

Equitable Identification of Gifted Students

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Disclosures of Tests & Books I have Published related to Equity (1985 – 2022)



FOR MORE INFORMATION PLEASE GO TO MY WEB PAGES

The screenshot shows two pages from Jack Naglieri's website. The left page is a promotional page for the 'Naglieri General Ability Tests', featuring a QR code, the Naglieri logo, and a banner with the text 'EQUITABLE ASSESSMENT OF GIFTED STUDENTS USING THE Naglieri General Ability Tests Now Available'. Below the banner, there are two columns of text: 'Inequity in Gifted Testing' and 'Achieving Equity'. The right page is the homepage of 'JACKNAGLIERI.COM', which includes a navigation menu, a welcome message, a bio of Dr. Jack A. Naglieri, and a grid of featured content such as 'NAGLIERI GENERAL ABILITY TESTS: VERBAL, NONVERBAL AND QUANTITATIVE', 'HANDOUTS', and 'WEBINARS'.

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Naglieri & Otero (2024) Free Book

Free Mini Book

SCAN HERE

PASS Theory of Intelligence and the CAS2

www.JackNaglieri.com

PASS Theory of Intelligence and the CAS2

JACK A. NAGLIERI & TULIO M. OTERO

PASS THEORY OF INTELLIGENCE AND ITS MEASUREMENT USING CAS2 2

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<https://newschannel20.com/news/local/district-186s-gifted-program-continues-to-help-former-student-thrive>

District 186's gifted program continues to help former student thrive

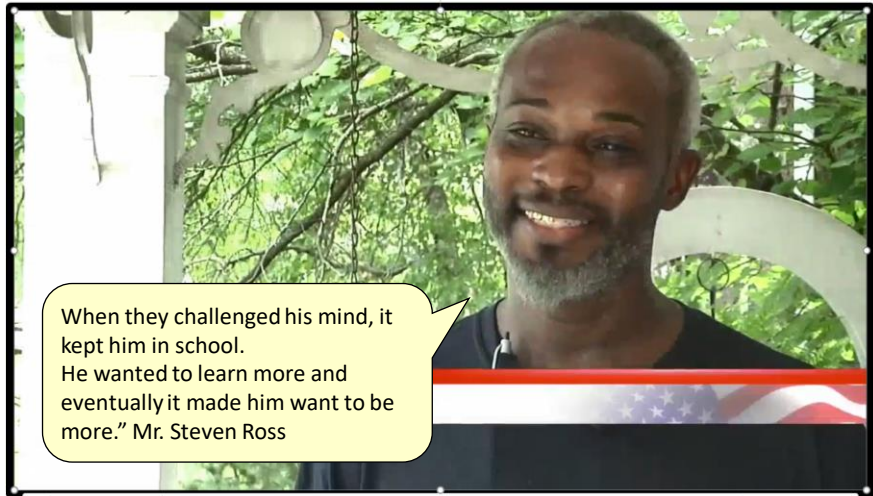
by Rachel Droze | Tue, July 31st 2018



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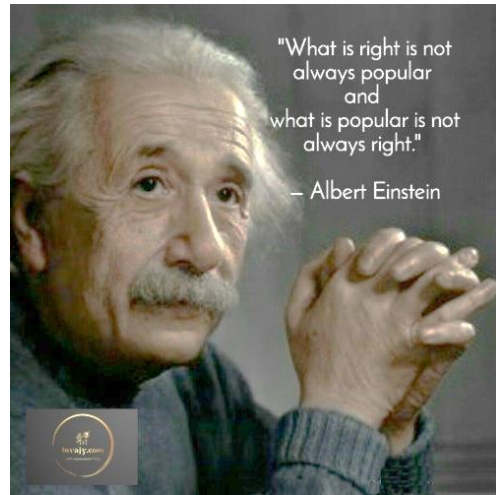
Devion Graduated High School and...



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The BIG picture

- The tools we use to identify students for GIFTED PROGRAMS change the course of a student's life
- The intelligence test we choose has a profound influence on what we learn and say about the student
- Equitable assessment can be achieved if we choose tests that measure how well a student **THINKS** in a way that is not confounded by what a student **KNOWS**



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Traditional IQ and Achievement Tests

- When I started working as a school psychologist in 1975...I noticed that parts of the intelligence tests we used were VERY similar to parts of the achievement tests
 - For example, the Achievement Test had a General Information and Arithmetic subtests JUST LIKE THE WISC!
- THAT DID NOT MAKE SENSE

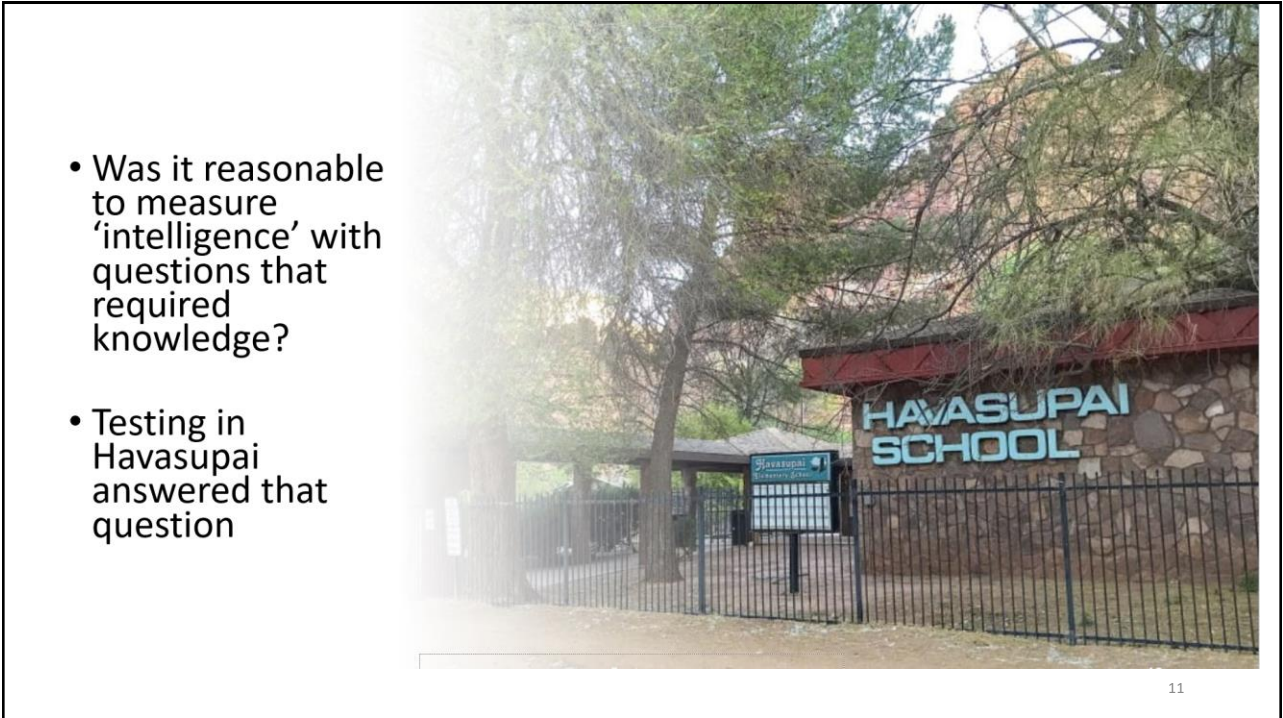


1975 Charles Champagne Elementary, Bethpage, NY

It seemed wrong to measure intelligence using questions that demand knowledge

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- Was it reasonable to measure 'intelligence' with questions that required knowledge?
- Testing in Havasupai answered that question

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1981

Test Results and Interpretations:

On the WISC-R, Amanda earned a Performance IQ of 95±7 which falls in the average range of intelligence and at the 37th percentile rank in comparison to the children her age in the standardization sample. In contrast to this score of average non-verbal intelligence was her Verbal IQ of 52±7. This score is quite low and indicates that her level of facility with the English language falls at about the 1st percentile rank. This score can NOT be considered an estimate of verbal intelligence because Amanda speaks mostly Supai and little English. Due to the large difference between these scores, no Full Scale IQ was computed.

Within the WISC-R a clear pattern emerged: Amanda performed well on tasks that required little or no English language comprehension or expression, and poorly on all tasks which did require these linguistic skills. In fact, even if a task was visual and non-verbal, but required English language comprehension of instructions, she performed more poorly.

WISC-V Full Scale				
Verbal Comprehension	Visual Spatial	Fluid Reasoning	Working Memory	Processing Speed
Similarities	Block Design	Matrix Reasoning	Digit Span	Coding
Vocabulary	Visual Puzzles	Figure Weights	Picture Span	Symbol Search
Information		Picture Concepts	Letter-Number Sequencing	Cancellation
Comprehension		Arithmetic		

WISC-R RECORD FORM

Wechsler Intelligence Scale for Children - Revised

NAME: _____
 ADDRESS: _____
 PARENT'S NAME: _____
 SCHOOL: _____
 PLACE OF TEST: _____
 REFERRED BY: _____

Year: 81 Month: 8 Day: 14
 Date Tested: _____
 Date of Birth: 74 4 26
 Age: 7 4 18

WISC-R PROFILE

Clinicians who wish to draw a profile should first transfer the child's scaled scores to the row of boxes below. Then mark an X on the dot corresponding to the scaled score for each test, and draw a line connecting the X's.

VERBAL TESTS					PERFORMANCE TESTS					
Information	Similarities	Arithmetic	Vocabulary	Comprehension	Digit Span	Picture Completion	Block Design	Object Assembly	Coding	Matrix
19	19	19	19	19	19	19	19	19	19	19
18	18	18	18	18	18	18	18	18	18	18
17	17	17	17	17	17	17	17	17	17	17
16	16	16	16	16	16	16	16	16	16	16
15	15	15	15	15	15	15	15	15	15	15
14	14	14	14	14	14	14	14	14	14	14
13	13	13	13	13	13	13	13	13	13	13
12	12	12	12	12	12	12	12	12	12	12
11	11	11	11	11	11	11	11	11	11	11
10	10	10	10	10	10	10	10	10	10	10
9	9	9	9	9	9	9	9	9	9	9
8	8	8	8	8	8	8	8	8	8	8
7	7	7	7	7	7	7	7	7	7	7
6	6	6	6	6	6	6	6	6	6	6
5	5	5	5	5	5	5	5	5	5	5
4	4	4	4	4	4	4	4	4	4	4
3	3	3	3	3	3	3	3	3	3	3
2	2	2	2	2	2	2	2	2	2	2
1	1	1	1	1	1	1	1	1	1	1

*See Chapter 4 in the manual for a discussion of the significance of differences between scores on the tests.

NOTES: Σ = 9.4

VERBAL TESTS	Raw Score	Scaled Score
Information	3	3
Similarities	0	2
Arithmetic	4	4
Vocabulary	0	1
Comprehension	0	1
(Digit Span)	2	2
Verbal Score		12

PERFORMANCE TESTS	Raw Score	Scaled Score
Picture Completion	10	8
Picture Arrangement	5	5
Block Design	18	12
Object Assembly	17	11
Coding	17	11
(Mazes)	17	11
Performance Score		72

Verbal Score	Scaled Score	IQ
12	12	52
72	72	95
Full Scale Score		59
Full Scale Score		72

*Printed from 4 tests, if necessary.

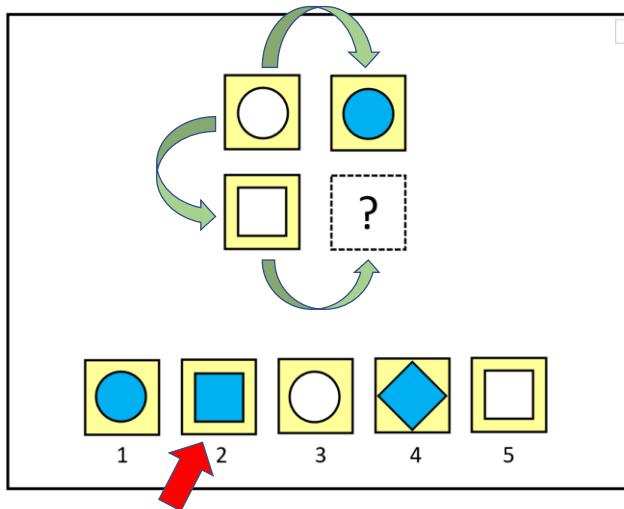
Naglieri, J. A. (1982). Does the WISC-R measure verbal intelligence for non-English speaking children? *Psychology in the Schools, 19*, 478-479.

Naglieri, J. A., & Yazzie, C. (1983). Comparison of the WISC-R and PPVT-R with Navajo children. *Journal of Clinical Psychology, 39*, 598-600.

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Tests that Measure Thinking or Knowing?



Girl is woman as
boy is to man ?

3 is to 9 as
4 is to 16 ?

C⁷ is to F as
E⁷ is to A ?

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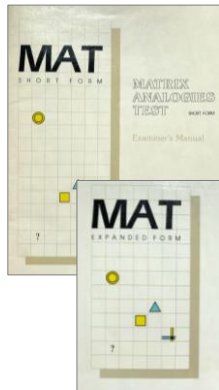
Equitable Assessment of Intelligence

- The questions I had about WISC subtests made me critical of the way intelligence was and is still measured
- Solution?
- Measure how well a person solves problems by **THINKING** in a way that is not dependent upon **KNOWING**
- How can you measure THINKING?
- I started with a progressive matrices test

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Naglieri's Nonverbal Tests: 1985 to Present

• First and Second Versions



- The goal: equitable measurement of *general ability* for ALL students, especially “intellectually gifted children from disadvantaged backgrounds (Naglieri, 1985, p. 3).”

Validity Results:

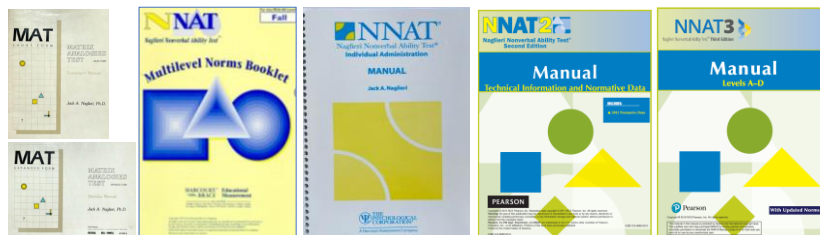
1. Males Females differences were trivial (< 1 point) on MAT:EF (452) & MAT:SF (N = 2,636)
2. Differences by Race were trivial (< 1 point) on MAT:EF (N = 110) and MAT:SF (N = 672)
3. MAT:SF correlations with reading and math achievement were substantial across grades K-12 (N = 3,022)

MAT Short and Expanded Forms 1985

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Naglieri's Nonverbal Tests : 1985 to Present

• Six Versions of the Naglieri Nonverbal Tests



MAT Short and Expanded Forms 1985

Naglieri Nonverbal Ability Test 1997

NNAT-Individual, 2003

NNAT-2 2008

NNAT3 2016

NNAT Validity:

- No difference by sex, race or Ethnicity (and Equal ID rates) on EVERY VERSION OF THE NNAT
- The NAT scores correlated significantly with Achievement & as well as the WISC!

The research on all these tests convinced me that measuring intelligence using items that measured how well students **think** in a way that is not influenced by what they **know** was an equitable way to measure **general intelligence 'g'**.

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Tests with Equity as a Goal 1985-Present

Traditional Tests

1. Naglieri, J. A. (1985). **Matrix Analogies Test - Expanded Form**. San Antonio: The Psychological Corporation.
2. Naglieri, J. A. (1985). **Matrix Analogies Test - Short Form**. San Antonio: The Psychological Corporation.
3. Naglieri, J. A. (1997). **Naglieri Nonverbal Ability Test**. San Antonio, TX: The Psychological Corporation.
4. Naglieri, J. A., & Bardos, A. N. (1997). **General Ability Scale for Adults**. San Antonio, TX: Pearson.
5. Naglieri, J. A. (2003). **Naglieri Nonverbal Ability Test - Individual Form**. San Antonio, TX: Pearson.
6. Wechsler, D., & Naglieri, J. A. (2006). **Wechsler Nonverbal Scale of Ability**. San Antonio, TX: Pearson.
7. Naglieri, J. A. (2008). **Naglieri Nonverbal Ability Test – 2nd Edition**. San Antonio, TX: Pearson.
8. Naglieri, J. A. (2016). **Naglieri Nonverbal Ability Test – Third Edition**. San Antonio, TX: Pearson.

Second Generation

9. Naglieri, J. A., & Das, J. P. (1997). **Cognitive Assessment System**. Austin: ProEd
10. Naglieri, J. A., Das, J. P., Goldstein, S. (2014). **Cognitive Assessment System Second Edition**. Austin, ProEd.
11. Naglieri, J. A., Das, J. P., & Goldstein, S. (2014). **Cognitive Assessment System Second Edition - Brief**. Austin, ProEd.
12. Naglieri, J. A., Moreno, M. A., & Otero, T. M. (2017). **Cognitive Assessment System – Español**. Austin, ProEd.
13. Naglieri, J. A. (2022). **Naglieri General Ability Test: Nonverbal**. Markham, Canada: MHS.
14. Naglieri, J. A. & Brulles, D. (2022). **Naglieri Ability Test: Verbal**. Markham, Canada: MHS.
15. Naglieri, J. A. & Lansdowne, K. (2022). **Naglieri Ability Test: Quantitative**. Markham, Canada: MHS.

Keep in mind that nonverbal tests are fine to measure *general ability*; but school psychologists typically need to measure MORE than 'g'. I recommend a multi-dimensional theory of intelligence based on brain function (PASS).

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Two Questions:

1. Why do we measure ability the way we do?
2. Do the tests measure thinking or knowing?

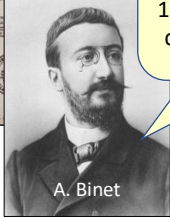
The early history of IQ tests provides the answers



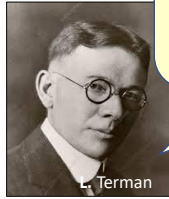
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Stanford-Binet → Army Mental Tests → Today



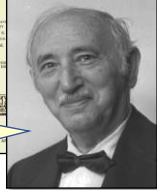
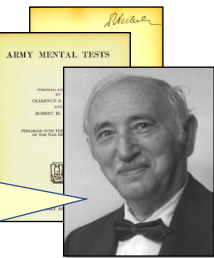
When working on the 1911 scale, Binet removed items from 1908 scale because 'they depended too much on school learning'



Terman added items dependent upon school learning in the 1916 Stanford-Binet because he believed 'intelligence at the verbal and abstract levels is the highest form of mental ability'.

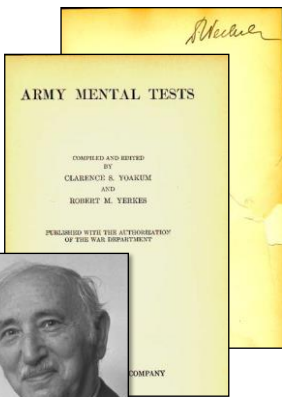


Arthur Otis (Terman's student) was instrumental in the development of the U.S. Army Alpha (Verbal & Quantitative) and Beta (Nonverbal) and the Otis-Lennon Ability Test



Wechsler based his intelligence test on the U.S. Army Mental Tests (Verbal, Quantitative & Nonverbal)

Alpha & Beta → Wechsler



- Army Alpha**
 - Synonym- Antonym
 - Disarranged Sentences
 - Number Series
 - Arithmetic Problems
 - Analogies
 - Information

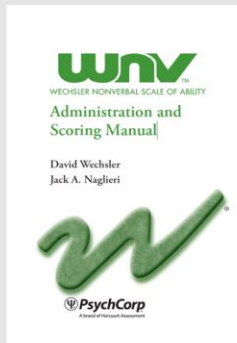
Verbal & Quantitative IQ (Knowledge)

- Army Beta**
 - Maze
 - Cube Imitation
 - Cube Construction
 - Digit Symbol
 - Pictorial Completion
 - Geometrical Construction

Nonverbal IQ (Thinking)

WISC, WJ CogAT & Otis-Lennon

The emphasis in the *WNV Manual* that the Full Scale measures *general ability nonverbally*—and *not* nonverbal ability—ties the WNV to Dr. Wechsler



Dr. Wechsler remained a firm believer in Spearman's *g* theory ... He believed that his Verbal and Performance Scales represented different ways to access *g*, but he never believed in nonverbal intelligence as being separate from *g*.

He saw the Performance Scale as the most sensible way to measure the general intelligence of people with ... limited proficiency in English.

Quotes from Alan S. Kaufman in the *Wechsler Nonverbal Manual*; Wechsler & Naglieri (2006)

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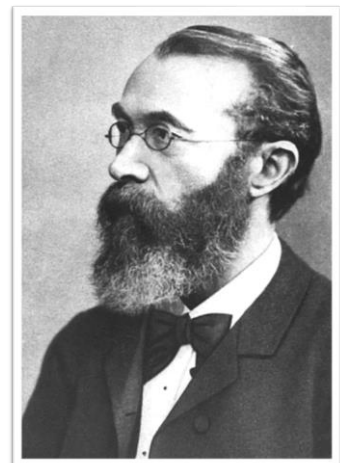
CONCEPT OF GENERAL INTELLIGENCE 61

The Criteria of a Test of Intelligence.— Influenced both by the theoretical discussion of general intelligence and by the empirical work of testing, we have arrived at certain requirements for a good test of intelligence, which we may discuss under the four following headings:

1. *Tests must be relatively new.*— A good intelligence test must avoid as much as possible anything that is commonly learned by the subjects tested. In a broad sense this rests upon a differentiation between knowledge and intelligence. To use as a test of intelligence something that is commonly taught in school is not desirable, because those children who have reached the particular grade in which this is generally taught have memorized this fact, whereas other children of equal or greater intelligence may have had no opportunity to learn this same fact, simply because they may not have reached this particular grade in their school work. To ask the question, "Who discovered America?" would be indicative of the school progress or general cultural environment of the child rather than of his general intelligence. Failure to answer might indeed be a lack of intelligence in the case of school children, but on the other hand a very intelligent child might fail to answer owing to the fact of his not having reached the grade in which this was taught.

Pintner (Intelligence Testing, 1923)

- This is a social justice issue for those from disadvantaged communities and those with limited education



A question on Wechsler's Information subtest

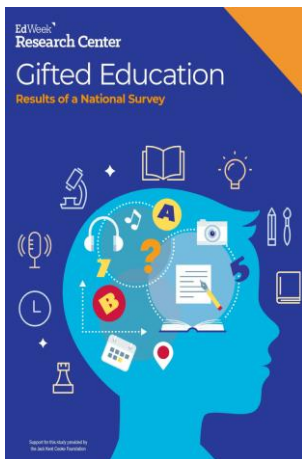
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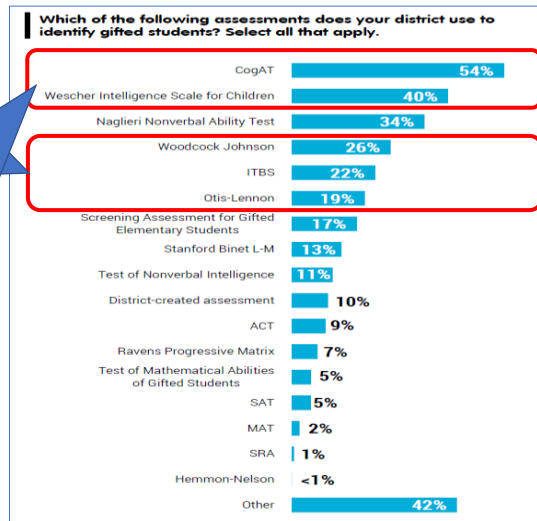
Including *Knowledge* in “Ability” Tests & Equity

Stanford-Binet-5	WISC-V	WJ-IV	KABC-II	OLSAT	CogAT
<ul style="list-style-type: none"> • Verbal • Knowledge • Quantitative Reasoning • Vocabulary • Verbal Analogies 	<ul style="list-style-type: none"> • Verbal Comprehension • Vocabulary, Similarities, Information • Fluid Reasoning • Figure Weights, Arithmetic 	<ul style="list-style-type: none"> • Comprehension Knowledge: Vocabulary & General Information • Fluid Reasoning: Number Series & Concept Formation • Auditory Processing: Phonological Processing 	<ul style="list-style-type: none"> • Knowledge / GC • Riddles, • Expressive Vocabulary, • Verbal Knowledge 	<ul style="list-style-type: none"> • Verbal • Following directions • Verbal Reasoning • Quantitative • Verbal Arithmetic Reasoning 	<ul style="list-style-type: none"> • Verbal Scale • Analogies • Sentence Completion • Verbal Classification • Quantitative • 44 pages of oral instructions

National Survey of Gifted Education

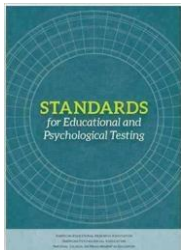


These tests have verbal and quantitative questions and lengthy verbal directions

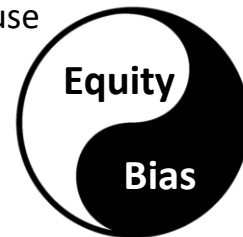


Test Content, Test Bias and Test Equity

According to the *Standards for Educational and Psychological Testing* (AERA, APA, NCME, 2014) Psychometric TEST BIAS and EQUITY are two different ways of measuring test fairness.



- ... if a person has had limited opportunities to learn the content in a test of intelligence, **that test may be considered unfair** (because it penalizes students for not knowing the answers) **even if the norming data do not demonstrate test bias.**
- Evidence of EQUITY is examined by test content and mean score differences



Rates of Identification

Table 2
NNAT Scores

	White		Black		Hispanic		Expected %
	n	%	n	%	n	%	
120 & above	1,571	10.3	269	9.4	190	9.5	9.0
125 & above	906	5.6	145	5.1	88	4.4	5.0
130 & above	467	2.5	75	2.6	46	2.3	2.0
135 & above	190	1.1	42	1.5	18	0.9	1.0
140 & above	90	0.6	19	0.6	9	0.4	0.4
Total Sample n	14,141		2,863		1,991		

95th %tile

Note. Expected percentage values are those associated with normal curve probabilities.

GIFTED IDENTIFICATION

Addressing Underrepresentation of Gifted Minority Children Using the Naglieri Nonverbal Ability Test (NNAT)

Jack A. Naglieri
George Mason University

Donna Y. Ford
The Ohio State University

ABSTRACT

A persistent problem in education is the underrepresentation of diverse students in gifted education programs. Many educators attribute the poor participation of diverse students in gifted programs to the ineffectiveness of standardized tests in capturing the ability of these students. Thus, a primary agenda of school selection committees is to find more culturally sensitive measures. This study examined the effectiveness of the Naglieri Nonverbal Ability Test (NNAT) in identifying gifted Black and Hispanic students in comparison to White students. The sample was comprised of

attribute the problem to standardized tests, contending that these tests fail to assess the strengths and abilities of culturally, ethnically, and linguistically diverse populations (e.g., Frazier et al., 1995). Support for this assertion comes from reports showing that Black, Hispanic, and Native American students consistently score lower than White students on traditional standardized tests (Bosdy, 1992; Sattler, 1988).
Despite the fact that intelligence tests such as the Wechsler Intelligence Scale for Children—Third Edition

PUTTING THE RESEARCH TO USE

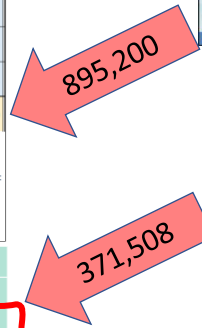
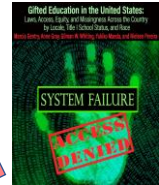
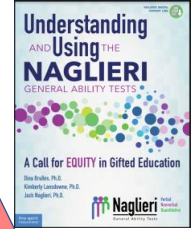
- Sample:
 - 19,210 children (fall 1995 NNAT sample) Grades K to 12
 - Cumulative frequency distributions for White (n = 14, 316) , Black (n = 2,880), and Hispanic (n = 2, 014) samples show equal identification across range of scores

Numbers of Gifted Students Missed = 1,266,708

Gifted Enrollment by Race and Ethnicity as of 2020 (updated 2024).				
	N in Public Education K-12 in 2020	N Potentially Gifted (8%; 92 percentile)	N Students in gifted programs	Difference Between Potential and Identified
White	23,834,458	1,906,757	1,937,350	30,593
Black	7,754,506	620,360	330,774	-289,586
Hispanic	14,337,467	1,146,997	600,498	-546,499
Native Americans	748,000	59,840	26,700	-33,140
Two or More Races	1,641,817	131,345	105,371	-25,974
Total Non-Whites	24,481,790	1,958,543	1,063,343	-895,200

1. Representation Ratio formula: N in Gifted Education / Potential N in Gifted Education.
 2. Total Enrollment data from Table 203.60. Enrollment and percentage distribution of enrollment in public elementary and secondary schools, by race/ethnicity and level of education: Fall 1999 through fall 2027. https://nces.ed.gov/ipeds/data/digest/d17/tables/d17_203.60.asp
 3. Gifted Enrollment data from Table 204.80. Number of public-school students enrolled in gifted and talented programs, by sex, race/ethnicity, and state: Selected years, 2004 through 2013-14. https://nces.ed.gov/ipeds/data/digest/d17/tables/d17_204.80.asp
 4. From: Brulles, D., Lansdowne, K. & Naglieri, J. A. (2022). *Understanding and Using the Naglieri General Ability Tests: A Call to Equity in Gifted Education*. Minneapolis, MN: Free Spirit Publishing.
 5. Native American data from: Steven C. Haas, Associate Director, Indigenous Students Leap Ahead (ISLA) Project.

Percent of Schools that do not identify	41.5%
Additional non-white gifted students = 41.5% of 895,200	N = 371,508
Total non-white gifted students missed	N = 1,266,708

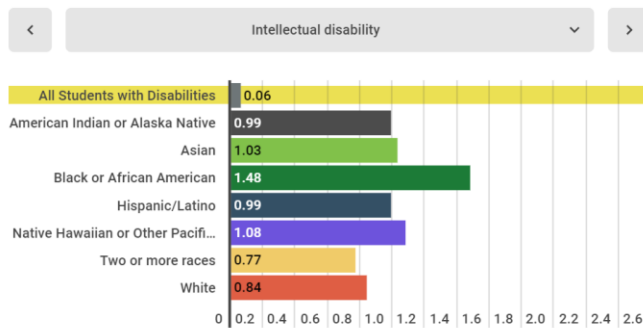


OSEP Office of Special Education Programs
Office of Special Education and Rehabilitative Services

OSEP Fast Facts: Race and Ethnicity of Children with Disabilities Served under IDEA Part B

For the purposes of this fact sheet, racial ethnic groups are defined in the IDEA Part B Child Count and Educational Environments for School Year 2019-2020, OSEP Data Documentation <https://www2.ed.gov/programs/osepidea/518-data/collection-documentation/data-documentation-files/part-b/child-count-and-educational-environment/idea-partb-childcountandedenvironment-2019-20.pdf>

Risk Ratio of Students with Disabilities by Disability Category and by Specific Race and Ethnicity, Ages 5 (in kindergarten) through 21: SY 2019-20

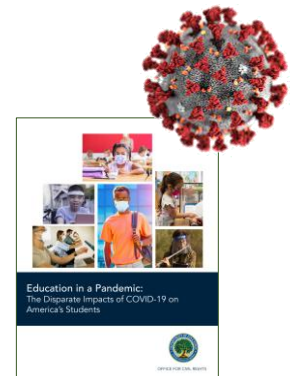


The relative risk ratio of students with disabilities under IDEA by race and Ethnicity is the probability of a student with a disability being identified for intellectual disability. The higher the number, the larger the probability. Nationally, **Black Students are 1.48 times more likely to be identified with intellectual disability** compared to all students with disabilities.

<https://sites.ed.gov/idea/osep-fast-facts-race-and-ethnicity-of-children-with-disabilities-served-under-idea-part-b/>
https://daamerica.org/lda_today/disproportionate-identification-of-students-of-color-in-special-education/

Academic Learning Loss & COVID

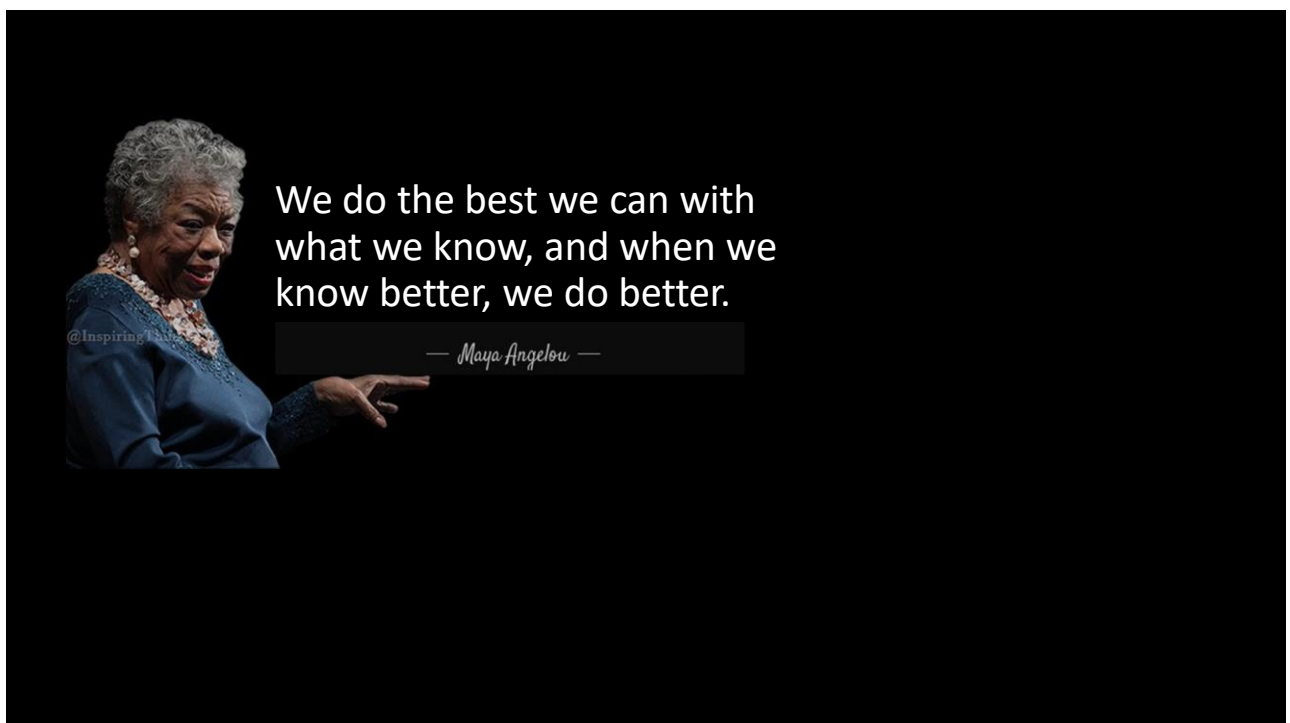
- COVID-19 has increased the impact of disparities in access and opportunity for students of color and they are even further behind than they were before.
- Their **scores on traditional intelligence tests** which demand knowledge **are even more inaccurate.**
- **Solutions:**
 - For traditional tests, use post-COVID norms only.
 - Use intelligence tests that are not dependent upon knowledge



Education in a Pandemic: The Disparate Impacts of COVID-19 on America's Students. US Dept. of Ed- Office of Civil Rights. June, 21, 2021. <https://www2.ed.gov/about/offices/list/ocr/docs/20210608-impacts-of-covid19.p>

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The Naglieri General Ability Tests: Verbal, Nonverbal and Quantitative

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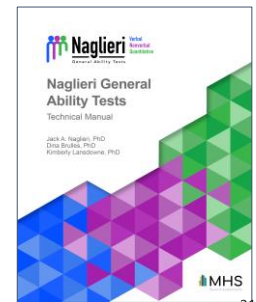
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NaglieriGiftedTests.com



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Naglieri General Ability Tests

- We **explicitly made tests for equitable identification** of students from diverse cultural, linguistic, or socioeconomic backgrounds
- We used the traditional Verbal, Nonverbal and Quantitative formats to **measure general ability** using:
 - Test questions that do not require academic knowledge,
 - Verbal and Quantitative test questions that can be solved using any language,
 - Animated instructions remove the need for comprehension of directions,
 - A multiple-choice response removes the need for verbal expression.
 - Online (and paper) administration for group or individual assessment
 - Universal assessment using local and national norms

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The Naglieri-V measures general ability using pictures of objects representing verbal concepts. The items are comprised of universally recognized pictures that do not rely on knowledge acquired in academic settings.

The student's task is to identify which of the six pictures does *not* represent the verbal concept shared by the other five.

The test items require close examination of *the relationships among the pictures*.



Naglieri General Ability Test – Verbal
(Naglieri & Brulles)

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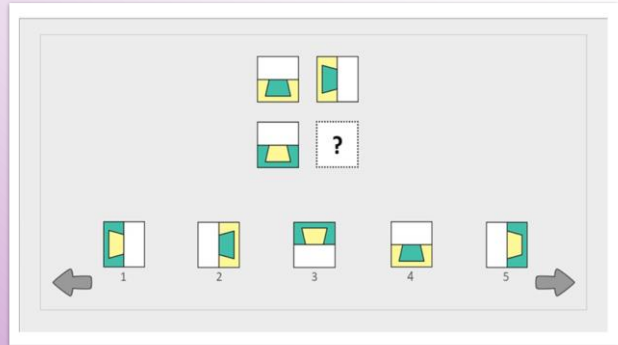
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The **Naglieri-NV** measures **general ability** using questions that require a student to recognize the relationships among the shapes.

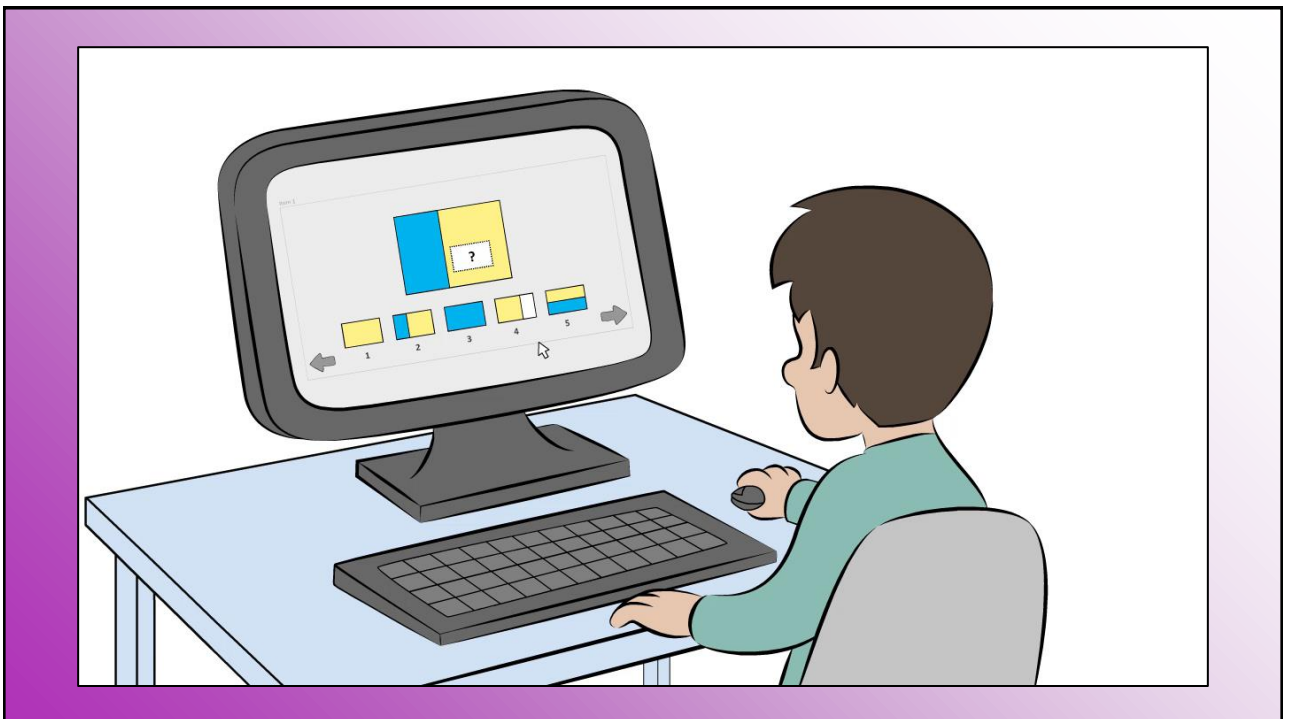
The structure of the items varies, but all items require that the student decipher the logic behind *the relationships among the shapes*, sequences, spatial orientations, patterns, and other distinguishing characteristics.

This nonverbal test is conceptually similar to the NNAT3 but it contains many **NEW** kinds of items not included before.



*Naglieri General Ability Test –
Nonverbal (Naglieri)*

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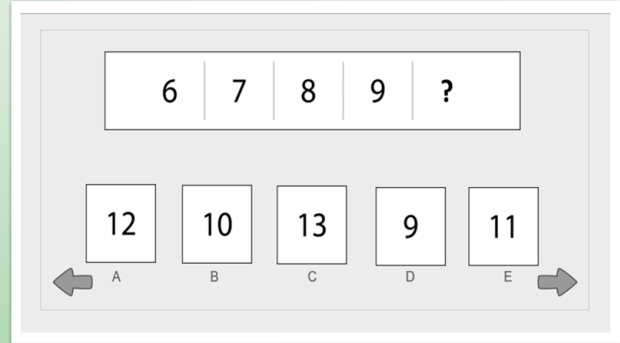
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The **Naglieri-Q** measures **general ability** using numbers and/or symbols. Students must decipher the logic behind the relationships among the numbers and symbols to identify the answer.

Items require the student to determine equivalency of simple quantities, analyze a matrix of numbers and solve mathematical sequences.

Items require minimal academic knowledge, and the calculation requirements are simple.

The items have no verbal requirements (i.e., no math word problems) so that they can be solved regardless of the language used by the student.

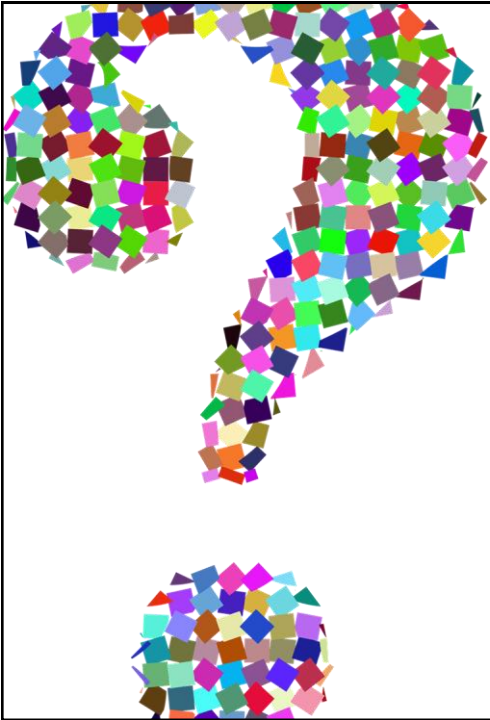


*Naglieri General Ability Test – Quantitative
(Naglieri & Lansdowne)*

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How do *different* tests use the *same* ability?

- Even though the tests have different content (shapes, words, numbers) they all rely on general ability ('g')
- They all require understanding relationships among things or ideas

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Research Evidence of Equity

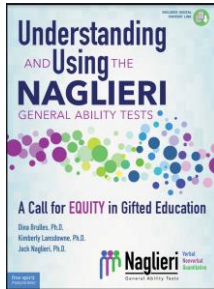
Selvamenan, M., Paolozza, A., Solomon, J., Naglieri, J. A., & Schmidt, M. T. (submitted for publication, Nov. 2020). Race, Ethnic, Gender, and Parental Education Level Differences on Verbal, Nonverbal, and Quantitative Naglieri General Ability Tests: Achieving Equity.

NONVERBAL TEST	VERBAL TEST	QUANTITATIVE TEST
		
<ul style="list-style-type: none"> • N= 3,630 Sample closely matches the US population on key demographics • No GENDER differences found between males and females for raw score across all forms • No RACE/ETHNICITY differences among White, Black, & Hispanic for raw score across all forms • No PARENTIAL EDUCATIONAL differences among five education levels (No high school diploma; High School graduate; Some college/Associate's degree; Bachelor's degree; Graduate/professional degree) for raw score across all forms 	<ul style="list-style-type: none"> • N= 2,482 Sample closely matches the US population on key demographics • No GENDER differences found between males and females for raw score across all forms • No RACE/ETHNICITY differences among White, Black, & Hispanic for raw score across all forms • No PARENTIAL EDUCATIONAL differences among five education levels (No high school diploma; High School graduate; Some college/Associate's degree; Bachelor's degree; Graduate/professional degree) for raw score across all forms 	<ul style="list-style-type: none"> • N= 2,841 Sample closely matches the US population on key demographics • No GENDER differences found between males and females for raw score across all forms • No RACE/ETHNICITY differences among White, Black, & Hispanic for raw score across all forms • No PARENTIAL EDUCATIONAL differences among five education levels (No high school diploma; High School graduate; Some college/Associate's degree; Bachelor's degree; Graduate/professional degree) for raw score across all forms

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Race and Ethnic Differences by Ability Test



See Brulles, D., Lansdowne, K. & Naglieri, J. A. (2022). Understanding and Using the Naglieri General Ability Tests: A Call to Equity in Gifted Education. Minneapolis, MN: Free Spirit Publishing for more details.

Note: Even though a test may not show psychometric bias those tests with academic content that show large mean score differences are not equitable and are unfair.

Traditional and 2nd-Generation Ability Tests

	By Race	By Ethnicity
Tests that require knowledge	Mn = 9.5	Mn = 5.2
Otis-Lennon School Ability Test (distric wide)	13.6	
Stanford-Binet IV (normative sample)	12.6	
WISC-V (normative sample)	11.6	
WJ- III (normative sample)	10.9	10.7
CogAT7 (Nonverbal scale)	11.8	7.6
CogAT7 - Verbal	6.6	5.3
CogAT7-Quantitative	5.6	3.6
CogAT- Nonverbal	6.4	2.9
CogAT-Total (V, Q & NV)	7.0	4.5
WISC-V (statistical controls normative sample)	8.7	
Tests that require minimal knowledge	Mn = 4.3	Mn = 2.9
K-ABC (normative sample)	7.0	
K-ABC (matched samples)	6.1	
KABC-II (adjusted for gender & SES)	6.7	5.4
CAS-2 (normative sample)	6.3	4.5
CAS (statistical controls normative sample)	4.8	4.8
CAS-2 (statistical controls normative sample)	4.3	1.8
CAS-2 Brief (normative samples)	2.0	2.8
NNAT (matched samples)	4.2	2.8
Naglieri General Ability Test-Verbal	2.2	1.6
Naglieri General Ability Test-Nonverbal	1.0	1.1
Naglieri General Ability Test-Quantitative	3.2	1.3

Note: The results summarized here were reported for the Otis-Lennon School Ability Test by Avant and O'Neal (1986); Stanford-Binet IV by Wasserman (2000); Woodcock-Johnson III race differences by Edwards and Oakland (2006) and ethnic differences by Sotelo-Dyrega, Ortiz, Flanagan, and Chaplin (2013); CogAT7 by Carman, Walther and Bartsch (2018) and Lohman (2016); WISC-V by Kaufman, Raiford, and Coalson (2016); Kaufman Assessment Battery for Children-II by Lichtenberger, Volkmer, Kaufman & Kaufman, (2006); CAS by Naglieri, Rojahn, Matto, and Aquilino (2005); CAS-2 and CAS-2-Brief by Naglieri, Das, and Goldstein, 2014a and 2014b; Naglieri Nonverbal Ability Test by Naglieri and Ronning (2000), and Naglieri General Ability Tests by Naglieri, Brulles, and Lansdowne (2022).

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Naglieri General Ability Tests: V, NV, Q

- **CAUTION:** All tests that require knowledge which were normed before COVID are likely impacted by the learning loss that has occurred
- These three tests are the **ONLY** measures of general ability that were normed on a post covid population
- It is best to do universal *testing of all students*
- **LOCAL NORMS** and **NATIONAL NORMS** (coming in the fall of 2023)

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The test you choose determines the results you receive, the decisions you make, and the future of your students

That is the *Practical Impact* of test selection

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WE CAN DO

BETTER

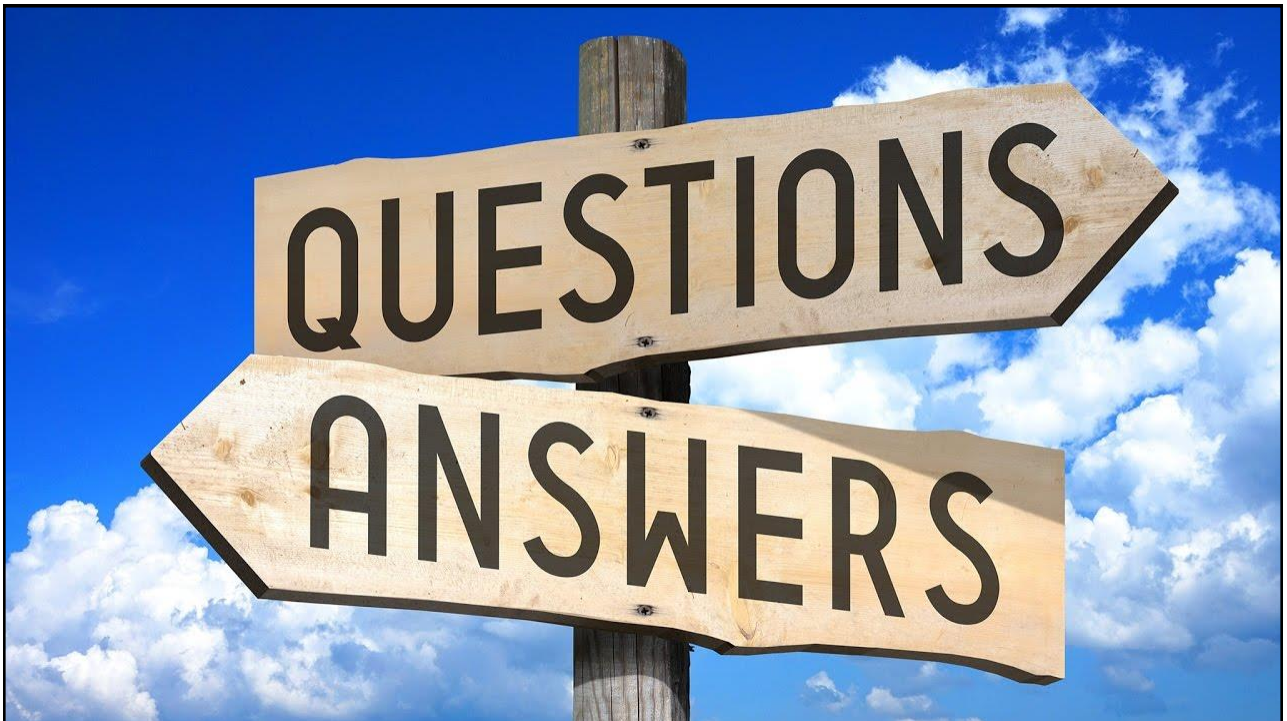
We Must do Better

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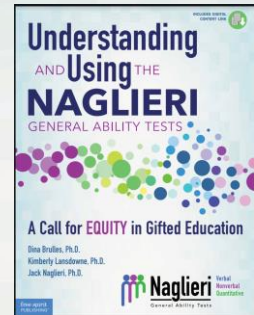
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Programming and Instruction

- Following identification, how can we create more equitable and inclusive gifted programs and services?
- See Brulles, Lansdowne & Naglieri (2022) which covers these and other topics:
 - Logistical Considerations
 - Understanding and Using Test Scores
 - Achieving Equity in Gifted Programming
 - Culturally Responsive Approaches for Reaching and Teaching All Gifted Learners
 - Local and National Norms



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Gifted & Talented

Clarification: We CAN find gifted students regardless of their academic skills

Gifted ✦ Very Smart

Talented ✦ Very Accomplished

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Using Local Norms is a strategy to increase underrepresented populations in gifted services

National norms- Compare a student's performance to peers from the same age or grade across the country

Local norms- Compare a student's performance to grade level peers in the same district, school or specific grade

- district level norms
- school building level norms
- group norms (ie. if 30% of the students are (demographic), compare scores across that group)

What is the Practical Impact?


Services can be provided for those who otherwise would not have been identified

Summary: Equitable Assessment of Intelligence

- **Equitable evaluation of intelligence** demands test questions that can be solved regardless of the amount of academic knowledge and facility with language a student has
- We have shown that
 - General ability (*g*) **can be measured equitably** across Verbal, Quantitative and Nonverbal content if the tests do not require academic knowledge
- Verbal, Quantitative and Nonverbal are **a description of the content of the tests'** questions **NOT** different types of intelligence
- Equitable tests measure THINKING in a manner that is minimally influenced by KNOWING

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We do the best we can with what we know, and when we know better, we do better.

— Maya Angelou —

Change Demands Courage to Think Differently

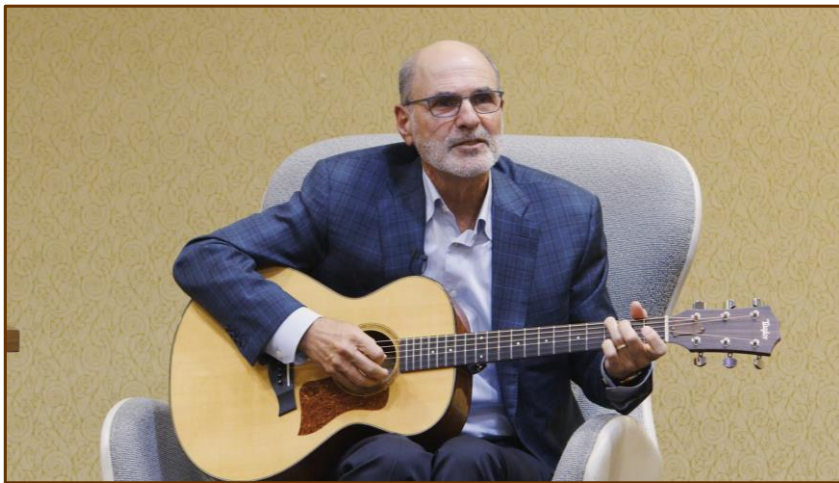
Socially just identification of gifted students requires self-reflection and self-correction in response to current research

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Maybe It's Time to Let the Old Ways Die



NYASP 2022
Legends in School
Psychology Award
Interview

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Helpful Links



NaglieriGiftedTests.com

