

# Dr. James Heckman

## The Importance of Early Childhood Investments

### The Effect of Early Investment on High School Graduation Rates

Based upon statistical analysis:

- Begin with a base graduation rate of 41%, the rate for disadvantage youth.
- Early investment alone can raise the graduation rate to 66%. This would involve moving children from the first to the fourth decile\* of skills
- Adolescent investment alone can raise the graduation rate to 64%. However, this investment will cost 35% more and will require moving children from the first to the ninth decile of skills.
- Early investment coupled with adolescent intervention can raise the graduation rate to 85%.
- Early investment coupled with steady and constant investment throughout life can increase the graduation rate to 91%.

### Cognitive vs. Non-Cognitive Skills

- Youth have two equally important skill and ability sets: Cognitive and Non-cognitive.
- Cognitive ability can be measured by test scores, IQ tests, etc.
- Non-cognitive ability represents character traits such as determination and dependability
- Most education policy in the United States focuses solely on cognitive ability
- Non-cognitive ability can reduce at risk behavior just as much as cognitive ability
- An illustration of the importance of both sets of skills can be found in the GED program: The test is a nearly perfect measure of cognitive ability.
- However GED recipients have trouble holding down jobs and earn significantly less than their peers. Even the military ceased accepting them. It is a clear demonstration that cognitive skills are one aspect of abilities.

### An example of early intervention: The Perry Preschool Program

- The **Perry Preschool program** did not have any long lasting effect on the IQ of the participants, but drastically improved their outcomes by increasing their non-cognitive abilities.

### Best Practice

- There is, as of right now, no best practice model.
- This means that groups of all kinds should continue to try programs and figure out what works.
- Eventually programs that are successful will weed themselves out from those that don't.

\* "Decile" refers to the tested ability level of the young person, with 10 being the highest.

### The Importance of Family

- Family is the greatest determining factor for the abilities of a child.
- Disadvantaged families tend to spend less time on child development
- This causes children to lack many skills their more advantaged peers acquire.
- The amount of time spent on child development increases as the mother's level of education increases.
- By investing early and changing outcomes, we can influence future generations by nurturing parents who will better help their young children.
- Improving family intervention can help schools improve - schools can only work with what we give them.

### Abilities and Skills

Abilities and Skills are:

Self-producing: the skills acquired at one stage of life persist throughout life and add to skills acquired later

Complementary: skills acquired increase the returns from investments made after the skills are acquired.

### Gaps in Ability

- Gaps in ability, both cognitive and non-cognitive, appear at an early age between children from disadvantaged families,
- These gaps persist throughout life.
- Abilities can be increased for all, but the gaps remain.

### Economic Benefits

- Workforce: Current US trends show a decline in college graduates and an increase in workers who lack basic necessary skills, causing a drag on the economy. Early childhood investments can turn this trend around.
- Benefit / Cost Ratios: If the Perry Program were administered today it would cost \$9,785 per pupil. Public education costs about \$7,500 per pupil.
- The benefit cost ratio for the Perry Program would be 9:1.
- Crime: The cost of crime is staggering: more than \$1.3 trillion per year.
- Increasing the graduation rate 1% can cause a societal savings of \$1.8 billion each year, solely from reduction of crime.

### Remedying Gaps in Ability

- Programs that target children from disadvantaged families have the greatest promise.
- Disadvantaged families spend less time on child development when their children are young.
- Early intervention lowers the cost of later interventions.
- Some later interventions, such as reducing class size, actually have negative investment returns.
- In order to produce similar outcomes, later investments cost 35% more than early investments.

### Sources:

Lecture by James Heckman: December 6, 2007

“Investing in Our Young People” by James Heckman and Flavio Cunha: November 15, 2006

“The Productivity Argument for Investing in Young Children” by James Heckman and Dimitriy V. Masterov

For additional publications, further information, copies of the sources (including graphs of his data) please visit: <http://jenni.uchicago.edu/human-inequality/>