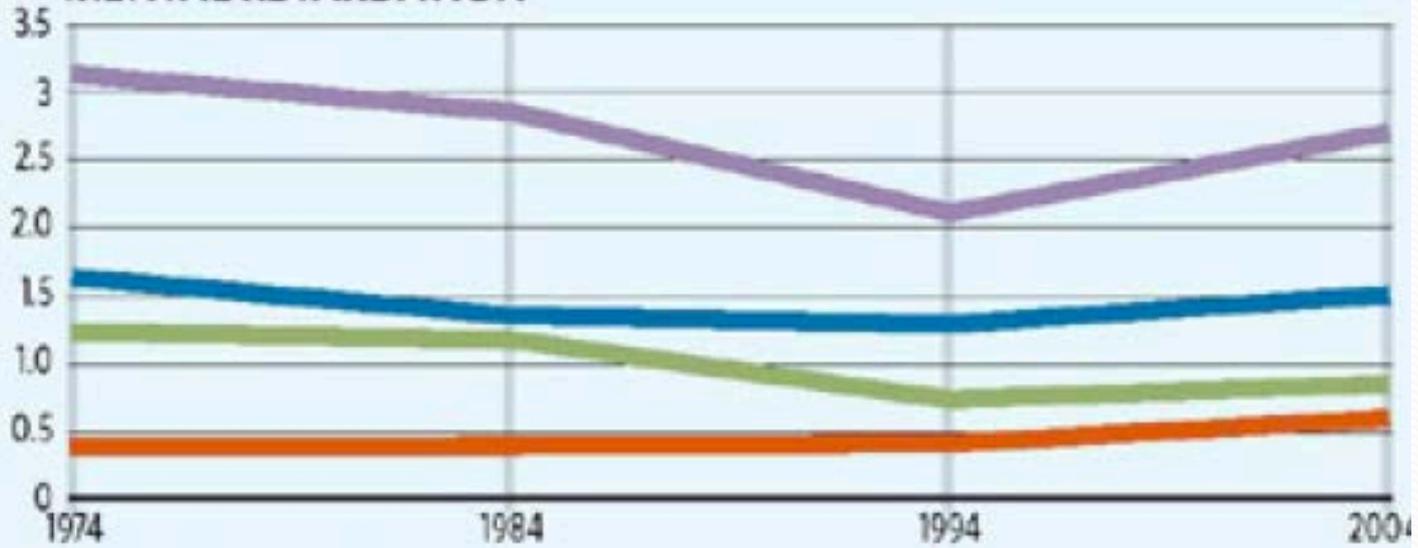
Figure 1

Relative Risk of Identification by Category and Race Compared to White Students Nationally

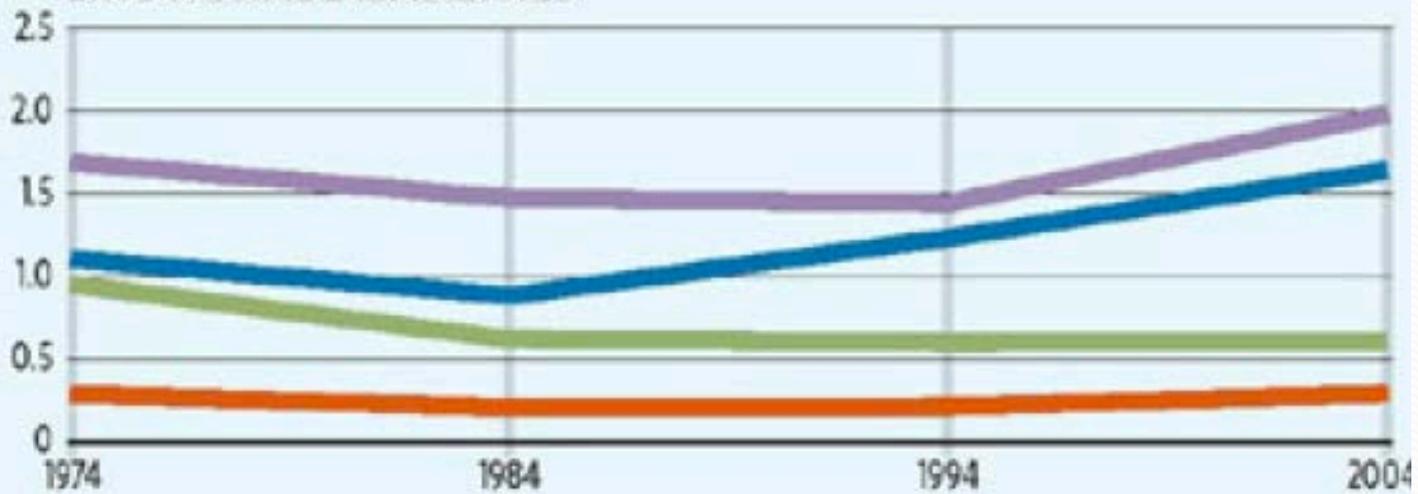
Adapted from Donovan and Cross (2002) and USDOE (2009).



MENTAL RETARDATION



EMOTIONAL DISABILITIES



Disproportionality is a National Problem

Even while group differences have been shrinking.

- The “racial” IQ gap has been shrinking. “Over the last 30 years, the measured I.Q. difference between black and white 12-year-olds has dropped from 15 points to 9.5 points.”

Nisbett, R. E. (2009) *Intelligence and how to get it*. W.W. Norton & Company



Wait a minute...

If the difference is shrinking shouldn't disproportionality be decreasing?



A little bit on Reliability and Validity

Reliability and Validity

Analysis of Test Reliability/Validity

3.45

Name of Reviewer:		Name of Test/ Edition:	
Date:		Recency of Norm Data (date):	
1. Purpose of Test			
Psychological	Speech/Language	Academic	
<input type="checkbox"/> Global Intelligence <input type="checkbox"/> Attention <ul style="list-style-type: none"> <input type="checkbox"/> Alertness <input type="checkbox"/> Performance consistency <input type="checkbox"/> Self-monitoring <input type="checkbox"/> Temporal-sequential ordering <ul style="list-style-type: none"> <input type="checkbox"/> Sequential awareness <input type="checkbox"/> Perception <input type="checkbox"/> Memory <input type="checkbox"/> Time management <input type="checkbox"/> Spatial ordering <ul style="list-style-type: none"> <input type="checkbox"/> Spatial awareness <input type="checkbox"/> Perception <input type="checkbox"/> Memory <input type="checkbox"/> Memory <ul style="list-style-type: none"> <input type="checkbox"/> Short-term <input type="checkbox"/> Long-term <input type="checkbox"/> Active working <input type="checkbox"/> Social Cognition <ul style="list-style-type: none"> <input type="checkbox"/> Verbal pragmatics (includes interpretation of feelings) <input type="checkbox"/> Code switching <input type="checkbox"/> Social behaviors <input type="checkbox"/> Language <ul style="list-style-type: none"> <input type="checkbox"/> Receptive <input type="checkbox"/> Expressive <input type="checkbox"/> Executive Functions/Reasoning <ul style="list-style-type: none"> <input type="checkbox"/> Concept formation <input type="checkbox"/> Critical thinking <input type="checkbox"/> Creativity <input type="checkbox"/> Problem solving <input type="checkbox"/> Logical thinking <input type="checkbox"/> Developmental Levels <input type="checkbox"/> Motor <ul style="list-style-type: none"> <input type="checkbox"/> Gross <input type="checkbox"/> Fine (e.g., graphomotor) <input type="checkbox"/> Social/Emotional <input type="checkbox"/> Adaptive Behavior <input type="checkbox"/> Other	<input type="checkbox"/> Receptive Language <input type="checkbox"/> Expressive Language <input type="checkbox"/> Vocabulary <ul style="list-style-type: none"> <input type="checkbox"/> Basic Concepts <input type="checkbox"/> Semantics <input type="checkbox"/> Syntax/Morphology <input type="checkbox"/> Auditory Processing <input type="checkbox"/> Language Processing <input type="checkbox"/> Pragmatics <ul style="list-style-type: none"> <input type="checkbox"/> Verbal <input type="checkbox"/> Non-verbal <input type="checkbox"/> Paralinguistics <input type="checkbox"/> Critical Thinking <ul style="list-style-type: none"> <input type="checkbox"/> Verbal Problem Solving <input type="checkbox"/> Articulation/Phonology <input type="checkbox"/> Other	<input type="checkbox"/> Reading <ul style="list-style-type: none"> <input type="checkbox"/> Alphabetic Principle <input type="checkbox"/> Phonemic Awareness <input type="checkbox"/> Word analysis/attack <input type="checkbox"/> Oral <input type="checkbox"/> Silent <input type="checkbox"/> Fluency <input type="checkbox"/> Comprehension <input type="checkbox"/> Vocabulary <input type="checkbox"/> Automaticity of word recognition <input type="checkbox"/> Written <ul style="list-style-type: none"> <input type="checkbox"/> Handwriting <input type="checkbox"/> Mechanics and grammar <input type="checkbox"/> Spelling <input type="checkbox"/> Organization <input type="checkbox"/> Style <input type="checkbox"/> Ideation <input type="checkbox"/> Editing <input type="checkbox"/> Math <ul style="list-style-type: none"> <input type="checkbox"/> Operations/computation <input type="checkbox"/> Application <input type="checkbox"/> Concepts <input type="checkbox"/> Problem solving <input type="checkbox"/> Functional <input type="checkbox"/> Time <input type="checkbox"/> Money <input type="checkbox"/> Charts/Tables/Graphs <input type="checkbox"/> Measurement <input type="checkbox"/> Statistics and Probability <input type="checkbox"/> Adaptive Behavior <ul style="list-style-type: none"> <input type="checkbox"/> Self care/daily living <input type="checkbox"/> Communication <input type="checkbox"/> Social Skills <input type="checkbox"/> Attention <input type="checkbox"/> Motor Skills <input type="checkbox"/> Problem solving <input type="checkbox"/> Other	

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Analysis of Test Reliability/Validity

3.46

2. Appropriate samples for test validation									
Population for the test									
Sample population	Sample Size	Age	Gender	Ethnic background	SES	Language	Region of U.S.	Other Country	
3. Reliability									
Is the reliability sufficiently high to warrant the use of the test as a basis for making decisions concerning individual students? (In general: .90=high; .80=moderate; .70=low)							High	Moderate	Low
4. Predictive Validity (Rater judgment)									
Is it an accurate predictor of performance? (If Questionable is marked, please explain under the final question, <i>additional limitations</i> , below.)							Yes	Questionable	No
5. Content Validity (Rater judgment)									
Are there sufficient test items to measure the skill being assessed?							Yes	No	
What limitations are described in the manual?									
Are there additional limitations that the examiner should consider? From <input type="checkbox"/> Mental Measurements Yearbook <input type="checkbox"/> Rater evaluation									
Does the manual indicate that the test was reviewed by a cultural bias review panel? If so, how many individuals were consulted and what were their qualifications? How was their input used?									
Additional Comments									
Is this test appropriate to use with African American students			<input type="checkbox"/> yes (whole test)	<input type="checkbox"/> yes (part)	<input type="checkbox"/> no				
Is this test appropriate to use with English language learner students			<input type="checkbox"/> yes (whole test)	<input type="checkbox"/> yes (part)	<input type="checkbox"/> no				

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Taking A Look At The Norm
Sampling Data Of Some Of
Our Most Often Used Tests of
Intelligence/Cognitive
Ability/General Ability.

Actual “N” (number of subjects) represented for the Development of Each Test’s Normative Tables by Age

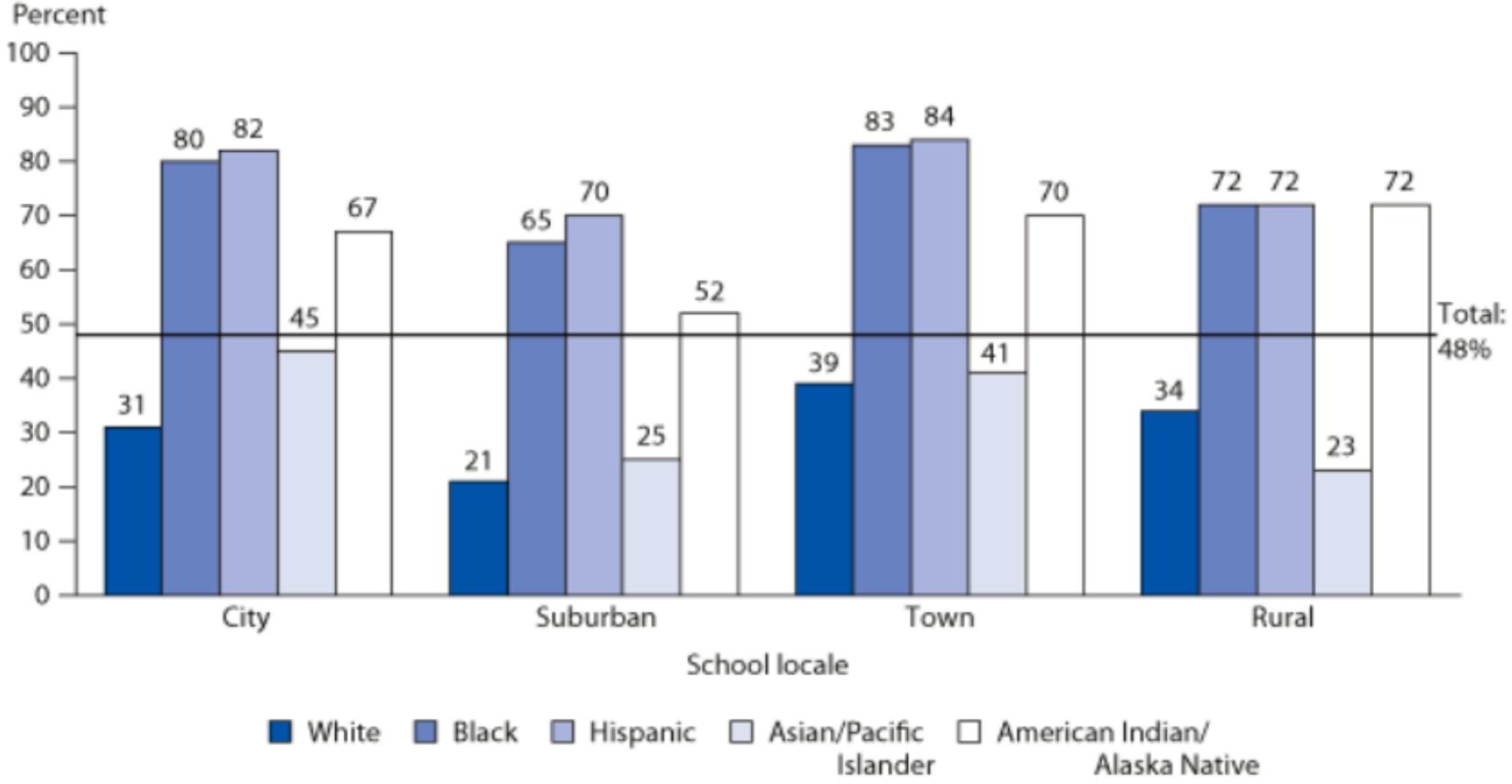
Age Group By Year	WISC IV-Integrated (US March 2000 Census by sex, parent education level and geographic region, in addition to ethnicity/race and age)	WJ-III NU (2005 US Census data weighted by region, community size, sex, Hispanic origin, and place of birth, over sampled American Indian to ensure more accurate contributions to the overall norms).	KABC-II (Current Population Survey 2001) parental education closely matches US population, education placement was a stratification variable based on National Center for Educational Statistics (2002)	DAS-II (stratified sample based on 2002 US Census Bureau data by sex, parent education level and geographic region, in addition to ethnicity/race and age)	CAS (stratified sample based on 1990 US Census Bureau data (sex, parent education level and geographic region, in addition to ethnicity/race and age)
10	200	579	200	200	200
11	200	428	200	200	200
12	200	352	200	200	200

Predictive Validity

- The APA's 1996 report stated that g correlated with school grades $r = .50$, which was about the same for social status (25% of variance) and with income ($r = .41$, 16.67% of variance).
- However when parental SES is controlled for it eliminates about a quarter of this predictive power. Therefore g in and of itself is at best only one of many factors that influence social outcomes.
- g is a very poor predictor of happiness and only slight better than chance at predicting law abidingness.

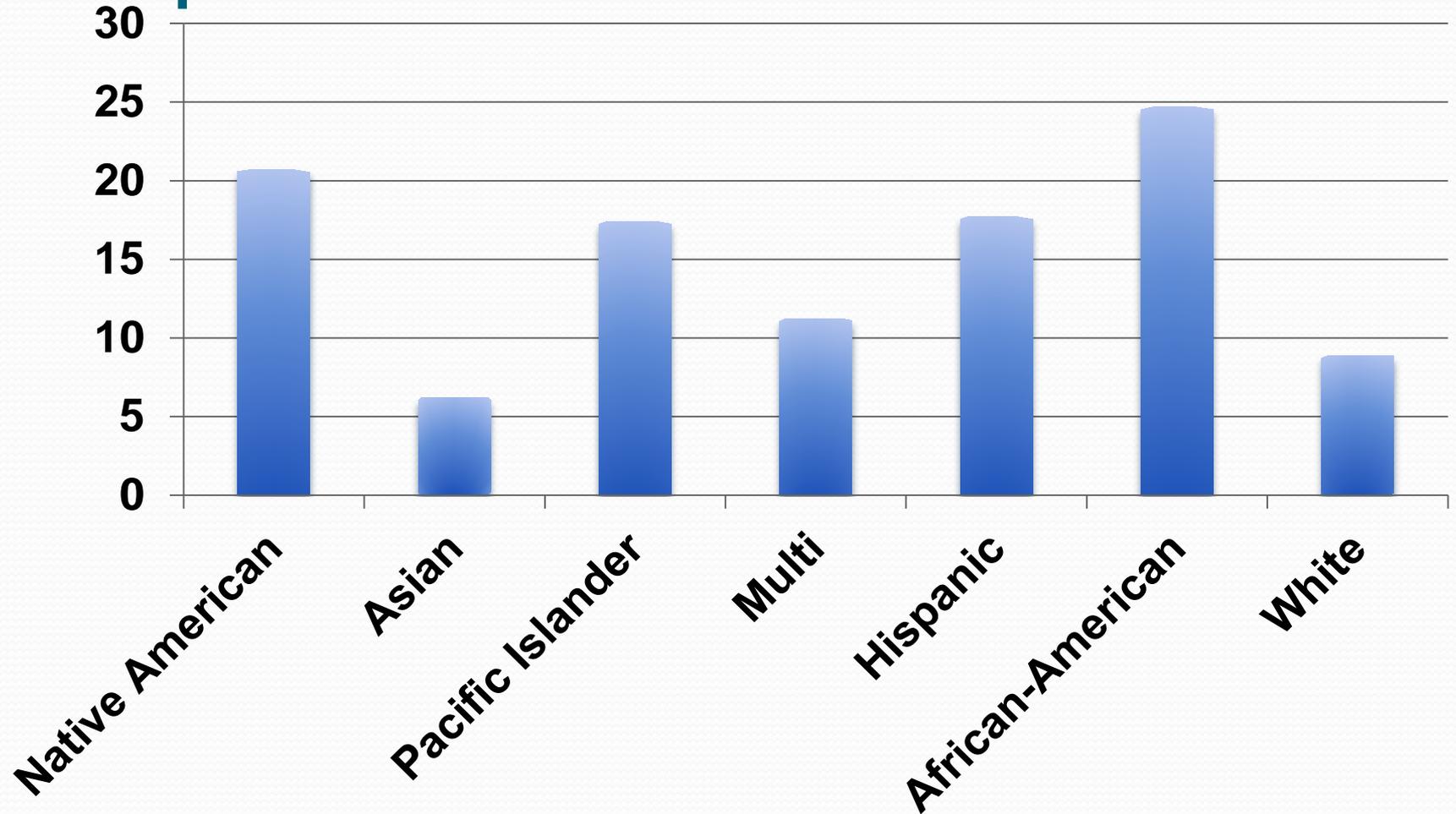
Ulrich Neisser, et al. "Intelligence: Knowns and Unknowns,"
American Psychologist 51(2) 1996:77-101.

Figure 7.5a. Percentage of public school 4th-graders eligible for free or reduced-price lunch, by school locale and race/ethnicity: 2009



NOTE: To be eligible for the National School Lunch Program, a student must be from a household with an income at or below 185 percent of the poverty level for reduced-price lunch or at or below 130 percent of the poverty level for free lunch. Race categories exclude persons of Hispanic ethnicity. For definitions of locales, see *Appendix A: Guide to Sources*.
 SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009 Mathematics Assessment, NAEP Data Explorer.

Dropout Rate in California 2010



<http://data1.cde.ca.gov/dataquest/cohortrates/GradRates.aspx?cds=00000000000000&TheYear=2010-11&Agg=T&Topic=Dropouts&RC=State&SubGroup=Ethnic/Racial>



Disproportionality is not just a Special Education Issue

What Does the Law Say?

Given all of this information, what is expected of us when we conduct an assessment on an African American student for special education?

Specific Learning Disability

(SLD) California Ed. Code 30 EC 56337

“(a) A specific learning disability, as defined in Section 1401(30) of Title 20 of the United States Code, means a disorder in one or more of the basic psychological processes involved in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or perform mathematical calculations, **and has a severe discrepancy between intellectual ability and achievement in one or more of the academic areas...**”

Specific Learning Disability

(SLD) California Ed. Code 30 EC 56337

“(a) A specific learning disability, as defined in Section 1401(30) of Title 20 of the United States Code, means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or perform mathematical calculations” ~~and has a severe discrepancy between intellectual ability and achievement in one or more of the academic areas~~

Specific Learning Disability (SLD) Cont.

“The term "specific learning disability" includes conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. That term does not include a learning problem that is primarily the result of visual, hearing, or motor disabilities, of intellectual disabilities, of emotional disturbance, or of environmental, cultural, or economic disadvantage.”

Specific Learning Disability (SLD) Cont.

“(b) Notwithstanding any other law and pursuant to Section 1414(b) (6) of Title 20 of the United States Code, in determining whether a pupil has a specific learning disability as defined in subdivision (a), a local educational agency is not required to take into consideration whether a pupil has a severe discrepancy between achievement and intellectual ability in oral expression, listening comprehension, written expression, basic reading skill, reading comprehension, mathematical calculation, or mathematical reasoning.”

Specific Learning Disability (SLD) Cont.

“(c) In determining whether a pupil has a specific learning disability, a local educational agency may use a process that determines if the pupil responds to scientific, research-based intervention as a part of the assessment procedures described in Section 1414(b)(2) and (3) of Title 20 of the United States Code and covered in Sections 300.307 to 300.311, inclusive, of Title 34 of the Code of Federal Regulations.”



So if the discrepancy model isn't
in CA Ed Code where is it?

It is part of the California Code of Regulations Title 5 Sec 3030j

- “j) A pupil has a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an impaired ability to listen, think, speak, read, write, **spell**, or do mathematical calculations, **and has a severe discrepancy between intellectual ability and achievement in one or more of the academic areas specified in Section 56337(a) of the Education Code.** For the purpose of Section 3030(j):”



“(1) Basic psychological processes include attention, visual processing, auditory processing, sensory-motor skills, cognitive abilities including association, conceptualization and expression.

(2) Intellectual ability includes both acquired learning and learning potential and shall be determined by a systematic assessment of intellectual functioning.

(3) The level of achievement includes the pupil's level of competence in materials and subject matter explicitly taught in school and shall be measured by standardized achievement tests.”



“(4) The decision as to whether or not a severe discrepancy exists shall be made by the individualized education program team, including assessment personnel in accordance with Section 56341(d), which takes into account all relevant material which is available on the pupil. No single score or product of scores, test or procedure shall be used as the sole criterion for the decisions of the individualized education program team as to the pupil's eligibility for special education. In determining the existence of a severe discrepancy, the individualized education program team shall use the following procedures:”

“(A) When standardized tests are considered to be valid for a specific pupil, a severe discrepancy is demonstrated by: first, converting into common standard scores, using a mean of 100 and standard deviation of 15, the achievement test score and the ability test score to be compared; second, computing the difference between these common standard scores; and third, comparing this computed difference to the standard criterion which is the product of 1.5 multiplied by the standard deviation of the distribution of computed differences of students taking these achievement and ability tests.”

“A computed difference which equals or exceeds this standard criterion, **adjusted by one standard error of measurement, the adjustment not to exceed 4 common standard score points**, indicates a severe discrepancy when such discrepancy is corroborated by other assessment data which may include other tests, scales, instruments, observations and work samples, as appropriate.

(B) When standardized tests are considered to be invalid for a specific pupil, the discrepancy shall be measured by alternative means as specified on the assessment plan.”

“(C) If the standardized tests do not reveal a severe discrepancy as defined in subparagraphs (A) or (B) above, the individualized education program team may find that a severe discrepancy does exist, provided that the team documents in a written report that the severe discrepancy between ability and achievement exists as a result of a disorder in one or more of the basic psychological processes. The report shall include a statement of the area, the degree, and the basis and method used in determining the discrepancy. The report shall contain information considered by the team which shall include, but not be limited to:”

- 
- “1. Data obtained from standardized assessment instruments;**
 - 2. Information provided by the parent;**
 - 3. Information provided by the pupil's present teacher;**
 - 4. Evidence of the pupil's performance in the regular and/or special education classroom obtained from observations, work samples, and group test scores;**
 - 5. Consideration of the pupil's age, particularly for young children; and**
 - 6. Any additional relevant information.**

(5) The discrepancy shall not be primarily the result of limited school experience or poor school attendance.”

When was the last time CCR Title 5 Sec 3030 updated?

HISTORY

1. New Article 3.1 (Sections 3030 and 3031) filed 1-31-83; effective thirtieth day thereafter (Register 83, No. 6).
2. Amendment filed 2-11-86; effective thirtieth day thereafter (Register 86, No. 7).
- 3. Amendment filed 3-21-88; operative 4-20-88 (Register 88, No. 15).**

5 CCR § 3030, 5 CA ADC § 3030

**This database is current through 3/8/13 Register
2013, No. 10**



The Discrepancy Model AKA “Wait to Fail”

Cannot be Forced on LEA's to
Determine Eligibility for a Specific
Learning Disability by the State



34 CFR § 300.309 Determining the existence of a specific learning disability

“(a) The group described in § 300.306 may determine that a child has a specific learning disability, as defined in § 300.8(c) (10), if

(1) The child does not achieve adequately for the child’s age or to meet State-approved grade-level standards in one or more of the following areas, when provided with learning experiences and instruction appropriate for the child’s age or State-approved grade-level standards:”



“(i) Oral expression. (ii) Listening comprehension. (iii) Written expression. (iv) Basic reading skill.(v) Reading fluency skills. (vi) Reading comprehension. (vii) Mathematics calculation. (viii) Mathematics problem solving.

(2)

(i) The child does not make sufficient progress to meet age or State-approved grade-level standards in one or more of the areas identified in paragraph (a)(1) of this section when using a process based on the child’s response to scientific, research-based intervention; or



(ii) The child exhibits a pattern of strengths and weaknesses in performance, achievement, or both, relative to age, State-approved grade level standards, or intellectual development, that is determined by the group to be relevant to the identification of a specific learning disability, using appropriate assessments, consistent with Sec. Sec. 300.304 and 300.305; and

(3) The group determines that its findings under paragraphs (a)(1) and (2) of this section are not primarily the result of—

(i) A visual, hearing, or motor disability;

(ii) Mental retardation;

(iii) Emotional disturbance;

(iv) Cultural factors;

(v) Environmental or economic disadvantage;

or

(vi) Limited English proficiency.

“(b) To ensure that underachievement in a child suspected of having a specific learning disability is not due to lack of appropriate instruction in reading or math, the group must consider, as part of the evaluation described in §§ 300.304 through 300.306

(1) Data that demonstrate that prior to, or as a part of, the referral process, **the child was provided appropriate instruction in regular education settings, delivered by qualified personnel;** and

(2) Data-based documentation of repeated assessments of achievement at reasonable intervals, reflecting formal assessment of student progress during instruction, which was provided to the child's parents.

(c) The public agency must promptly request parental consent to evaluate the child to determine if the child needs special education and related services, and must adhere to the time frames described in §§ 300.301 and 300.303, unless extended by mutual written agreement of the child's parents and a group of qualified professionals, as described in § 300.306(a)(1)



(1) If, prior to a referral, a child has not made adequate progress after an appropriate period of time when provided instruction, as described in paragraphs (b)(1) and (b)(2) of this section; and

(2) Whenever a child is referred for an evaluation.
(Authority: 20 U.S.C. 1221e-3; 1401(30); 1414(b)(6))”

Where does Larry P. fit in?

Given all of this information, what is expected of us when we conduct an assessment on an African American Student for Special Education?

Courts and the CDE

- Larry P.
 - 1979 Court ruled ban on IQ tests to place students in EMR classes or “substantial” equivalent
 - 1986 Decision modified to expand previous ruling to ban use of IQ testing for all African American students for special education
- Crawford v. Honig (1992)
 - District court summary vacated the ‘86 modification to the Larry P. injunction

CDE in 1994 issued a Legal Advisory

Stated that regardless of the Crawford v Honig decision, districts should use in lieu of IQ tests, alternative means of assessment to determine identification and placement. “Such techniques should include, and would not be limited to:

- 
- Assessments of the pupil's personal history and development
 - Adaptive behavior
 - Classroom performance
 - Academic achievement
 - Evaluative instruments designed to point out specific information relative to a pupil's abilities and inabilities in specific skill areas”



There is no Banned Test List

Contrary to popular belief, since the 1994 Memorandum, there has not been an updated list.

1997 CDE Legal Memorandum

"No other list of tests has been recognized by the Department of Education for the purpose of finding school districts out of compliance in testing African-American students for special education...the original Larry P. decision **was not limited to a specific set or sets of standardized intelligences tests**, school districts should be advised that any standardized measure of intelligence should not be used with African-American students until such time as they are validated as unbiased by the State Board of Education and approved by the court. There should be no "on-the-spot" judgments that result in finding districts out of compliance for using tests that are not listed."

Why No Updated list?

The CDE is placing its trust in school psychologists to be knowledgeable and ethical in their practice in following this rule. Who better than school psychologists to know what intelligence is, right?

Isn't there a difference between measures of general ability, tests of intelligence and IQ?

- No, they are synonymous. In the literature they are used interchangeably.

- 
- **“This section contains a review of seven instruments that use a nonverbal format to measure intelligence...The tests reviewed were the: Comprehensive Test of Nonverbal Intelligence (CTONI); General Ability Measure for Adults (GAMA); Leiter-R; Naglieri Nonverbal Ability Tests – Individual Administration (NNAT-I); the Nonverbal Scales of the Stanford Binet Fifth Edition; Test of Nonverbal Intelligence – Third Edition; and the Universal Nonverbal Intelligence Test (UNIT).”**

Test makers want you to think there is, but look carefully.

DAS

- **“The DAS estimates the *g* factor only by those subtests that are the best estimators of *g*, in contrast to virtually all other cognitive batteries. The DAS does not refer to *g* by the terms intelligence and IQ, but by the descriptive term General Conceptual Ability (GCA).”** Elliott (2005)

CAS

- **“The Planning, Attention, Simultaneous, and Successive (PASS; Naglieri & Das, 1997) theory is rooted in the work of A. R. Luria (1966, 1973a, 1973b, 1980) on the functional aspects of brain structures. We used Luria’s work as a blueprint for defining the important components of human intelligence (Das, Naglieri, & Kirby, 1994).**

- 
- 
- As most recently as Dec. 13, 2011 a school district argued in front of an administrative law judge that the Naglieri Nonverbal Ability Test NNAT isn't a test of intelligence and won.



How can you say it is wrong when the administrative law judge says it's ok?

“The NNAT-I is a nonverbal measure of general ability that is predictive of academic success. Like traditional tests of general ability (e.g., *Wechsler Intelligence Scales for Children-Third Edition*, Wechsler, 1991) the NNAT-I is designed to measure general ability.”

But if the Judge says it's OK, it's OK Right?

No. When case law does not follow the CDE Legal Memorandum, it doesn't give us license to break the rules.

Remember the 1997 Memorandum states, "until such time as they are validated as unbiased by the State Board of Education and approved by the court." That has not happened.



But we've been through a Coordinated Compliance Review (CCR) by the state and they didn't say anything about the DAS II etc...

“There should be no “on-the-spot” judgments that result in finding districts out of compliance for using tests that are not listed.” 1997 CDE Memorandum.

In this area we are to police ourselves, until such a time as the courts and the state department of education agree that a specific test can be used.



So what do we do in the mean time?

How are we to know what we can and can't use?

We think Riverside County SELPA has a very good way to make this determination.



Riverside County SELPA

Guidelines for Assessing African-American Students

In making a determination of whether a test falls under the IQ test ban for African-American student one should consider:

- (a) Is the test standardized and does it purport to measure intelligence (cognition, mental ability or aptitude)?
- (b) Are the test results reported in the form of IQ or mental age?
- (c) Does evidence of the (construct) validity of the test rely on correlations with IQ tests?

What if we just don't report the standard score?

- No measures of intelligence, means no measures, period.
- Nothing from these tests: No age equivalents, No grade equivalents, No percentile ranks.
- If a competent school psychologist can figure out the standard scores from that information don't use it.
- And yes, the subtests of an intelligence test represent measures of intelligence.

What about similar tests? Digit Span or some form of it can be found in tests of intelligence or Memory etc.?

- The TAPS-3 and CTOPP's, as well as all tests of memory have some form of digit span. As long as you are interpreting the scores within the construct of its intended use, you are OK.
- However, do not use similar subtest from intelligence test batteries as the theory and co-norming to other subtests are designed to or imply larger, boarder intellectual capabilities i.e. “*g*” or an equivalent.

What about children of mixed ethnicity? Can you use IQ tests on them?

The answer is a qualified “maybe.” Parents can identify the racial identification of their children. If they designate their child as other than African American, you may be able to conduct the assessment, and may be required (depending upon parent request) to do so, as the child is not by parent report African American.

If the box is left blank by the parent, according to federal regulations the school clerk is authorized to fill it in.



What do you do if an African American student comes to your district with an IQ score in their File?

- The CDE issued a directive (Campbell, 1987):
“a qualified professional should identify appropriate data to be copied and purged of all IQ scores or references to information from IQ tests.”

The term purged has been interpreted as redacted (eliminating the reference by black pen making what is underneath unreadable).

See also, Student v. New Haven Unified Sch. Dist.
(OAH 2007)

Now to the assessments themselves. What are we at the DCN using?

- It is not just one thing, a new test, a new protocol, or survey.
- It is a process. Much like what you are doing. A process that is as conscientiously, comprehensive as possible, culminating in the IEP team mapping out significant processing areas to determine if eligibility has been met or not. We call it The MATRIX.



Using the Matrix to determine SLD eligibility

- Per the Larry P Mandate, we can't use standardized tests of intelligence, so we can't use the discrepancy model
- The Matrix provides another method to determine SLD, a Processing Strengths and Weaknesses Model (PSW).
- The Matrix complements Rtl and MTSS

NASP Position Statement on SLD (2007)

- “Relying primarily upon an ability-achievement discrepancy as the means of identifying children with specific learning disabilities is at odds with scientific research and with best practices.”
- “(a) use a variety of assessment tools and strategies to gather functional, developmental, academic information, (b) use of technically sound instruments, (c) nondiscriminatory assessment, (d) use of educationally relevant assessment tools and strategies”

Matrix

Identify Strengths/Weaknesses under each domain; note emerging skill/important information in Comments

Domains	Reasoning	Language/ Communication	Social Cognition	Executive Function	Visual-Spatial
Description	<ul style="list-style-type: none"> • Problem Solving • Abstract Thought • Deduction • Inferential Thinking 	<ul style="list-style-type: none"> • AAC • Abstract Language/ Reasoning • Artic/Phonological/ Oral Motor • Fluency/Prosody/Voice 	<ul style="list-style-type: none"> • Knowledge acquired, directly attributed to observations of others in social context • Cultural Competency • Learns Social Rules 	<ul style="list-style-type: none"> • Selective attention • Organization • Strategizing • Flexibility /Shifting Cognitive Sets • Multiple Perspectives • Self Monitoring • Working Memory 	<ul style="list-style-type: none"> • Pattern Completion • Spatial Awareness • Part to Whole Reasoning • Visual Memory • Visual Motor Integration
Strengths					
Weaknesses					
Comments					

Reviewing School Records

- Goal:
 - to obtain a global picture of the student's educational history.

- Find more “pieces of the puzzle”



Interviews–

- Collect background history impacting student's learning and cognitive skills
- Identify and/or clarify areas of concern and strengths
- Develop and verify hypotheses of student's cognitive profile
- Identify interventions to assist student

Tips for Culturally Competent Interviewing

- If unfamiliar with the culture, seek help from the “cultural broker”
- Be flexible and responsive to the family’s interaction and interview style
- Speak naturally-do not attempt to conform to student’s or family’s speech style
- Remember that each individual and family is unique

Observations

Purpose

- Application of skills in everyday life
- How a student integrates skills
- Find cognitive strengths, weaknesses, and styles
- Identify environmental contributions to skills
- Behavioral needs and supports

Where to Look

- Community – Field trips, vocational courses, supported work environments
- School – Break time, cafeteria, group work, sports fields, independent work

Is formal testing ever used as part of a MATRIX assessment?

Yes. But unlike the other procedural categories, formal testing is optional.

Strategically selected tasks taken from formal tests that are not prohibited may yield data that can be used to help:

- Extend or clarify our understanding of a student.
- Confirm or reject hypotheses based on results of other procedures.





Does James Just Hate IQ Tests?

No, quite the contrary.



But it can tell us so much. What is wrong with using IQ tests?

- For the same reason you don't wear binoculars when you drive. They make clear those things that are fuzzy and unclear in the distance by bring them into sharp focus. The tradeoff is that it narrows your field of vision, and becomes a driving hazard.

A little bit on Factor Analysis and test construction. (I promise no math problems.)

Informal Assessment

- In the context of the MATRIX, informal assessment includes a wide range of non-statistically normed, non-standardized activities which provide opportunities for a student to demonstrate various strengths and challenges
- The information derived from these activities complements data gathered through observations, interviews, work samples, and record reviews.

Informal Assessment

- Informal assessment may be used to gather general information about a student's functioning or to try out hypotheses and clarify specific abilities.
- Informal assessment data often replace some data previously gathered through formal testing

Informal Assessment

- Can include elements from observations and interviews of the student as they include a wide variety of conversations and activities
- Activities may:
 - Be unstructured or highly structured
 - Occur indoors or outside
 - Include 2 or more people

Norm are norms, whether they be national or...

- Local norms:
 - Classroom
 - Grade Level
 - Group Level

We incorporate familiar and preferred games as part of our assessment:

- What age range/development level is the game designed for?
- How long did it take them to learn the rules?
- Can they explain the rules to me to a peer?
- Do they just know the basics or are they able to employ strategy?
- Compared to local norms how does s/he do in with respect to the domains?

We incorporate unfamiliar, but high interest games as part of our assessment:

- What age range/development level is the game designed for?
- How long does it take them to learn the rules?
- Can they learn in it?
- Can they explain the rules to a peer?
- Do they just know the basics or are they able to employ strategy?
- Compared to local norms how does s/he do in with respect to the domains?



Our Informal Assessment Process is highly influenced by:

- Dynamic Assessment
- Authentic Assessment
- The professional expertise of practitioners who are already asked to interpret data that is highly subjective such as surveys and interviews



Domains

- Reasoning –
- Language Communication -
- Social Cognition -
- Executive Functioning -
- Visual/Spatial -



- Grades 2
 - 75% understand that what they have seen shouldn't have happened and are curious about why
 - 75% of those who understand, are willing to attempt to learn how to do it
 - and 25-50% of those can master it after four attempts
-
- Grades 1
 - 50% understand that what they have seen shouldn't have happened and are curious about why
 - 50% of those who understand, are willing to attempt to learn how to do it
 - and 10% of those can master it after four attempts



What domains can you look for while doing and learning this magic trick?

Time To Have Some Fun

Come On Down:

- Select a game
- Break up into groups of 4-6
- Start playing

Informal Assessment - Games

Keep in mind ...

1. What domain(s) does your game require?
 - Reasoning
 - Language
 - Executive Functioning
 - Visual-Spatial
 - Social Cognition
2. Be prepared to share out 1-2 examples of how those domains apply to your game.



OK...the games were fun, but how is this keeping in compliance with special education law?

The MATRIX was designed to follow best practices and be easily implementable in accordance with the law.

34 CFR § 300.311 Specific documentation for the eligibility determination

(a) For a child suspected of having a specific learning disability, the documentation of the determination of eligibility, as required in § 300.306(a) (2), must contain a statement of—

(1) Whether the child has a specific learning disability;

(2) The basis for making the determination, including an assurance that the determination has been made in accordance with § 300.306(c)(1);

(3) The relevant behavior, if any, noted during the observation of the child and the relationship of that behavior to the child's academic functioning;

(4) The educationally relevant medical findings, if any;

(5) Whether

(i) The child does not achieve adequately for the child's age or to meet State-approved grade-level standards consistent with § 300.309(a) (1); and

(ii)

(A) The child does not make sufficient progress to meet age or State approved grade-level standards consistent with § 300.309(a)(2)(i);
or

(B) The child exhibits a pattern of strengths and weaknesses in performance, achievement, or both, relative to age, State-approved grade level standards or intellectual development consistent with § 300.309(a) (2)(ii);



(6) The determination of the group concerning the effects of a visual, hearing, or motor disability; mental retardation; emotional disturbance; cultural factors; environmental or economic disadvantage; or limited English proficiency on the child's achievement level; and

(7) If the child has participated in a process that assesses the child's response to scientific, research-based intervention—

(i) The instructional strategies used and the student-centered data collected; and

(ii) The documentation that the child's parents were notified about

(A) The State's policies regarding the amount and nature of student performance data that would be collected and the general education services that would be provided;

(B) Strategies for increasing the child's rate of learning

(C) The parents' right to request an evaluation.



(b) Each group member must certify in writing whether the report reflects the member's conclusion. If it does not reflect the member's conclusion, the group member must submit a separate statement presenting the member's conclusions. (Authority: 20 U.S.C. 1221e-3; 1401(30); 1414(b)(6))



How the Matrix can be used
to identify SLD?

Using the MATRIX

- Putting the pieces together
- Share information:
 - School Psychologists
 - Speech and Language Pathologist
 - Education Specialists
 - Teacher
 - Parents
- Discussion of each others findings/information

First steps in using the Matrix to determine eligibility

- Plot data across each domain
- Strengths = average or above average skills for the student's peer group
- Weakness = skills are noticeably below those of the student's peer group
- Comments = additional background information, low average skills, emerging skills, conflicting information.

Matrix

Identify Strengths/Weaknesses under each domain; note emerging skill/important information in Comments

Domains	Reasoning	Language/Communication	Social Cognition	Executive Function	Visual-Spatial
Description	<ul style="list-style-type: none"> • Problem Solving • Abstract Thought • Deduction • Inferential Thinking 	<ul style="list-style-type: none"> • AAC • Abstract Language/ Reasoning • Artic/Phonological/ Oral Motor • Fluency/Prosody/Voice 	<ul style="list-style-type: none"> • Knowledge acquired, directly attributed to obsvtn of others in context of social interaction/ experience • Cultural Competency • Learns Social Rules 	<ul style="list-style-type: none"> • Selective Attention • Organization • Strategizing • Flexibility/Shifting Cognitive Sets • Multiple Perspectives • Self-Monitoring • Working Memory 	<ul style="list-style-type: none"> • Pattern Completion • Spatial Analysis • Part to Whole Reasoning • Visual Memory • Visual Motor Integration
Strengths	<p>-use of nonverbal problem solving skills (use of manipulatives to solve math problems)</p> <p>-average performance on NEPSY Animal Sorting</p>		<p>-references peers to determine what to do</p> <p>-works collaboratively with peers</p> <p>-encourages and compliments others</p> <p>-demonstrates cultural competency across different environments</p>	<p>-work is accurate, self monitors</p> <p>-materials well organized</p> <p>-plans before reproducing design responses</p> <p>-attentive/focused on nonverbal tasks</p> <p>-transitions well between activities and to changes in routines</p>	<p>-penmanship</p> <p>-drawing with details and 3-D perspective</p> <p>-accurately copying info</p> <p>-visual memory; -accurately reproduced > 90% of details of Rey Complex Figure; accurately reproduction after time delay</p> <p>-Lego construction</p> <p>-assembles IKEA furniture at home</p>
Weaknesses	<p>-generalizing/applying skills</p>	<p>-decoding, blending sounds, struggling much more so than classroom peers</p> <p>-following verbal directions</p> <p>-word finding</p> <p>-verbal formulation</p>		<p>-performance on working memory subtests</p> <p>difficulty remembering more than 2 step directions</p>	
Comments		<p>-identified with language impairment at age 5</p> <p>-history of difficulty learning letter sounds</p> <p>-slow progress in reading</p>			

Auditory Processing

Language/Communication

- Phonemic (receptive)
- Short Term Recall (receptive, not Attention related)

Cognitive: Expression

Language/Communication

- Oral Fluency (expressive)
- Writing Fluency (expressive)

Visual Processing

Visual-Spatial

- Visual Memory (not Attention related)
- Visual Motor Integration

Sensory Motor

Language/Communication

- Writing Fluency

Visual-Spatial

- Graphic Representation (Visual Expression)

Attention

Executive Function

- Attention

Cognitive: Conceptualization

Executive Function

- Planning and Organization
- Working Memory

Reasoning

- Deductive Critical Thinking Skills
- Inductive
- Learns Rules

Cognitive: Association

Reasoning

- Integration of Memory (Auditory, Visual, Kinesthetic)

Language/Communication

- Synonym/Antonym
- Analogies

Social Cognition

- Knowledge from Environment/Cultural Competency
- Learns Rules

Specific Learning Disability

Matrix will show us:

- Strengths (average or above average abilities) in at least two or more domain areas
- How processing strengths and weaknesses relate to academic achievement
- If there is/are significant weakness(es) that warrant(s) an SLD.

Intellectual Disability (ID)

- 
- Education Code 3030, section (h) definition: **significantly below average general intellectual functioning** existing concurrently with **deficits in adaptive behavior** and manifested during the developmental period, which adversely affect a pupil's educational performance.

How the Matrix can be used to identify ID

- Plot functioning across each domain
- Domains = we would expect weaknesses across all or most domains
- May find relative strengths in imitation, rote memory

Matrix

Identify Strengths/Weaknesses under each domain; note emerging skill/important information in Comments

Domains	Reasoning	Language/ Communication	Social Cognition	Executive Function	Visual-Spatial
Description	<ul style="list-style-type: none"> Problem Solving Abstract Thought Deduction Inferential Thinking 	<ul style="list-style-type: none"> AAC Abstract Language/ Reasoning Artic/Phonological/ Oral Motor Fluency/Prosody/Voice 	<ul style="list-style-type: none"> Knowledge acquired, directly attributed to observations of others in social context Cultural Competency Learns Social Rules 	<ul style="list-style-type: none"> Selective attention Organization Strategizing Flexibility /Shifting Cognitive Sets Multiple Perspectives Self Monitoring Working Memory 	<ul style="list-style-type: none"> Pattern Completion Spatial Awareness Part to Whole Reasoning Visual Memory Visual Motor Integration
Strengths			<ul style="list-style-type: none"> -Eye contact, gesturing -smiles at others - recognizes others' emotions 		
Weakness	<ul style="list-style-type: none"> -applying learned skills -limited problem solving -difficulty following new routines -requires assistance and practice to complete ABAB patterns 	<ul style="list-style-type: none"> -following simple directions; 1 step only -unintelligible speech -receptive & expressive language around 2-3 year old level -uses 1-2 word phrases 	<ul style="list-style-type: none"> -Relies on scaffolding for simple pretend play - simple turn taking with prompts 	<ul style="list-style-type: none"> -relies on individual adult support to stay on task -impulsive in answers; did not look at all choices -short attention span -relies on scaffolding to complete most tasks 	<ul style="list-style-type: none"> - Slow learning of letters -delayed fine motor -difficulty forming letters -copies simple lines and circle approximations -not yet drawing simple people/stick figures -completes inset puzzles
Comments	<ul style="list-style-type: none"> -Slow academic progress -Follows simple routines 	<ul style="list-style-type: none"> All milestones delayed -has learned basic concepts with repetition and intense interventions 	<ul style="list-style-type: none"> -mostly approaches adults and not peers -beginning to socialize with peers that take a motherly role 		



Once Matrix is complete, the team can compare Adaptive Behavior measures.

If Adaptive Behavior measures are impacted as well the ID is the appropriate special education disability category.



OK Lets Look at some reports

How we at the DCN report our findings...



I hope I was able to meet the objectives and you are leaving this workshop with:

- 
- An understanding of the elements of a comprehensive special education evaluation for African American students in light of Larry P and understand why it is still with us today
 - A good introduction to the MATRIX process, a best practices model developed by the DCN
 - Feeling comfortable about Informal Assessments as a vital tool to fill out a comprehensive assessment for determining eligibility

- 
- Opportunity to actively engage with peers utilizing informal assessment techniques, to sharing your professional judgment, on what cognitive skills can be observed in everyday activities, especially in play
 - An understanding of how informal assessments can reveal information that standardized assessments just cannot answer

- 
- An Understanding of how to use data on cognitive strengths and weaknesses to make a determination of eligibility and how this would fit into report
 - A renewed confidence in your own expertise in the field



Q & A

- Further questions please feel free to contact me at

jhiramoto@dcn-cde.ca.gov

- Contact us through

www.askaspecialist.org

Thank You

References

- Alfonso, V. C., Flanagan, D. P. & Radwan, S. (2005). The Impact of the Cattell-Horn-Carroll Theory on Test Development and Interpretation of Cognitive and Academic Abilities. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, second edition: theories, tests, and issues*, Chapter 9. The Guilford Press.
- Bagnato, S. J, Niesworth, J. T., & Pretti-Frontczak, K. (2010). *LINKing authentic assessment and early childhood intervention: Best measures for best practices 2nd Edition*. Brookes Publishing Company.
- Bagnato, S. J. & Simeonsson, R. J. (2008). *Authentic assessment for early childhood intervention: Best practices*. The Guildford Press.
- Beebe-Frankenberger, M. (2008). Best Practices in Providing School Psychological Services in Rural Settings. A. Thomas & J. Grimes (Eds.) *Best practices in school psychology fifth edition, Vol. 5*, Chapter 112. National Association of School Psychologists Publications.
- Braden, J., P. & Athanasiou M. S. (2005). A Comparative Review of Nonverbal Measures of Intelligence. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, second edition: theories, tests, and issues*, Chapter 26. The Guilford Press.

- Braden, J., P. & Athanasiou M. S. (2005). A Comparative Review of Nonverbal Measures of Intelligence. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, second edition: theories, tests, and issues*, Chapter 26. The Guilford Press.
- Braden, J., P. & Niebling, B. C. (2005 & 2012). Using the Joint Test Standards to Evaluate the Validity Evidence for Intelligence Tests. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, second and third edition: theories, tests, and issues*, Chapter 28 and 31 respectively. The Guilford Press.
- Brown-Chidsey, R. (2005). Intelligence Tests in an Era of Standards-Based Educational Reform. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, second edition: theories, tests, and issues*, Chapter 29. The Guilford Press.
- Brown-Chidsey, R. & Andren K. J. (2012). Intelligence Tests in the Context of Emerging assessment Practices: Problem-Solving Applications. from In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, third edition: theories, tests, and issues*, Chapter 35. The Guilford Press.

- Burke, K. B. (2009). *How to assess authentic learning fifth edition*. Corwin Press
- Carroll, J. B. (1993). *Human cognitive abilities: A survey of factor-analytic studies*, New York: Cambridge University Press.
- Carroll, J. B. (2005). The Three-Stratum Theory of Cognitive Abilities. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, second edition: theories, tests, and issues*, Chapter 4. The Guilford Press.
- Chen, J. & Gardner, H. (2005). Assessment Based on Multiple-Intelligences Theory. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, second edition: theories, tests, and issues*, Chapter 5. The Guilford Press.
- Das, J. P., Naglieri, J. A., & Kirby, J. R. (1994). *Assessment of cognitive processes*. Needham Heights: MA: Allyn & Bacon.

- Dawson, P., Guare, R. (2004). *Executive Skills in Children and Adolescent: A Practical Guide to Assessment and Intervention*. NY: Guilford Press.
- 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, third edition: theories, tests, and issues*, Chapter 30. The Guilford Press.
- Eagle, J. W. Dowd-Eagle, S. E. & Sheridan, S. M (2008). Best Practices in School-Community Partnerships. A. Thomas & J. Grimes (Eds.) *Best practices in school psychology fifth edition, Vol. 3*, Chapter 58. National Association of School Psychologists Publications.
- Elliott, C. D. (2005). The Differential Ability Scales. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, second edition: theories, tests, and issues*, Chapter 18. The Guilford Press.

- Fiorello, C. A., Hale, J. B. & Wycoff, K. L. (2012). Cognitive Hypothesis Testing: Linking Test Results to the Real World. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, third edition: theories, tests, and issues*, Chapter. The Guilford Press.
- Fitch, T., Ludwig, H., & Bugnyar, T. (2010). Social Cognition and the Evolution of Language: Constructing Cognitive Phylogenies. *Neuron* 65, 1-21.
- Flanagan, D. P., Alfonso, V. C., & Ortiz, S. O. (2012). The Cross-Battery Assessment Approach: An Overview, Historical Perspective, and Current Directions. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, third edition: theories, tests, and issues*, Chapter 19. The Guilford Press.
- Flanagan, D. P., Ortiz, S. O. & Alfonso, V. C. (2007). *Essentials of cross-battery assessment (essentials of psychological assessment)* Second Edition. Wiley.

- Flanagan, D. P., Ortiz, S. O. & Alfonso, V. C. (2008). Best Practices in Cognitive Assessment. *A. Thomas & J. Grimes (Eds.) Best practices in school psychology fifth edition, Vol. 2, Chapter 39.* National Association of School Psychologists Publications.
- Floyd, R. G. (2005). Information-Processing Approaches to Interpretation of Contemporary Intellectual Assessment Instruments. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, second edition: theories, tests, and issues*, Chapter 10. The Guilford Press.
- Floyd, R. G. & Kranzler, J. H. (2012). Processing Approaches to Interpretation of Information from Cognitive Ability Tests: A Critical Review. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, third edition: theories, tests, and issues*, Chapter 21.
- Ford, L. & Dahintenm, V. S. (2005). Use of Intelligence Tests in the Assessment of Preschoolers. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, second edition: theories, tests, and issues*, Chapter 22. The Guilford Press.

- Ford, L. Kazey, M. L. & Negreiros, J. (2012). Cognitive Assessment in Early Childhood: Theoretical and Practice Perspectives. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, third edition: theories, tests, and issues*, Chapter 24. The Guilford Press.
- Gioia, G. A., Isquith, P. K., Guy, S. C. & Kenworthy, L. (2000). *Behavior Rating Inventory of Executive Function (BRIEF) Professional Manual*. Psychologist Assessment Resources, Inc.
- Godber, Y. (2008). Best Practices in Program Evaluation. A. Thomas & J. Grimes (Eds.) *Best practices in school psychology fifth edition, Vol. 6*, Chapter 139. National Association of School Psychologists Publications.
- Gutkin, T.B. (1999). Collaborative Versus Directive/Prescriptive/Expert School-Based Consultation: Reviewing and Resolving a False Dichotomy. *Journal of School Psychology*, 37(2) 161-190.

- Hale, J. B., Yim, M. Schneider, A. N., Wilcox, G, Henzel, J. N. & Dixon, S. G. (2012). Cognitive and Neuropsychological Assessment of Attention-Deficit/Hyperactivity Disorder: Redefining a Disruptive Behavior Disorder. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, third edition: theories, tests, and issues*, Chapter 29. The Guilford Press.
- Harrison, P. L. & Raineri, G. (2008). Best Practices in the Assessment of Adaptive Behavior. A. Thomas & J. Grimes (Eds.) *Best practices in school psychology fifth edition, Vol. 2*, Chapter 37. National Association of School Psychologists Publications.
- Hass, M., Riel, J.J., & Carriere, J.A. (2008, March). Writing useful and defensible psychological reports. Seminar presented at the annual convention of the California Association of School Psychologists, Burlingame, CA.
- Haywood, C. & Lidz, C. S. (2006). *Dynamic assessment in practice: Clinical and educational applications*. Cambridge University Press.

- Hintze, J. M., Volpe, R. J. & Shapiro, E. S. (2008). Best Practices in the Systematic Direct Observation of Student Behavior. *A. Thomas & J. Grimes (Eds.) Best practices in school psychology fifth edition, Vol. 52* Chapter 18. National Association of School Psychologists Publications.
- Horn, J. L. & Blankson, N. (2005 & 2012). Foundations for Better Understanding of Cognitive Abilities. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, second and third editions: theories, tests, and issues*, Chapter 3. The Guilford Press.
- Kamphaus, R. W., Winsor, A. P., Rowe, E. W. Kim S. (2005 & 2012). A History of Intelligence Test Interpretations. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, second and third edition: theories, tests, and issues*, Chapter 2., The Guilford Press.
- Keith, T. Z. (2008). Best Practices in Using and Conducting Research in Applied Settings. *A. Thomas & J. Grimes (Eds.) Best practices in school psychology fifth edition, Vol. 6*, Chapter 137. National Association of School Psychologists Publications.

- Keith, T. Z. (2005). Using Confirmatory Factor Analysis to Aid in Understanding the Constructs Measured by Intelligence Tests. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, second edition: theories, tests, and issues*, Chapter 27. The Guilford Press.
- Keith, T. Z. (1990). Confirmatory and hierarchical confirmatory analysis of the Differential Ability Scales. *Journal of Psychoeducational Assessment*, 8, 291-405.
- Keith, T. Z. & Reynolds, M. R. (2012). Using Confirmatory Factor Analysis to Aid in Understanding the Constructs Measured by Intelligence Tests. In D. P. Flanagan & P. Harrison (Eds.) *Contemporary intellectual assessment, third edition: theories, tests, and issues*, Chapter 32. The Guilford Press.
- Kelly-Vance, L. & Ryalls, B. O. (2008). Best Practices in Play Assessment and Intervention. A. Thomas & J. Grimes (Eds.) *Best practices in school psychology fifth edition, Vol. 2* Chapter 33. National Association of School Psychologists Publications.

- Klinger, L. G., O'Kelley, S. E., Mussey, J. L., Goldstein, S. & DeVries, M. (2012). Assessment of Intellectual Functioning in Autism Spectrum Disorder. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, third edition: theories, tests, and issues*, Chapter 27. The Guilford Press.
- Levine, Mel (1998). *Developmental variation and learning disorders, 2nd edition*. MA: Educators Publishing Services.
- Levine, Mel (2000). *A table of neurodevelopmental constructs*. MA: Educators Publishing Services.
- Levine, Mel (2001). *Jarvis clutch – social spy*. MA: Educators Publishing Services.
- Lichtenstein, R. (2008) Best Practices in Identification of Learning Disabilities. A. Thomas & J. Grimes (Eds.) *Best practices in school psychology fifth edition, Vol. 2*, Chapter 17. National Association of School Psychologists Publications.
- Luria, A. R. (1966). *Human brain and psychological processes*, New York: Harper & Row.

- Luria, A. R. (1973a). *The origin and cerebral organization of man's conscious action*. In S. G. Sapir & A.C. Nitzburg (EDS.), *Children with learning problems* (pp. 109-130), New York: Brunner/Mazel.
- Luria, A. R. (1973b). *The working brain: An introduction to neuropsychology*. New York: Basic Books.
- Luria, A. R. (1980). *Higher cortical functions in man* (2nd ed.). New York: Basic Books.
- Maricle, D. E. & Avirett, E. (2012). The Role of Cognitive and Intelligence Tests in the Assessment of Executive Functions. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, third edition: theories, tests, and issues*, Chapter 34. The Guilford Press.
- Mather, N., & Wendling, B. J. (2005 & 2012). Linking Cognitive Assessment Results to Academic Interventions and Students with Learning Disabilities. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, second and third edition: theories, tests, and issues*, Chapters 13 and 23 respectively. The Guilford Press.

- McCloskey, G., Whitaker, J., Murphy, R. & Rogers, J. (2012). Intellectual, Cognitive, and Neuropsychological Assessment in Three-Tier Service Delivery Systems in Schools. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, third edition: theories, tests, and issues*, Chapter 36. The Guilford Press.
- McCue, M., Chase, S.L., Dowdy, C.A., Pramuka, M., Petrick, J., Aitken, S., & Fabry, P. (1994). Functional assessment of individuals with cognitive disabilities: A desk reference for rehabilitation. U.S. Department of Education Rehabilitation Service Administration #H129J10012 and #H246D30003. Pittsburgh, PA: Center for Applied Neuropsychology.
- McGrew, K. W. (2004). Pre-publication book chapter of The Cattell-Horn-Carroll Theory of Cognitive Abilities, Past, Present and Future.
- McGrew, K. W. (2005). The Cattell-Horn-Carroll Theory of Cognitive Abilities, Past, Present and Future. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, second edition: theories, tests, and issues*, Chapter 8. The Guilford Press.

- McGrew, K. & Flanagan, D. (1998). *Intelligence test desk reference (ITDR): the Gf-Gc cross-battery assessment*, Pearson Education.
- Miller, D. C. & Maricle, D. E. (2012). The Emergence of Neuropsychological Constructs into Tests of Intelligence and Cognitive Abilities. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, third edition: theories, tests, and issues*, Chapter 33. The Guilford Press.
- Miller, D. D. & Kraft, N. P. (2008). Best Practices in Communicating With and Involving Parents. A. Thomas & J. Grimes (Eds.) *Best practices in school psychology fifth edition, Vol. 3*, Chapter 57. National Association of School Psychologists Publications.
- Minke, K. M. & Anderson K. J. (2008). Best Practices in Facilitating Family-School Meetings. A. Thomas & J. Grimes (Eds.) *Best practices in school psychology fifth edition, Vol. 3*, Chapter 59. National Association of School Psychologists Publications.

- Miranda, A. H. (2008) Best Practices in Increasing Cross-Cultural Competence. *A. Thomas & J. Grimes (Eds.) Best practices in school psychology fifth edition, Vol. 5*, Chapter 109. National Association of School Psychologists Publications.
- Miranda, A. H. & Olivo II, J. C. (2008) Best Practices in Urban School Psychology. *A. Thomas & J. Grimes (Eds.) Best practices in school psychology fifth edition, Vol. 5*, Chapter 113. National Association of School Psychologists Publications.
- Nagle, R. J. & Gagnon, S. G. (2008). Best Practices in Planning and Conducting Needs Assessment. *A. Thomas & J. Grimes (Eds.) Best practices in school psychology fifth edition, Vol. 6*, Chapter 140. National Association of School Psychologists Publications.
- Naglieri, J. A. (2003). *Naglieri Nonverbal Ability Test – Individual Form*. San Antonio, TX: Harcourt Assessment.
- Naglieri, J. A. (2005). The Cognitive Assessment System. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, second edition: theories, tests, and issues*, Chapter 20. The Guilford Press.

- Naglieri, J. A. (2008). Best Practices in Linking Cognitive Assessment of Students With Learning Disabilities to Interventions. *A. Thomas & J. Grimes (Eds.) Best practices in school psychology fifth edition, Vol. 2*, Chapter 41. National Association of School Psychologists Publications.
- Naglieri, J. A. & Das, J. P. (1997). *Das-Naglieri: Cognitive Assessment System*, Itasca, IL: Riverside.
- Naglieri, J. A. & Das, J. P. (2005). Planning, Attention, Simultaneous, Successive (PASS). Theory: A Revision of the Concept of Intelligence. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, second edition: theories, tests, and issues*, Chapter 7. The Guilford Press.
- Naglieri, J. A., Das, J. P. & Goldstein, S. (2012). Planning, Attention, Simultaneous, Successive: A Cognitive-Processing-Based Theory of Intelligence, Chapter 7, from *Contemporary Intellectual Assessment, Third Edition: Theories, Tests, and Issues*, Editors Flanagan, D. P & Harrison, P. L, The Guilford Press.

- Naglieri, J. A. & Otero, T. M. (2012). The Wechsler Nonverbal Scale of Ability – Assessment of Diverse Populations. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, second edition: theories, tests, and issues*, Chapter 18. The Guilford Press.
- Ortiz, S. O. (2008). Best Practices in Nondiscriminatory Assessment. A. Thomas & J. Grimes (Eds.) *Best practices in school psychology fifth edition, Vol. 2*, Chapter 40. National Association of School Psychologists Publications.
- Ortiz, S. O. & Dynda, A. M. (2005). Use of Intelligence Tests with Culturally and Linguistically Diverse Populations. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, second edition: theories, tests, and issues*, Chapter 25. The Guilford Press.
- Ortiz, S. O., Flanagan, D. P. & Dynda, A. M. (2008). Best Practices in Working with Culturally Diverse Children and Families. A. Thomas & J. Grimes (Eds.) *Best practices in school psychology fifth edition, Vol. 5*, Chapter 108. National Association of School Psychologists Publications.

- Ortiz, S. O., Ochoa, S. H. & Dynda, A. M. (2012). Testing with Culturally and Linguistically Diverse Populations: Moving beyond the Verbal-Performance Dichotomy into Evidence-Based Practice. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, third edition: theories, tests, and issues*, Chapter 22. The Guilford Press.
- Ortiz, S. O. & Ochoa, S. H. (2005). Advances in Cognitive Assessment of Culturally and Linguistically diverse Individuals. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, second edition: theories, tests, and issues*, Chapter 11. The Guilford Press.
- Robinson, G. & Struthers, L. (2011). Executive Functioning Deficits: Applications and Interventions for School Psychologists. National Association of School Psychology Convention, San Francisco.
- Sattler, J.M. (2001). *Assessment of Children: Cognitive Applications*, 4th Edition. Jerome M. Sattler Publisher, Inc.

- Sattler, J. M. & Hoge, R. D. (2006). *Assessment of Children: Behavioral, Social, and Clinical Foundations*, 5th Edition. Jerome M. Sattler Publisher, Inc.
- Schneider, W. J. & McGrew, K. S. (2012). the Cattell-Horn-Carroll Model of Intelligence. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, third edition: theories, tests, and issues*, Chapter 4. The Guilford Press.
- Schulte, A.C. & Osborne, S.S. (2003). When Assumptive Worlds collide: A Review of Definitions of Collaboration in Consultation. *Journal of Educational and Psychological Consultation*, 14(2), 109-138.
- Sheridan, S. M., Taylor, A. M. & Woods, K. E. (2008). Best Practices for Working With Families: Instilling a Family-Centered Approach. A. Thomas & J. Grimes (Eds.) *Best practices in school psychology fifth edition, Vol. 3*, Chapter 60. National Association of School Psychologists Publications.

- Shinn, M. R. (2008). Best Practices in Using Curriculum-Based Measurement in a Problem-Solving Model. *A. Thomas & J. Grimes (Eds.) Best practices in school psychology fifth edition, Vol. 2*, Chapter 14. National Association of School Psychologists Publications.
- Sternberg, R. J. (2005 & 2012). The Triarchic Theory of Successful Intelligence. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, second and third edition: theories, tests, and issues*, Chapter 6. The Guilford Press.
- Stewart, L. H. & Silberglitt, B. (2008). Best Practices in Developing Academic Local Norms. *A. Thomas & J. Grimes (Eds.) Best practices in school psychology fifth edition, Vol. 2*, Chapter 13. National Association of School Psychologists Publications.

- Valencia, R. R & Suzuki, L. A. (2001). *Intelligence testing and minority students foundations, performance factors, and assessment issues*. Sage Publications, Inc.
- Watkins, M. W., Glutting, J. J. & Youngstrom, E. A. (2005). Issues in Subtest Profile Analysis. In D. P. Flanagan & P. L. Harrison (Eds.) *Contemporary intellectual assessment, second edition: theories, tests, and issues*, Chapter 12. The Guilford Press.
- Wechsler, D., & Naglieri, J. A. (2006). *Wechsler Nonverbal Scale of Ability*. San Antonio, TX: Harcourt Assessment.