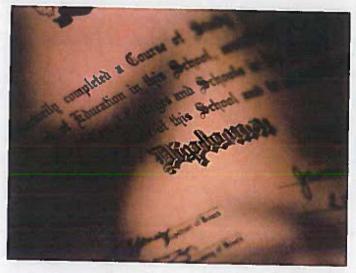
## HUMAN CAPITAL

THE ECONOMICS OF READING, 'RITING AND 'RITHMETIC



lthough there are certainly some discussions of education and skill acquisition in the writings of early economists from Adam Smith forward, the systematic examination of education (that is, investments in and contributions of training and experience in the workplace) really began about 50 years ago with the work of Jacob Mincer at Co-

lumbia University and my colleague and Nobel laureate Gary Becker at the University of Chicago. Becker's 1964 volume, Human Capital, was "square one" for students of Mincer, Becker, and others whose pioneering research has led to significant contributions to our understanding in this general field.

The world "capital" or investments in equipment and other resources to produce output, is long-standing and hardly raises eyebrows. But when economists began to refer to invest-

## By Allen R. Sanderson

ments in "human capital" and apply it to various aspects of

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education and labor markets, "how-dare-you" fur began to fly in some quarters. However, nowadays the term has settled into everyday language, including renaming what had long been "personnel departments" at firms and agencies as departments of human resources, or simply HR.

So, after a half-century of devoting energy to the topic, what do we know about the economics of education?

First, the financial returns to investments in people are substantial. The private monetary benefits compare very favorably with other investments, and they have increased substantially in recent decades. For example, compared with his or her peer with only a high school diploma, someone with a college education will earn about twice as much over a lifetime. The gap is even greater in comparison with a high school dropout or GED holder. Furthermore, unemployment

rates for college graduates are 50 percent lower than those with only a high school diploma, and two-thirds lower in comparison with the high school dropout population.

One contemporary thorn is the wide and increasing gap between skilled and unskilled workers in our society and its obvious contribution to one of our major societal issues today-income inequality. Some might attribute it to the loss of manufacturing and reliance on "McService" jobs, but in a high-tech world the demand for talented, highly-skilled workers in the service sector is enormous. Think Microsoft, Intel, Amazon, Google, The impact of increased immigration, legal or illegal to income inequality is negligible compared with the basic fact that unskilled workers are simply disposable in the modern world.

In addition to the financial rewards, there are also non-monetary benefits that accrue to the highly educated individual, including better health, a longer life expectancy, a greater appreciation for good literature and the arts, and perhaps a more rewarding life.

In addition to these gains for the individual, society also has a stake in these human capital investments - a better-informed citizenry, lower crime rates, fewer illegitimate births. And at the macroeconomic level, education is a key ingredient in producing economic growth and development across countries. Schooling increases productivity and advances and helps tame technological change, thus generating gains in per capita income and one's material standard of living.

Given the importance, then, of education in many dimensions and

at all levels, and the rather dismal performance of American high school students in mathematics and science in comparison with their international peers, it is no wonder that the United States continues to grope toward better outcomes in K-12 classrooms. Dissatisfaction with the current state of affairs, especially in urban schools, drives the support

for voucher systems, charter schools, merit pay for good teachers, paying students to stay in school, both the Bush and Obama educational initiatives, and other tweaking.

The most recent research indicates that the observed white-black achievement gap in high schools today is the result of activities and interventions in the 0-4 range, not in the K-12 years; thus schooling and its alternative structure may have less importance than families and good public policy in early human capital formation.

Once cause for concern, or even alarm, in the years ahead is the slowing of education attainment among our young people in terms of both graduation rates and college attendance. Over the 20th century, the American system of education-with all its faults, the mass education and non-elitist nature of it-helped make us the richest nation on earth.

If we now surrender that leadership and those gains as we stand on the educational sidelines and watch our brain gains become brain drains, perhaps we should at least learn the words for "human capital" in Chinese!