



A closer look at local and national norms using the **Naglieri General Ability Tests™**

Local and national norms can be used to identify students for gifted programming. When analyzing students' test results, it is important to understand the difference between these types of norm reference samples.

The Naglieri General Ability Tests™ (Naglieri–Verbal, Naglieri–Quantitative, and Naglieri–Nonverbal) offer the flexibility of generating both types of norms to make decisions that align with district policy requirements and fair identification best practices. This case study delves into the variation in outcomes when comparing local and national norms based on the performance data of Grade 1 students from two school districts who underwent testing with all three Naglieri General Ability Tests.



Local and National Norms: What Should I Use?

When identifying students for gifted programming, there are many factors to consider to ensure fair representation and testing practices, such as the test content and how the tests are administered. Furthermore, it is imperative that Gifted Coordinators consider the local (i.e., state or district) definition of giftedness when making identification decisions. This practice includes cut score determinations and the type of norm reference sample used: local or national norms. The Naglieri General Ability Tests are a suite of three distinct measures, Naglieri–Verbal, Naglieri–Quantitative, and Naglieri–Nonverbal, offering automatically generated local and national norms. This scoring flexibility allows districts to generate and analyze scores from either type of norm or both to identify students fairly.

The reference sample chosen for gifted identification will directly impact how test scores are computed and the interpretation of those scores. Both local and national norms can be used to identify students fairly, and the differences between these norm types should be explored in the context of your district’s demographic makeup and identification requirements and policies.

What’s the Difference, Anyways? Isn’t a Score a Score?

Comparing students to their grade peers can be accomplished by using local or national norms. While score types between local and national norms may appear similar—Percentile Ranks, Standard Scores, and Stanines can be generated for both—the important distinction is the norm reference sample that is used to calculate the scores. The calculation begins with the student’s Raw Score, the sum of the questions answered correctly on a test, which is used to create other types of scores. A student’s test performance is then compared to the specified reference sample (i.e., local or national norms). The same Raw Score may yield different standardized score results when the reference comparison group changes. For example, a Grade 1 student with a Raw Score of 22 on the Naglieri General Ability Tests–Verbal may have a Local Percentile Rank of 91 when compared to their district-level peers and a National Percentile Rank of 86 when compared to their grade-level peers in the national norm sample. That is, this student scored higher than 91% of students in their local sample (other students within their district in the same grade), but they score higher than only 86% of all students nationally.

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Local Norms

Computed using a sample of students tested in a grade within a school, subdistrict (group of schools), or district. Ideally, students should be universally tested within a grade. Scores directly compare any student’s test performance to the test performance of all grade-level peers in the local norm sample.

National Norms

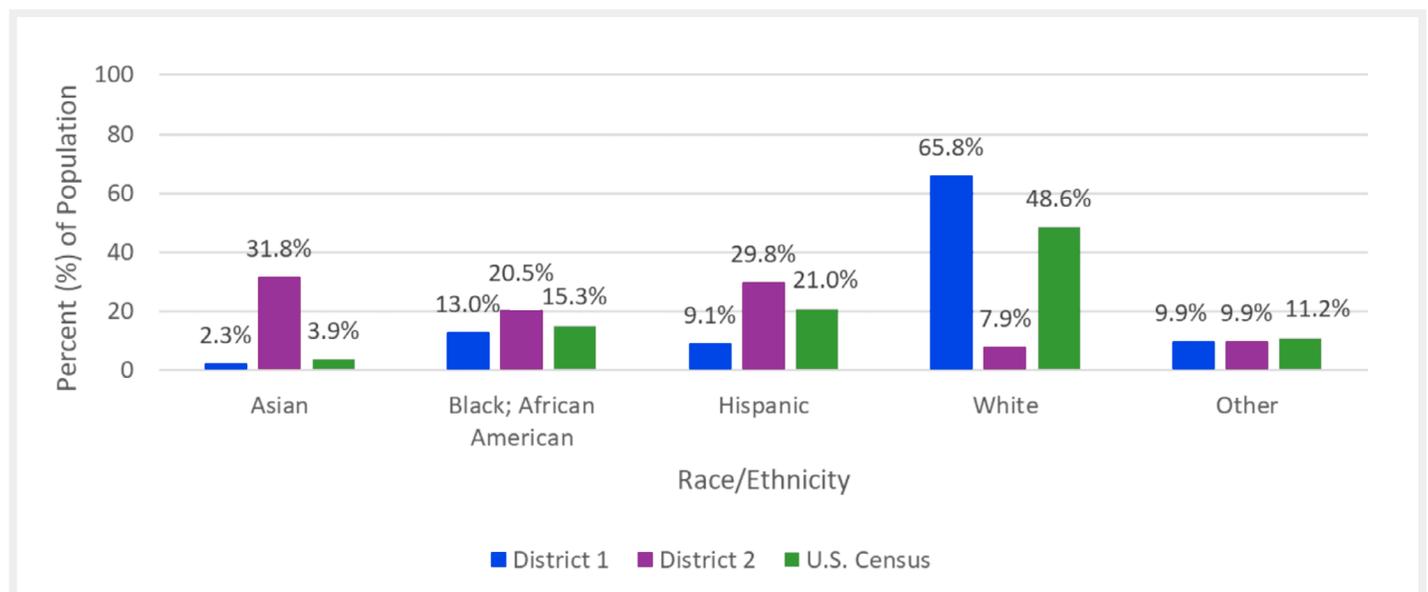
Computed using a large sample of students who match the demographic makeup of the country by grade, gender, geographic region, and race/ethnicity. Scores are a comparison of any student’s test performance to the test performance of grade-level peers in the national norm sample.

A Closer Look: Two Districts and Two Norm Types

Let's take a closer look at the results from both types of norms using data from school districts that used the Naglieri General Ability Tests as part of their identification programs in 2022. After referencing their district's identification policies for gifted services, two distinctly different school districts from the Midwest and Western U.S. regions opted to generate local and national norms for the Grade 1 students who completed all three Naglieri General Ability Tests. Local norms were generated at the district level, with scores directly comparing all Grade 1 students' test performance to their grade-peers tested across the district.

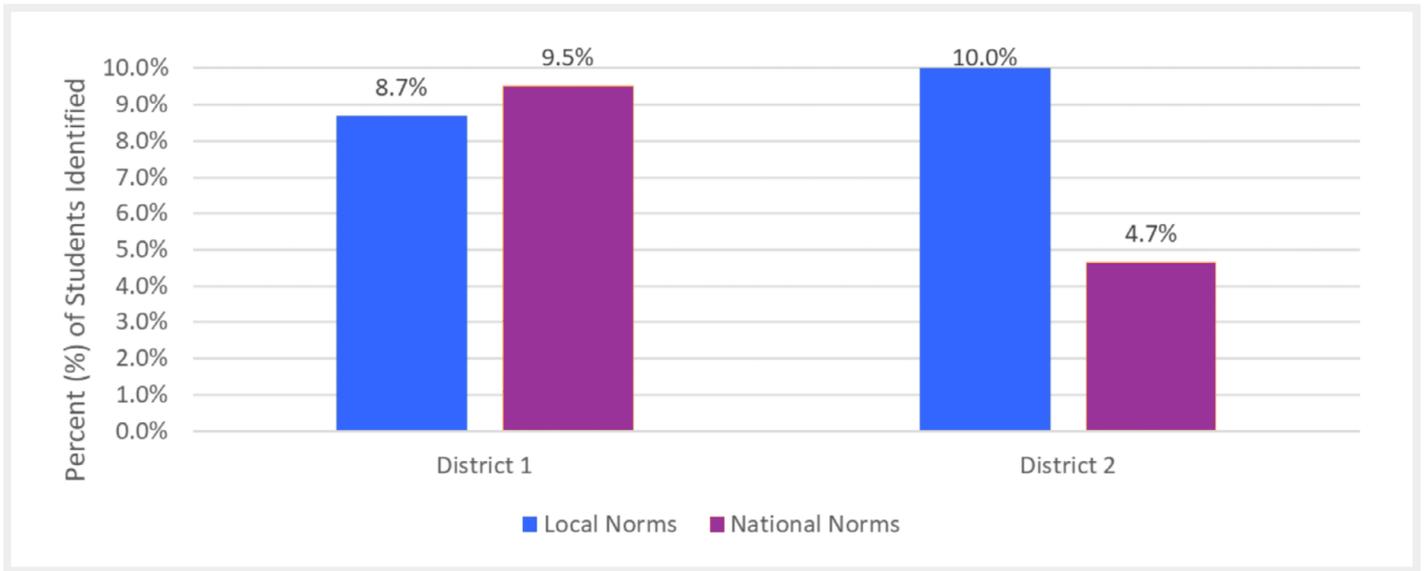
The Naglieri General Ability Tests national norms compare a student to a static reference sample of grade-peers that reflects the population at large (equally balanced by grade and gender and matching the U.S. census [2019] geographic region and race/ethnicity within 2.5 percentage points). Figure 1 shows the racial/ethnic makeup of the two districts. Our first district, District 1, more closely matches the U.S. census in terms of race/ethnicity. Students of Asian, Black; African American, and Other races/ethnicities match closely, falling within a range of -1.3% to -2.3% difference from the census. Hispanic (-11.9% difference) and White (17.2% difference) students have some deviation from the U.S. census demographic makeup. District 2 does not match the demographic makeup of the U.S. census as closely, with notably significant differences between Asian (27.9% difference) and White (-40.7% difference) students.

Figure 1: District and 2019 U.S. Census: Race/Ethnicity Demographics



The number of students identified for each district was analyzed across all three Naglieri General Ability Tests using the same cut score for both local and national norms (that is, a percentile rank of 90 or higher). The percentage of students from the districts' general population who obtained a Percentile Rank score of 90 or higher on the Naglieri-Nonverbal test can be found for local and national norms in Figure 2. District 1 had similar results across both types of norm reference samples. They were able to identify the top 8.7% and 9.5% of students in their district using local and national norms, respectively. In contrast, District 2, whose demographic makeup was markedly different from the national norm sample, identified fewer students using the national norms sample, with 4.7% of students identified compared to those using local norms with 10%.

Figure 2: Naglieri-Nonverbal: Students Identified by Norm Type



So, which is better—local norms or national norms? Our two districts demonstrate that there is no one-size-fits-all answer. Local and national norms offer insight into student performance and can be used. The good news is that the Naglieri General Ability Tests scoring and reporting platform allows you to easily use both types of norms and examine how the results align with the goals of your programming (are there a certain number of seats for identification?) or policies within your district (is there a certain cut score you must use or specified norm type?). A district that more closely resembles the country’s demographic makeup may choose to use national norms and achieve results that allow them to find a proportional number of students from their district. **Local norms may provide a fair and accurate option when your district markedly differs from the U.S. population, and students are missed compared to a national sample that doesn’t resemble your local community.**



Get in touch with a member of our team today

to discuss using the Naglieri General Ability Tests in your school district.