



Increasing Equity Using the ***Naglieri General Ability Tests***

Learn more



The Challenge !

Educators working to identify students for gifted programs across the U.S. face the ongoing challenge of addressing inequity. This challenge pertains to students from diverse cultural, racial, ethnic, and linguistic backgrounds, as well as those from various socioeconomic statuses, those who have had limited or different educational experiences, and students with disabilities.

Educators must consider what kind of tools and practices will most effectively identify gifted students with the potential for high achievement even if they are not yet achieving at a high level yet. Intelligence tests that have verbal and quantitative content can pose an obstacle for underrepresented students who may not have had the opportunity to acquire the knowledge required to answer the questions included in these tests and, therefore, they fail to earn high enough scores to be accepted into gifted programs (Hodges et al., 2018).



Our Solution



Authors **Jack A. Naglieri, Ph.D., Kimberly Lansdowne, Ph.D., and Dina M. Brulles, Ph.D.**, in partnership with MHS, are thrilled to introduce the **Naglieri General Ability Tests**. These three separate tests measure general intellectual ability across verbal, nonverbal, and quantitative content areas, and were developed to help achieve equity for all students. Test directions are provided using language-free, animated instructions. Test items were carefully designed to allow students to solve problems regardless of the language they speak, significantly reduce the demand for advanced academic knowledge, eliminate the need for verbal responses to the test questions, and greatly reduce cultural influences so the tests measure general ability as fairly and equitably as possible.

Initial research found minimal differences across gender, race, ethnicity, and parental education.



Measure General Intellectual Ability from Multiple Perspectives

The **Naglieri General Ability Tests-Verbal (Naglieri-V)**, **Naglieri General Ability Tests-Nonverbal (Naglieri-NV)**, and **Naglieri General Ability Tests-Quantitative (Naglieri-Q)** were designed to be used independently or in combination, providing students the opportunity to demonstrate their ability to solve problems from three different types of content.



Authors: Jack A. Naglieri, PhD and Dina M. Brulles, PhD

In the **Naglieri General Ability Tests-Verbal (Naglieri-V)**, questions require students to understand the relationships among six pictures to determine which one does not represent the verbal concept shared by the other five.



Author: Jack A. Naglieri, PhD

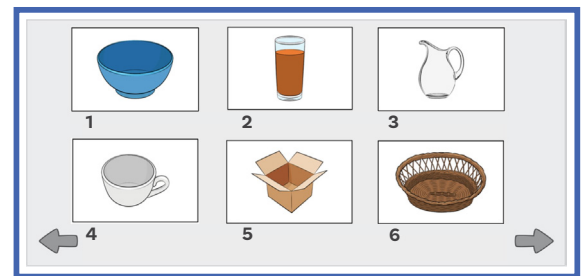
In the **Naglieri General Ability Tests-Nonverbal (Naglieri-NV)**, questions focus on visual relationships and patterns through color, sequence, and orientation, to determine which of the five multiple-choice options best answers each question.



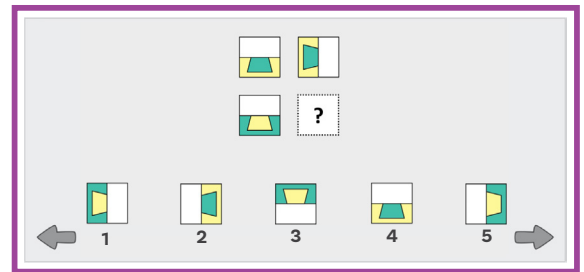
Authors: Jack A. Naglieri PhD and Kimberly Lansdowne, PhD

In the **Naglieri General Ability Tests-Quantitative (Naglieri-Q)**, questions require students to reason with mathematical relationships represented by numbers and shapes to determine which of the five multiple-choice options completes the pattern.

Grades: **K-9**
Format: **Online**
Administration Type: **Group**
Administration Time: **Approximately 30 minutes**



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Format: **Online**
Administration Type: **Group**
Administration Time: **Approximately 30 minutes**



Grades: **K-9**
Format: **Online**
Administration Type: **Group**
Administration Time: **Approximately 30 minutes**



The Results

STUDY 1: Naglieri-V



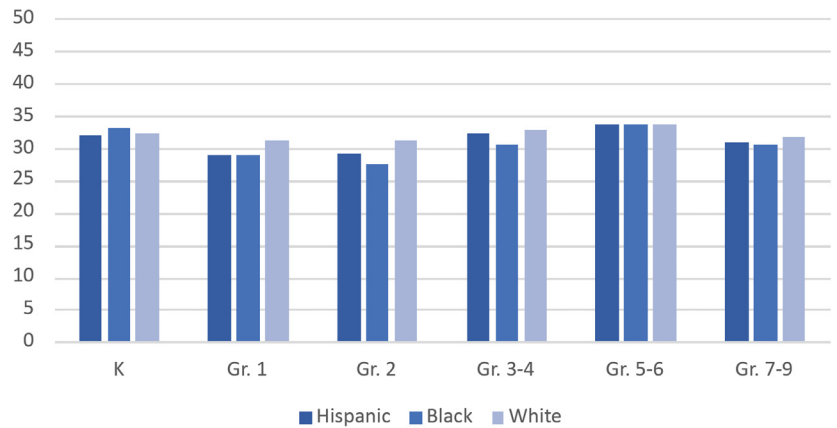
Naglieri
General Ability Tests

Verbal

Number of Students: **2,126**

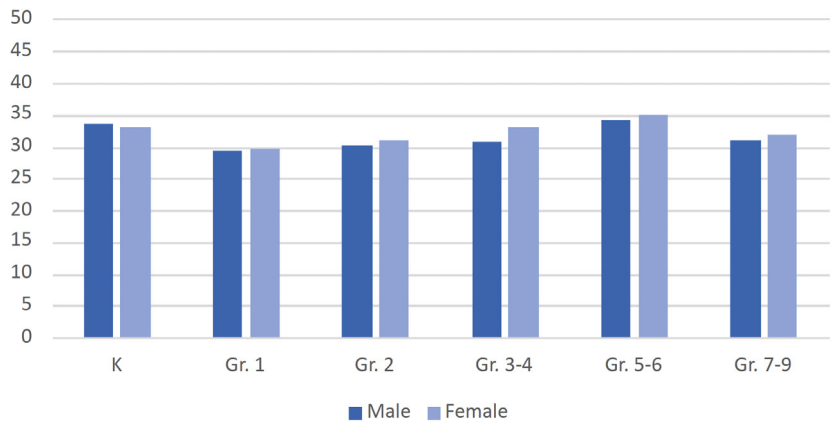
Tests included 50 items distributed across different grade-forms.

AVERAGE SCORE BY RACE/ETHNIC GROUPS



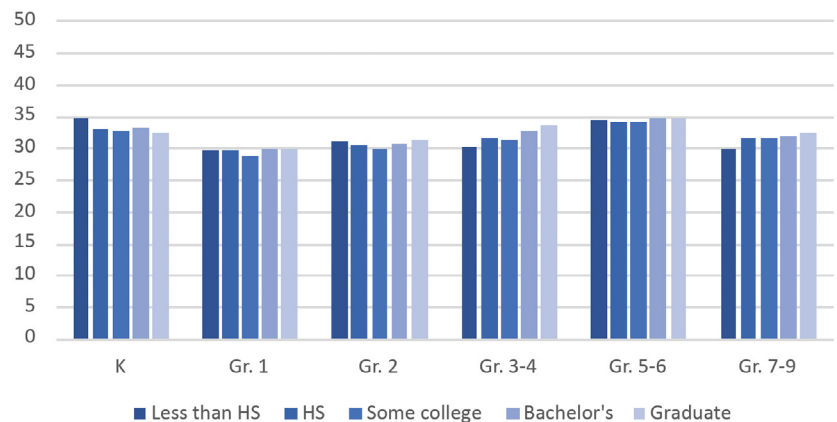
The average scores were very similar and there were no significant differences between Hispanic, Black, and White students on the **Naglieri-V** test.

AVERAGE SCORE BY GENDER



The average scores were remarkably similar across grades with only one significant, but small, difference for the Grade 3-4 group between male and female students on the **Naglieri-V** test.

AVERAGE SCORE BY PARENTAL EDUCATION LEVELS



The average scores were remarkably similar and there were no significant differences found between any of the parental education levels on the **Naglieri-V** test.

Note: Less than high school diploma (Less than HS), high school graduate (HS), some college or associate's degree (Some college), bachelor's degree (Bachelor's), and graduate or professional degree (Graduate).

The Results

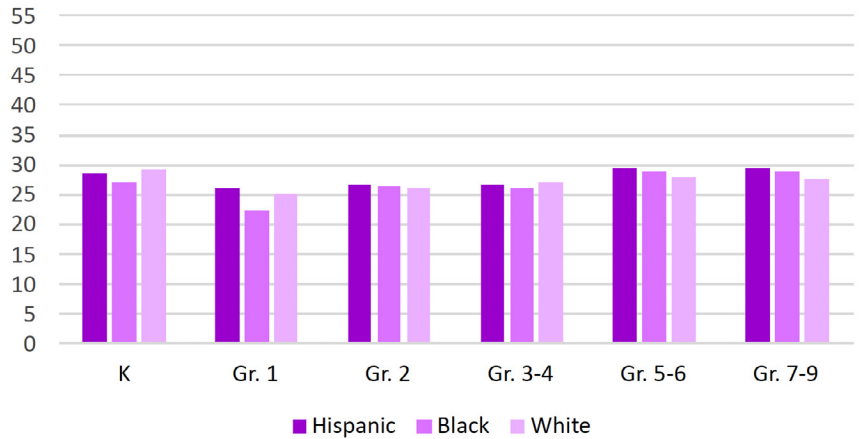
STUDY 2: Naglieri-NV

Number of Students: **2,356**

Tests included 55 items distributed across different grade-forms.

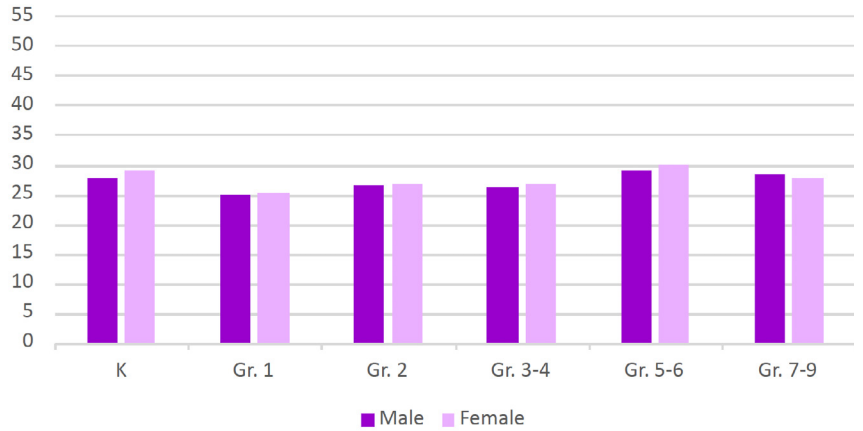
The average scores were very similar and there were no significant differences between Hispanic, Black, and White students on the **Naglieri-NV** test.

AVERAGE SCORE BY RACE/ETHNIC GROUPS



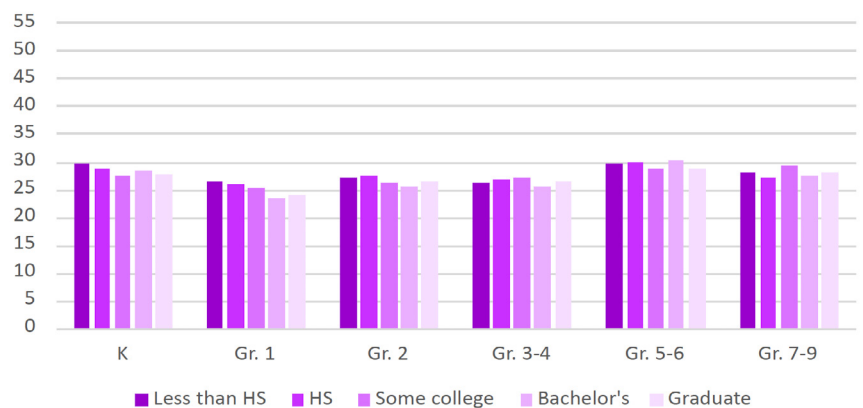
The average scores were remarkably similar across grades between male and female students on the **Naglieri-NV** test.

AVERAGE SCORE BY GENDER



The average scores were remarkably similar and there were no significant differences found between any of the parental education levels on the **Naglieri-NV** test.

AVERAGE SCORE BY PARENTAL EDUCATION LEVELS



Note: Less than high school diploma (Less than HS), high school graduate (HS), some college or associate's degree (Some college), bachelor's degree (Bachelor's), and graduate or professional degree (Graduate).

The Results

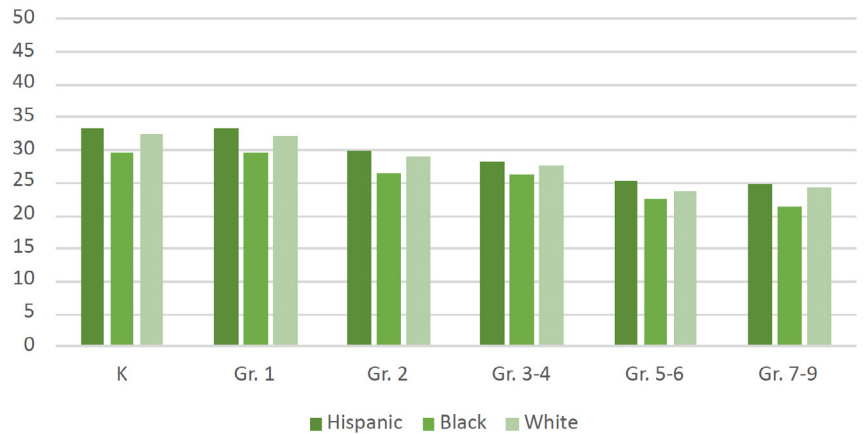
STUDY 3: Naglieri-Q

Number of Students: **2,036**

Tests included 50 items distributed across different grade-forms.

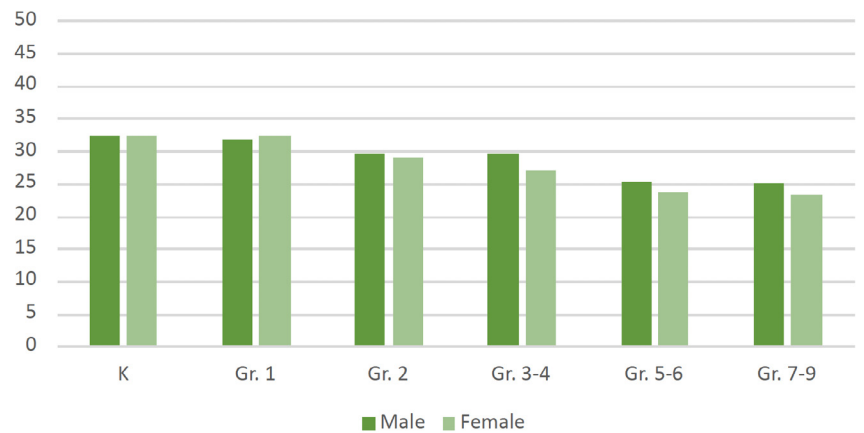
The average scores were very similar and there were no significant differences between Hispanic, Black, and White students on the **Naglieri-Q** test.

AVERAGE SCORE BY RACE/ETHNIC GROUPS



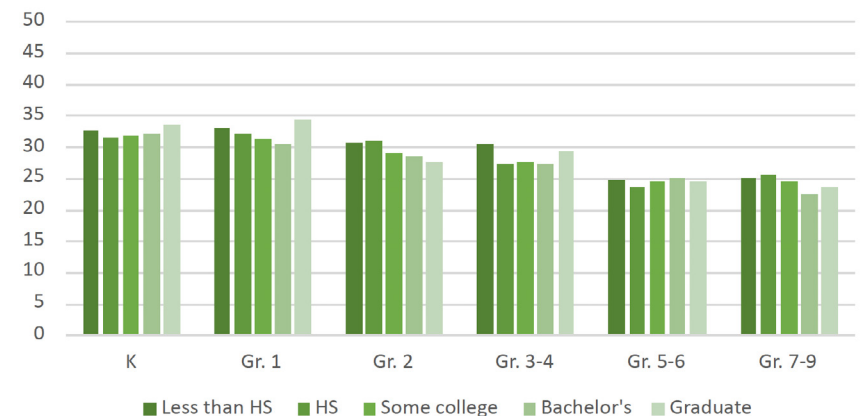
The average scores were remarkably similar across grades between male and female students on the **Naglieri-Q** test.

AVERAGE SCORE BY GENDER



The average scores were remarkably similar and there were no significant differences found between any of the parental education levels on the **Naglieri-Q** test.

AVERAGE SCORE BY PARENTAL EDUCATION LEVELS



Note: Less than high school diploma (Less than HS), high school graduate (HS), some college or associate's degree (Some college), bachelor's degree (Bachelor's), and graduate or professional degree (Graduate).

Our Research Studies

The main goal of the three research studies detailed here was to address the question: “Will students from different demographic groups (i.e., race/ethnicity, gender, or parental education level) score differently on these tests?” To answer this question, three studies were conducted in which a total 6,518 students across the U.S. completed one of the **Naglieri General Ability Tests** on a computer. Each student’s score was calculated by taking the sum of the questions answered correctly on each test.

Comparisons across the student groups were conducted using a statistical method that controls for other demographics that may change or affect the scores. For example, to look at whether students from different racial and ethnic groups scored differently, other factors need to be controlled for that may affect their performance, such as the student’s region, household income, parental education level, and gender.

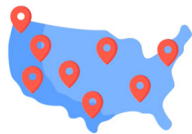
Conclusion

The three studies of the **Naglieri General Ability Tests** aimed to answer a critical question: “Will students from different demographic groups (i.e., race/ethnicity, gender, or parental education level) score differently on these tests?”

The research studies revealed little to no differences in student scores across race, ethnicity, gender, and parental education level on all three tests: Naglieri–V, Naglieri–NV, and Naglieri–Q. That is, students from different racial and ethnic backgrounds, both males and females, and students with different parental education levels, performed similarly to each other.

These findings were consistent across all three tests and across all grades ranging from Kindergarten to Grade 9. The results suggest that when direct attempts are made to minimize the confounding impact of prior knowledge and language, particularly in the instructions, test content, and response format of ability tests, a more equitable method of assessing diverse populations for gifted programs can be achieved.

Comparing students to the right group



National Norms



Local Norms

Sample

Kindergarten - Grade 6

Computed using a large sample of students who match the demographic makeup of the country by grade, gender, geographic region, and race/ethnicity.

Kindergarten - Grade 9

Computed using a sample of students tested in a grade within a school, subdistrict (group of schools), or district.

Testing design

Flexible: Universal screening or individual testing (e.g., nomination, referral)

Ideally, students should be universally tested within a grade.

Outcomes

Scores are a comparison of any student's test performance to the test performance of grade-level peers in the national norm sample.

Scores directly compare any student's test performance to the test performance of all grade-level peers in the local norm sample.

MHS' Commitment to Integration, Security and Accessibility



Integration Features

Data Integration: MHS provides rostering options for staff, students, and classes through OneRoster and other integration methods to meet diverse client needs. MHS is a ClassLink certified OneRoster partner and has several other SIS integration possibilities. MHS is able to securely process OneRoster REST and CSV files provided by SIS systems. In addition to these integration measures, MHS has created specific measures around the unique use case faced by test administrators in providing tests to only specific students in a grade level. These measures significantly reduce the time and effort required to administer and distribute MHS assessments.

Single Sign-On (SSO): MHS supports all major SSO options within the education sector through MHS Identity, powered by Microsoft Entra ID. This provides robust identity and access, including SSO, Multi-Factor Authentication (MFA), and Federated Identity.

Learning Management Systems (LMS) Integration: Our easy-to-implement integration ensures a secure, one-click, and seamless experience for users accessing MHS assessments. Students access MHS assessments directly through the LMS they use every day.

Security and Compliance

- **MHS is committed to protecting student information** and ensuring the continuous availability of applications for various users, adhering to numerous laws and acts such as FERPA, COPPA, PPRA, CIPA, and GDPR, among others.
- **MHS has implemented certified technical measures** that rank among the highest in the education sector, including external and internal vulnerability detection, disaster recovery, scalability, source code vulnerability, and access control measures.
- **MHS undergoes annual third-party audits and holds certifications**, including external and internal vulnerability detection, disaster recovery, scalability, source code vulnerability, and access control measures.

For detailed information on MHS' Privacy documentation, please visit:

<https://MHS.com/Privacy-Policy/>

For detailed information on MHS' Compliance certifications and documentation, please visit:

<https://MHS.com/Compliance/>

Accessibility Compliance

- **MHS adheres to the highest standards of web accessibility**, complying with both the Accessibility for Ontarians with Disabilities Act (AODA) 2005 and the Web Content Accessibility Guidelines (WCAG) Levels A-AA.
- Our web content meets **WCAG 2.0 Level A and Level AA criteria**, making it accessible to a broader range of people with disabilities.
- Our commitment to accessibility is validated by **annual third-party audits**, ensuring continuous compliance with international standards.

For more information on our commitment to accessibility, please visit: please visit:

<https://MHS.com/Accessibility/>



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