Successful intelligence: A model for testing intelligence beyond IQ tests

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Abstract  Standard conventional tests only assess a narrow sampling of the abilities required for success in school and in life. In contrast, the augmented theory of successful intelligence asserts that intelligence involves creative skills in producing new ideas, analytical skills in evaluating whether the ideas are good ones, practical skills in putting the ideas into practice and in convincing other people of the value of the ideas, and wisdom-based skills in confirming that one is using one’s knowledge and skills to serve a common good. Three projects were created to evaluate the theory with regard to college admissions: First, the Rainbow Project demonstrated that prediction of first-year college academic performance could be increased while simultaneously decreasing differences between ethnic groups on a predictive assessment, in comparison with the Scholastic Aptitude Test (SAT). Second, the Kaleidoscope Project improved prediction of academic and extracurricular performance over SAT scores alone; but the ethnic-group differences usually obtained vanished. Third, the Panorama Project showed the success of similar techniques in a less selective population. The projects demonstrate the application of the augmented theory of successful intelligence in enhancing college and university admissions procedures.

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La Inteligencia Exitosa: Un Modelo para evaluar la Inteligencia más allá de los test de Cociente Intelectual (CI)

Resumen La inteligencia exitosa avanza a un modelo que evalúa más allá de los test de IQ. Este modelo incluye habilidades creativas en la generación de ideas nuevas, habilidades analíticas en la evaluación de la valía de las ideas, habilidades prácticas en la implementación de las ideas y habilidades de sabiduría en la confirmación de que se está utilizando el conocimiento y las habilidades para servir un propósito común. Tres proyectos fueron creados para evaluar esta teoría en el contexto de las admisiones universitarias: Primero, el Proyecto Rainbow demostró que la predicción del rendimiento académico en el primer año de la universidad podía aumentarse mientras disminuían las diferencias entre grupos étnicos en comparación con el Test de Aptitud Scholastic (SAT). Segundo, el Proyecto Kaleidoscope mejoró la predicción del rendimiento académico y extracurricular sobre los resultados del SAT; pero las diferencias entre los grupos étnicos que usualmente obtenían desaparecieron. Tercero, el Proyecto Panorama demostró el éxito de técnicas similares en una población menos selectiva. Los proyectos demuestran la aplicación del modelo de la inteligencia exitosa en la mejora de las admisiones a la universidad.

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There was a time when even the Model T Ford was a great innovation. But innovations don’t stay innovative forever, and today, if you see someone driving a Model T, you are likely to view the car as quaint, antique, passé, or any of a number of other things, but not as innovative or even particularly useful except for generating feelings of nostalgia.

Roughly a century ago, the pioneers of intelligence testing introduced ideas and technological innovations that, for their time, were revolutionary. Since that work by these pioneers, Alfred Binet and Theodore Simon, testing to identify cognitive skills prerequisite to academic and other forms of success has changed relatively little (Binet & Simon, 1916). In contrast, other technologies, such as medical testing, telecommunications, and computation, have changed enormously. No one would want to be tested for cancer with early 20th century technology, or wait to pay for an operator to connect a long-distance call, or look forward to the future day when UNIVAC, one of the first computers, could help with their data analysis. If any other technology had stayed about the same for 100 years, people would be amazed. Yet, this retro world is the world in which we live in the field of testing the abilities of the gifted and the not so gifted.

There certainly have been new developments. Joseph Renzulli (2005) and Howard Gardner (1983), in particular, but also others (Sternberg & Davidson, 2005) have proposed new models of identification that have been used to identify gifted children in ways that go beyond conventional IQ testing. But the principal tests used to measure IQ and related abilities have not changed much, whether one is seeking to identify the gifted or those with, say, intellectual disabilities. Moreover, it is not just a matter of measuring “IQ.” Other tests that measure largely the same thing as IQ tests, such as SATs and ACTs (Frey & Detterman, 2004), also have changed little over time. Most of the changes in these tests have been cosmetic ones responding to demands from the marketplace, not to scientific advances.

Contemporary standardized tests measure today, as they did earlier, what is called “general ability,” which English psychologist Charles Spearman (1904) identified early in the twentieth century. The efforts of my colleagues and I have been addressed toward developing new kinds of ability and achievement tests that assess abilities in broader ways than has been the case in the past. We have sought especially to identify gifted individuals.

We call our framework the augmented theory of successful intelligence, or WICS. This is an acronym for wisdom, intelligence, and creativity, synthesized (Sternberg, 1997, 2003a, 2005; Sternberg & Grigorenko, 2004). In almost any life pursuit, people need to think (a) creatively to generate new and valuable ideas, (b) analytically to judge whether their ideas and the ideas of others are worthwhile; and (c) practically to implement their ideas and to convince others of the value of those ideas. People also need (d) wisdom to help to ensure that their skills are utilized to achieve a common good that balances their own (intrapersonal) interests with other people’s (interpersonal) and institutional (extrapersonal) interests over the long term, not just the short term. According to WICS, people can improve in these cognitive skills (Dweck, 1999; Sternberg, 1999, 2003b; Sternberg & Grigorenko, 2007).

On this view, traditional ability tests, originating with those of Binet and Simon (1916) and Spearman (1904), are less than comprehensive because they so strongly focus on analytical (and also memory-based) skills without also assessing creative, practical, and wisdom-based skills. Traditional standardized tests correlate with varied kinds of performances on life tasks (Herrnstein & Murray, 1994; Jensen, 1982; Schmidt & Hunter, 1998), but not at an impressive level of magnitude.

WICS is not the only theory, of course, that proposes abilities beyond general intelligence, something others have done before (Gardner, 2006; Thurstone, 1938). For example, Howard Gardner has argued that there are eight multiple intelligences, not just a single “intelligence.” Even theories that specify just one general intelligence generally differentiate abilities levels of cognitive skills hierarchically arranged (Carroll, 1993; Cattell, 1971; Johnson & Bouchard, 2005; Sternberg & Grigorenko, 2002). Where the traditional psychometric theories differ from the more modern ones is in precisely which skills are posited— what types of cognitive skills are considered sufficiently important to be part of a theory of intelligence—and in how important the skills are considered to be beyond general intelligence (g).
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