

## Identification of Gifted Students Using the Naglieri Ability Tests (Slide Key Take-Aways)

Not based on what the student has to know to complete the tasks (prior knowledge) but rather how does a student have to think in order to complete the task.

Premise is that “nonverbal” tests work best for students without prior knowledge (uneducated populations, lack of exposure) and those whose primary language is not English.

NNAT measures nonverbal general ability using geometric shapes

Test potentially identifies students who may **not** have good grades, academic skills, or are English learners however they are very smart.

“These children become very talented given the opportunity to learn”

2000 study suggests that NNAT gives an unbiased assessment of White, African American, Hispanic, and Asian children’s ability as opposed to other IQ tests such as the WISC-IV (at that time), SB-IV, WJ-III. All groups scored similarly.

2004 study suggests unbiased assessment of Hispanic children with and without Limited English Proficiency.

2005 study did not reveal any significant differences between gender performance on NNAT.

**New:**

Naglieri Tests of General Ability (Naglieri, Brulles, & Lansdowne, 2021)

NAT **Nonverbal** (Naglieri) ) items are fresh and different from the original

NAT **Verbal** (Naglieri & Brulles); looks at associative relationships between pictures not sure if words will be included?

NAT **Quantitative** (Naglieri & Lansdowne); relationships and patterns between numbers

The focus is on Equitable assessment for ALL students.

These tests are **currently in the norming phase**.

All tests provide animated instructional directions (very little verbal directions), interactive practice questions

**Pilot study promising for gender, race/ethnicity, parent education level differences.**

\*So far, small sample size 2,482

2013 Judge Robert Gettleman decision that District U-46 intentionally discriminated against Hispanic students in their gifted programming placement. Found school gifted procedures discriminatory towards Hispanic and Black students. CogAT verbal and Quantitative require English. Weighted matrix for decision focused on achievement and CogAT. Too little reliance on nonverbal test such as NNAT.

### How to Equitably Identify Gifted Students

Do universal screening with ability tests that do not require knowledge of English (NNAT)

New Naglieri tests that add Verbal and Quantitative tests that do not require knowledge of English will potentially identify underserved populations

From slides: We can do Better!

### Notes from Video

#### Equitable Identification of Gifted Students in the Era of BLM:

Traditional cognitive ability tests used to identify gifted and talented students are too language and prior knowledge dependent. Language is typically involved in the test directions and there is often a verbal expression component. As a result, these test instruments fail to acknowledge students who come from low income families, kids from culturally and linguistically diverse environments, and English language learners.

Naglieri expresses the need for more fair and equitable assessments especially when dealing with under-represented populations.

Most tests are confounded by knowledge.

Differentiates between "Gifted" and "Talented"

Gifted: Those kids who are very smart, may not be very good at reading, may not get good grades

\*\*The story of Devion Ross. December 2013 Standard Score of 141 on NNAT\*\*\*

Talented: Those kids who have a lot of knowledge (attended great preschools, read to, educated parents, etc.) Most cognitive tests will lean towards those kids. \*\*Prior knowledge

Most districts use CogAT and WISC to identify gifted students (again these tests are often based on prior knowledge and are too language dependent).

54% of districts use CogAT to identify talented and gifted students. 66% of CogAT requires prior knowledge/knowledge required. WISC is the next widely used assessment with 40% of districts using this measurement. 40% of this test requires use of prior knowledge. Too much achievement. No knowledge requirement on Naglieri.

**\*\*Teacher referral is not always the best way to determine who is Gifted and Talented; some biases may be present towards a student or group of students.**

**We should be measuring thinking, not knowing.**

Traditional cognitive tests are similar to achievement tests (similar tasks); hence requiring prior knowledge; hence defeats the purpose.

**"It's not what you know, it's how you think!"**

"There's a way to do it better-find it" Thomas Edison

Nonverbal test of general ability.

General ability

Cog At has one page of directions; confounds of getting accurate scores  
Can measure general ability using the V, NV, Q approach with reduced verbal knowledge requirement

New assessments address Equity in identifying Gifted students

No words just pictures, nonverbal video used for instructions

3,600 in pilot study of nonverbal test  
Quantitative: relationships and patterns involving numbers; analogies  
2,800 students no gender, race, or parental education level differences; reliability across all grade levels.

These tests will be released in the summer of 2021

How would we use these tests:  
Universal Screening: Use general ability measure  
Don't want filters that would get in the way.

Illinois School District U-46  
42% Hispanic, 2% of Hispanic in the gifted program  
Parents sued the school district  
Whenever you use cognitive tests that require knowledge, you become vulnerable

**Using Local Norms to Improve Racial and Ethnic Representation Rates video**

**Definition: Talented vs. Gifted**

Gifted - really smart

Talented - really accomplished. One can be talented without having a lot of knowledge.

Tests that involve knowledge are widely used and require skills in English, Math etc. Although ability tests do not show psychometric bias (Worrell, 2019) they do yield large mean score differences by races. Conversely, tests that do not rely on knowledge show much smaller mean score differences.

The district with 42% Hispanics but only 2% of students in gifted were Hispanic.

On July 11, 2013, Judge Robert Gettleman issued a decision holding that District U-46 intentionally discriminated against Hispanic students specific in their gifted programming (placement), and found problems with policies and instruments for screening and identification. (c) use of both verbal and math scores at arbitrary designated levels for screening and for identification, (d) use of weighted matrix, as well as content and criteria in weighted matrices that favored achievement and traditional measures, (e) too little reliance on a nonverbal test (Naglieri Nonverbal Ability Test) for admission to

#### **List of Test that Demand Knowledge**

1. SB - IV
2. WISC - IV & V
3. WJ - III
4. CogAT
5. OLSAT

#### **List of Test the Do Not Demand Knowledge**

1. K - ABC & KAB 2
2. CAS & CAS 2
3. NNAT
4. Naglieri Verbal, Nov Verbal & Quantitative

The data from tests that demand knowledge do not represent the racial makeup of the entire population.

Table 1. Number of Students in US Public Schools Grades K-12 in 2018

	US Population	Potentially Gifted (8%) of US Population	Actual Numbers of Students in Gifted & Talented Programs	Numbers of students Not Identified
White	26,822,930	2,145,834	2,065,366	80,468
Black	8,530,756	682,460	366,823	315,637
Hispanic	15,888,681	1,271,094	778,545	492,549
Native American	572,330	45,786	25,183	20,603
Two or More Races	1,782,991	142,639	123,026	19,613
Total non-White	26,774,758	2,141,979	1,293,577	848,402

English language learner (ELL) students enrolled in public elementary and secondary schools in 2015 by Race and Ethnicity

	N of ELL in Public Ed	N Potentially Gifted (8%)	N students Identified	N Missed (% Missed)
White	294,763	23,581	8,548	15,033 (64%)
Black	178,141	14,251	5,166	9,085 (64%)
Hispanic	3,772,633	301,811	109,406	192,404 (64%)
Asian	511,703	40,936	14,839	26,097 (64%)
Pacific Islander	26,992	2,159	783	1,377 (64%)
Native Am./ Alaska Native	38,792	3,103	1,125	1,978 (64%)
Two or More Races	31,136	2,491	903	1,588 (64%)
Total	4,854,160	388,333	140,771	247,562

According to the *Standards for Educational and Psychological Testing*, 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 having learned the content.

Equitable assessment can be achieved if all examinees have equal opportunity to perform. Even if the norming data do not demonstrate psychometric bias, the test can still be considered unfair.

### **Solutions**

1. Select tests that are less dependent upon knowledge
2. Use nonverbal tests
3. Weight the matrix to favor scores from tests that are not dependent on knowledge
4. Use Local norming procedures.

### **Using Local Norms as a strategy to improve underrepresented populations**

National Norms - Compare a student's performance to peers from the same age or grade across the nation.

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

### **Benefits**

1. Increased identification of students from all racial, cultural, and income groups.
2. More students from diverse backgrounds will have their needs met and will be able to develop their gifts.

**General Ability** is what allows us to solve many different kinds of problems. (Reasoning, memory, sequencing, verbal, math skills, patterns and so on.)

### **New Test for General Ability**

1. Naglieri Verbal (Naglieri & Brulles 2021)
2. Naglieri Non-Verbal (Naglieri, 2021)
3. Naglieri Quantitative (Naglieri & Lansdowne, 2021)

Verbal and Quantitative tests can be solved regardless of the language a student speaks, with non verbal directions and no verbal expression required. These tests provide an equitable approach to assessment.

Findings based on pilot testing of all general ability tests closely matched US Population on key demographics (race, gender and education).

### **How to Use the Test?**

1. **Obtain scores for ALL students not just referrals.**
2. Use local norm procedures.
3. Decide how the information obtained for each student will be evaluated (average, & or or logic etc.)
4. Evaluate the outcome.
5. Avoid discriminant practices (US - 46 Court Case)

## **IDENTIFICATION AND TESTING SUBCOMMITTEE REPORT**

*ACTION: The subcommittee will report on the CogAT and the Naglieri tests currently used by ACPS to identify students for the TAG program. We will also provide recommendations regarding the implementation of local norms.*

OVERVIEW:

IMPACT:

REFERENCES:

The goal of identification for gifted and talented services is to find those students with the potential for learning at an advanced level. To achieve that desired result, the TAGAC recommends that ACPS focus on identification methods that assess students' potential rather than their current performance. In view of the foregoing, the TAGAC supports ACPS' continued use of universal screeners as a means of identifying students with the need for advanced academic services.

We recommend that ACPS continue to engage in the universal screening of all students in specific grade levels (first and third). Moreover, the TAGAC supports ACPS' decision to expand the universal screening of students during the 2021-2022 school year to all children in grades first through fourth due to the COVID-19 pandemic. We encourage ACPS to consider providing expanded screening opportunities on an ongoing basis at the elementary school level, as well as providing such opportunities at the middle school level.

In addition, the TAGAC supports ACPS' continued use of the Naglieri Nonverbal Ability Test (NNAT) as a means of assessing a student's general ability. The NNAT can be used irrespective of the language a student speaks. Furthermore, it requires no specific knowledge. The test seeks to evaluate how a student has to think in order to complete a task rather than what the student needs to know to complete the task. Thus, the NNAT provides an equitable approach to assessment; and we believe its continued use will enable ACPS to acknowledge students who come from low income families, culturally and linguistically diverse environments, and English language learners.

For purposes of assessing a student's skills in specific areas, we recommend ACPS consider the use of the new Naglieri Verbal and Quantitative tests as a possible alternative to the current CogAT test, which is currently used as a universal screener for third graders. The NTA Verbal looks at associative relationships between pictures and the NTA Quantitative examines relationships and patterns between numbers. These tests were designed to help educators equitably identify underserved populations because the tests do not require knowledge of English.

We further recommend creating an assessment matrix that favors scores on tests like the NNAT. To do otherwise risks creating or at least perpetuating inequities in the evaluative process because of flaws inherent in other assessment tools. For instance, traditional ability tests focus on achievement rather than potential, and teacher referrals can sometimes present bias towards a student or group of students.

In addition, the TAGAC recommends that ACPS employ "local norms" as a strategy to improve the identification of students from all racial, cultural, and income groups. To do so, we recommend ACPS compare a student's performance to grade level peers in each individual school, rather than the district as a whole. This would enable ACPS to better ensure that students are not being unfairly penalized for not having learned certain content because it would assess whether those students have academic needs that cannot be met in the regular classroom at their current school.

3/23 - We started the meeting at 7 pm. TAGAC committee members Julia Egy and Daphney Denerville-Davis were in attendance. We discussed the procedures going forward. The subcommittee will watch the videos and review the presentation materials for the Naglieri in preparation for the next meeting. We will move on to the CogAT after that. We are going to try and meet again on April 6, 2021. ACPS will confirm whether that day and time are available.

<https://jacknaglieri.com/webinars-%26-videos#9dfac5d1-2175-4f57-ba65-d162257db77e>

4/6 - We started the meeting at 7 pm. TAGAC committee members Julia Egy, Asha Mede, and Daphney Denerville-Davis were in attendance. Daphney shared her notes that she took. Asha will include her notes as well. Julia is going to work on a first draft on Saturday morning before 11 am. Daphney and Asha will email regarding times when they want to edit. Our next meeting will be on April 20. We will finish up the Naglieri portion then. We will then move on to the CogAt and discuss that portion during our first meeting in May. The subcommittee approved the minutes from the 3/23 meeting.