

Future career path of gifted youth can be predicted by age 13 9-7-2007

Camilla Benbow and David Lubinski

The future career path and creative direction of gifted youth can be predicted well by their performance on the SAT at age 13, a new study from Vanderbilt University finds. The study offers insights into how best to identify the nation's most talented youth, which is a focus of the new \$43 billion America Competes Act recently passed by Congress to enhance the United States' ability to compete globally.

"Our economy depends upon the creative sector – science, technology, the arts, medicine, law and entertainment," David Lubinski, study co-author and professor of psychology at Vanderbilt's Peabody College of education and human development, said. "Our research finds that differences in creative potential among highly gifted youth can be identified at age 13, offering opportunities for educators and policymakers to develop programs to cultivate these individuals based on their unique strengths and abilities."

The research was drawn from the Study of Mathematically Precocious Youth or SMPY, which is tracking 5,000 individuals over 50 years identified at age 13 as being highly intelligent by their SAT scores. Lubinski and Camilla Benbow, Patricia and Rodes Hart Dean of Education and Human Development at Peabody College, lead the study. Their co-author on the new report, published online by Psychological Science Sept. 7, was Gregory Park, a doctoral student in Peabody's Department of Psychology and Human Development.

The current study looked at the educational and professional accomplishments of 2,409 adults who had been identified as being in the top 1 percent of ability 25 years earlier, at age 13.

"We found significant differences in the creative and career paths of individuals who showed different ability patterns on the math and verbal portions of the SAT at age 13," Benbow, a member of the National Science Board and vice chair of the National Mathematics Advisory Panel, said. "Individuals showing more ability in math had greater accomplishments in science, technology, engineering and mathematics, while those showing greatest ability on the verbal portion of the test went on to excel in the humanities – art, history, literature, languages, drama and related fields."

Overall, the creative potential of these participants was extraordinary. They earned a total of 817 patents and published 93 books. Of the 18 participants who later earned tenure-track positions in math/science fields at top-50 U.S. universities, their average age 13 SAT-M score was 697, and the lowest score among them was 580, a score greater than over 60 percent of all students who take the SAT.

Benbow believes the latest findings from SMPY may be relevant to the ongoing public discussion about education and competitiveness.

"SMPY has already shown that highly achieving adults can be identified at an early age. These results now show us that we can also predict in which areas they are most likely to excel," she

said. "The policy question becomes: how best can we support individuals such as these, especially during their formative years, to help promote their development and success?"

The findings contradict recent reports that the SAT has no predictive value.

"The key factor in our study is that the SAT was administered at a young age," Lubinski said. "When students take the test in high school, the most able students all score near the top, and individual differences are harder to see. Using the test with gifted students at a young age allows us to easily identify differences in strengths and abilities that could potentially be used to help shape that person's education."

The Templeton Foundation funded the research. More information about SMPY can be found on its Web site, <http://www.vanderbilt.edu/Peabody/SMPY/>.

Lubinski is an investigator in the Vanderbilt Kennedy Center for Research on Human Development.

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