

## Interview (1):

# Jack Naglieri

**Taisir Subhi Yamin**

The International Centre for Innovation in Education (ICIE)

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**Dr. Jack Naglieri** has held faculty positions at Northern Arizona University, The Ohio State University, and George Mason University. He is currently a Senior Research Scientist at the Devereaux Centre for Resilient Children. Dr. Naglieri is also Emeritus Professor of Psychology at George Mason University. Dr. Naglieri has made exceptional contributions in developing many assessment tests that continue to be used by psychologists and educators. He is well known for developing the PASS Theory of Intelligence and its application using the CAS2 for the identification of specific learning disabilities. A number of the tests that Dr. Naglieri developed emphasize the importance of fair and equitable assessment of neurodiverse learners.

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**Taisir Subhi Yamin (TSY):**

Would you please explain what motivated you to enter the field of gifted and talented education?

**Jack Naglieri (JN):**

My interest in equitable identification of gifted students actually began in 1975 while I was working as a school psychologist. When administering the WISC-R and achievement tests I noticed that some of the questions on these two tests were very similar. The intelligence test had vocabulary, information, and arithmetic test questions and so did the achievement test I was using. This did not make sense; they are supposed to be measuring something different! The problem became increasing clear when I evaluated students for possible learning disabilities, especially those with limited opportunity to learn and students whose primary language was not English.

In 1979, I created items described as progressive matrices for a subtest included in the *Kaufman Assessment Battery for Children* (K-ABC; Kaufman & Kaufman, 1983). Seeing the success of these items in the K-ABC, I decided to create my own version, and in 1985, I published my first two tests; the *Matrix Analogies Test Short* (MAT-SF) and *Matrix Analogies Test Expanded* (MAT-EF) Forms. The tests were comprised of questions that did not demand knowledge and therefore could be efficient ways to measure intelligence. The 34-item MAT-SF was designed for large-scale screening and the 64-item MAT-EF for individual assessment of intelligence, respectively. These nonverbal tests of general ability could be used for fair and equitable evaluation of students with limited English language skills, limited educational opportunity, and “intellectually gifted children from disadvantaged backgrounds” (Naglieri, 1985, p. 3). These tests would turn out to be the first of many that I have created for equitable assessment of intelligence.

**TSY:**

How would you describe some of the challenges that you faced?

**JN:**

This is an interesting question. What stands out the most is that the response was a mixture of widespread acceptance and resistance. It is widely understood that intelligence tests have a historical connection to racism beginning in the early 1900s when the prevailing view held by psychologists such as Louis Terman, author of the Stanford-Binet, was that intelligence was determined by hereditary factors/genetics. This position led to systemic racism across many contexts. More recently, the American Psychological Association apologized for the role psychologists played in promoting racism and the ideology of White supremacy resulting in a greater emphasis on equitable assessment of intelligence. My efforts to ensure that equitable measures of intelligence were used to identify all gifted students was a conscious effort on my part due to the content of traditional IQ tests such as the Stanford-Binet and Wechsler Scales.

Many people in the field of gifted were delighted to hear that I developed nonverbal tests of intelligence (MAT-SF, NNAT) and their revisions (NNAT2, NNAT3); especially when I shared the research I conducted which showed that the tests worked! Often professionals advocate in advance of getting research support for a method or test. I did the opposite. My approach was (a) start with a vision; (b) operationalize that vision – in this case build items that can be used to measure intelligence in a way that will be fair for all students; (c) conduct the research necessary to show that the tests have good reliability and validity for various purposes but especially for equitable assessment of diverse populations; and (d) help educators understand how to use these tests to identify very smart students who deserve appropriate educational opportunities. This work has been very well received by those who embrace diversity in gifted education.

What surprised me was push back from teachers who only wanted to teach high achieving students, and not those who could become high achieving given the opportunity to learn. What also surprised me was the objections of other test authors who rejected my view that intelligence should not be measured using tests that demanded academic knowledge such as vocabulary and math word problems.

What further confounds the measurement of intelligence in traditional IQ tests are the directions for administration that require comprehension of verbal concepts and demand working memory and the requirement that a student verbally explain their answers to the questions.

The problems associated with using knowledge to measure intelligence (which was exactly what I noticed more than 40 years ago) was solved with my nonverbal tests. This has been one of my primary areas of research because the consequences of using intelligence tests changes the course of a young person's life. Any test author or test user should be mindful of the social justice implications of the tests they make or use. I strongly suggest that: socially just assessment requires self-reflection ( e.g., "is the test I am using fair?") and self-correction (e.g., "is there a better way to achieve equity than what I have been doing?") in response to current research findings which suggests we can do better.

**TSY:**

How did you become involved internationally?

**JN:**

It was very clear that my work with fair and equitable intelligence tests, which included the various NNAT editions, the *Cognitive Assessment System* first and second editions (Naglieri & Das, 1994, 2014) and the *Wechsler Nonverbal Scale of Ability* (Wechsler & Naglieri, 2006) was getting international attention. The new *Naglieri General Ability Tests: Verbal, Nonverbal and Quantitative* (Naglieri, Brulles & Lansdowne, 2022) are also getting international attention even though they are only available on a limited basis right now. I am always happy to share information about my tests because they were conceived to provide an equitable way to measure intelligence for a wide variety of people.

**TSY:**

Can you please identify your most significant accomplishments and contributions to date?

**JN:**

As I reflect on this question a few topics come to mind. First is the need for intelligence tests to have been built with an explicit explanation of what the test measures. This could be the concept of general intelligence which has value for large scale testing or it could be a theory based on how the brain works. I have created several tests using the general intelligence approach; this includes the MAT-SSF and MAT-EF (1985), three editions of the NNAT (1997, 2003, 2016), the GAMA (Naglieri & Bardos, 1997), the *Wechsler Nonverbal Scale of Ability* (Wechsler & Naglieri, 2006) and most recently the *Naglieri General Ability Tests, Verbal, Nonverbal and Quantitative* (Naglieri, Brulles & Lansdowne, 2021). In each of these tests' manuals I have stated that the tests measure general ability, a concept related to Spearman's research often designed with a single letter 'g'. I have created tests explicitly designed to reinvent the concept of intelligence based on brain function as described by A. R. Luria and in our 1994 book *The Assessment of Cognitive Processes: The PASS Theory of Intelligence* (Das, Naglieri & Kirby). More recently the *Essentials of CAS2 Assessment* (Naglieri & Otero, 2017) describes the *Cognitive Assessment System* (CAS; Naglieri & Das, 1997) and the suite of tests which comprise the second edition: CAS2, CAS2: Español, CAS2: Online, CAS2: Brief, and CAS2: Rating Scale. These tests are very different from traditional IQ tests, which is why they are so effective for evaluation of, for example, twice exceptional gifted students with disabilities and for instructional planning.

In all my test development projects I have emphasized the importance of high psychometric qualities and a clear and concise understanding of what the tests measure. Without such clarity, users have the burden of trying to determine the meaning of test scores, which is the task of the test author. I have seen many instances where the test I have created helped a student, their teacher and parents better understand their intellectual strengths and areas of needs. Ultimately, my work is all about helping the student be successful in school and life.

**TSY:**

Can you describe your plans for next year and in the near future?

**JN:**

My current plan for the coming years is to help educators and psychologists interested in gifted education embrace all highly intelligent students regardless of their background and educational attainment. To do so, the first step described by my colleagues Drs. Brulles and Lansdowne and myself in our book *Understanding and Using the Naglieri General Ability Tests: A Call to Equity in Gifted Education* (Free Spirit Publishing, 2022) is to differentiate between gifted and talented students. Simply put, a gifted student is very smart, and may or may not be academically skilled. A talented student is very academically accomplished and may or may not be very smart.

Drs Brulles and Lansdowne and I have completed the new *Naglieri General Ability Tests: Verbal* (Naglieri & Brulles, 2022), *Quantitative* (Naglieri & Lansdowne, 2022), and *Nonverbal* (Naglieri, 2022). These three measures of general ability are uniquely constructed so that a person can solve the test questions regardless of which language(s) that person uses. The directions to the test are presented using animated instructions and no verbal response is required. Three research studies involving over 7,000 students ranging from grades K-12 have been completed which show trivial differences across gender, race, ethnicity, and parental educational levels (Selvamenan, et al. submitted for publication, 2022). Clearly, these three tests provide a viable approach to measuring general ability using tests with verbal, quantitative and nonverbal content.

**TSY:**

You have been working with a number of scholars. Can you tell us some memories about these people?

**JN:**

My work in the field of gifted has been vastly enriched by three colleagues who have influenced the course of my career and ultimately the lives of countless students. While teaching at The Ohio State University (1982-2000) I shared my paper "Comparison of White, African-American, Hispanic, and Asian Children on the Naglieri Nonverbal Ability Test," published in 2000 in the journal *Psychological Assessment* with Dr. Donna Ford. The results of that study showed that my test, the NNAT, yielded small differences across race and ethnicity. Dr. Donna Ford asked the critical question: "Does the test identify similar percentages of students with very high scores across race and ethnic groups?" I responded: "I don't know. Let's find out!" Which is exactly what we did and we reported our findings in our paper entitled "Addressing Underrepresentation of Gifted Minority Children Using the Naglieri Nonverbal Ability Test" published in 2003 in *Gifted Child Quarterly*. The collaboration with Donna was a pivotal moment in my career and I remain indebted to her for her contribution to my journey toward equity in the identification of all gifted students.

My work in the field of gifted has been enormously influenced by my colleagues Dr. Dina Brulles and Dr. Kim Lansdowne. I first met Kim and Dina at a conference in 2004. They came to my presentation on the NNAT and subsequently used my test with much success. Over the years we discussed many aspects of gifted education and in 2009 we published our first book

entitled *Helping All Gifted Children Learn: A Teacher's Guide to Using the NNAT2*. My understanding of the field of gifted was enriched by their extraordinary knowledge of gifted students. Dina and Kim often smiled when I shared some 'crazy' ideas about how to create a verbal and quantitative test of general ability that would work regardless of the language a student knows. Today, we have achieved that goal, as I discussed in the text above. Their willingness to work with me on the *Naglieri General Ability Tests* has allowed me to go well beyond what I did by myself with the *Naglieri Nonverbal Ability Tests*. Clearly, they have made a huge impact on me and so many students who would not have been identified had it not been for these new tools for finding very smart students regardless of how much academic knowledge they have (see: [www.naglierigiftedtests.com](http://www.naglierigiftedtests.com)).

