

Heckman's research shows non-cognitive skills promote achievement

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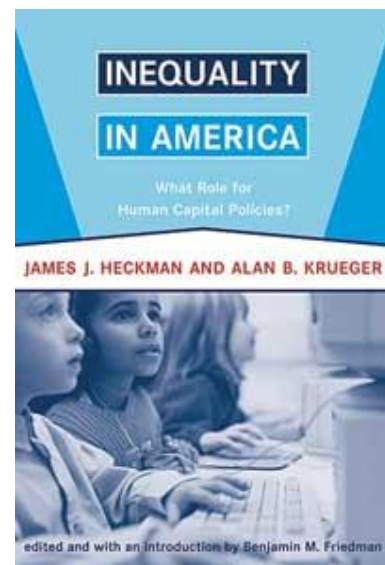
Persistence pays, contends economist James Heckman, as do other non-cognitive skills for both the individual and society.

Like persistence, dependability and other under-studied traits probably play as important a role in work and school success as do more easily measured skills, such as those recorded on achievement tests, writes Heckman in a forthcoming book.

Heckman, the Henry Schultz Distinguished Service Professor in Economics and one of the world's leading figures in the study of human capital policy, has found that programs that encourage non-cognitive skills effectively promote long-term success for participants.

Although current policies, particularly those related to school reform, put heavy emphasis on test scores, practical experience and academic research show that non-cognitive skills also lead to achievement.

Numerous instances can be cited of people with high IQs who fail to achieve success in life because they lacked self-discipline and of people with low IQs who succeeded by virtue of persistence, reliability and self-discipline, Heckman writes in the forthcoming book, *Inequality in America: What Role for Human Capital Policies?* (Massachusetts Institute of Technology Press), which he co-authored with Alan Krueger. The book is in the format of a debate the two had at Harvard University with comments by leading economists and rejoinders, as well as rebuttals by Heckman and Krueger.



“Our analysis challenges the conventional point of view that equates skill with intelligence, and draws on a body of research that demonstrates the importance of both cognitive and non-cognitive skills in determining socioeconomic success,” he said.

Surveys of employers show they most value job stability and dependability in employees, Heckman points out. Other studies show perseverance, dependability and consistency are the most important predictors of students’ academic grades, he adds, in a chapter based on work with former student Pedro Carneiro, currently a lecturer in economics at University College London.

Because non-cognitive skills are more easily improved during adolescence than are cognitive skills and they often stabilize in the formative years, public policy can help stimulate their development over longer periods. For instance, while IQ is well set by age 8, non-cognitive skills such as dependability continue to develop.

Social scientists and policy-makers have had difficulty measuring the impact of non-cognitive skills, but Heckman believes his research on the GED (General Educational Development) certificate awarded to students who have dropped out of high school after they complete the program provides some insights. His work has shown that GED recipients earn less than other high school dropouts with similar ability levels.

“Inadvertently, a test has been created that separates out bright but non-persistent and undisciplined dropouts from other dropouts,” Heckman said. “It is, then, no surprise that GED recipients are the ones who drop out of school, fail to complete college and fail to persist in the military. GED recipients are ‘wise guys’ who lack the ability to think ahead, persist in tasks or to adapt to their environments.”

Heckman also has extensively studied early childhood education. Evidence of the effectiveness of early childhood programs is mixed, partly because of a wide range in quality among programs and a wide range of quality in the schools in which the students eventually enroll.

Although many preschool programs are designed to promote cognitive development, the non-cognitive lessons may be the most important, said Heckman. “The greatest effect of early childhood programs is on non-cognitive skills, motivation and achievement, not on IQ.”

One well-studied, early childhood program operates in the Perry Preschool in Ypsilanti, Mich., where disadvantaged children were randomly assigned and received intensive help, as did their parents. The study then followed and monitored the pupils into adulthood.

“Evidence indicates that those enrolled in the program are higher earners and have lower levels of criminal behavior in their late 20s than do comparable children who did not participate in the program, Heckman said. “Reported cost-benefit ratios for the programs are substantial,” he said. The program is expected to yield \$8.70 for each dollar invested over the lifetime of the participants. A substantial portion of that return (65 percent) comes because of reduced levels of crime among the participants.

The findings dispute the claims of some scholars that early childhood interventions are not effective because test score advantages for children with preschool experiences tend to fade as they go through school.

“Academics have a bias toward believing that cognitive skills are of fundamental importance to success in life,” Heckman said. “Because of this, the relatively low malleability of IQs after early ages has led many to proclaim a variety of interventions to be ineffective.” The evidence from the Perry Preschool program shows that such programs reduce criminal activity, promote social skills and integrate disadvantaged people into mainstream society. “The greatest impact of these programs is on socialization and not IQ. Social skills and motivation have large payoffs in the labor market, so these programs have the potential for a large payoff.”

Heckman has found that older students develop non-cognitive skills as a benefit of mentoring programs. Effective programs include Big Brothers/Big Sisters, which pairs adult volunteers with youth from single-parent homes. The adult is intended to be a friend who does not focus on the educational problems or other deficiencies of the younger “sibling.”

A study of the Big Brothers/Big Sisters program showed that 10- to 16-year-old youngsters in the program were less likely to have drug or alcohol problems, have more success in school and have better relationships with their parents than were similar young people not involved in the program, Heckman said.

Early intervention seems to be the most important common feature in effective public policies to build human capital. An investment made while a person is young pays repeated benefits over a lifetime, as a person builds on the strengths he or she has developed.

Likewise, programs intended to provide job training for older workers who are out of work often fail because they are not prepared to take advantage of the opportunities. From a public expenditure point of view, the lifetime financial return on investing in a middle-aged person is much less than investing in someone who is still in school, Heckman said.