

Going to college:

Why it could be the best investment you'll ever make

On average, college grads earn a million dollars more over a lifetime than high school grads

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College is not for everyone,” my friend suggested. “Look at Bill Gates, Michael Dell and Steve Jobs; none of them graduated.” Indeed. Meanwhile, Stanford Law graduate and PayPal co-founder Peter Thiel paid 24 teenagers each \$100,000 to drop out of college and go into business. Why? The average plumber makes as much as the average doctor, he told *60 Minutes*. In addition, he argues, college gets in the way of entrepreneurship, so if you provide access to risk capital, these young people will accomplish great things.

Having contributed to the accumulated wealth of each of these innovators through the purchase of their products and use of their services, I deeply appreciate their accomplishments. However, higher education’s critics are drawing all the wrong lessons from the experience of a few inventors and business magnates — these anecdotes about rare individuals ignore what the research says about the benefits of a college education to students and society.

Many people have come to believe that college costs too much, takes too long and leaves students saddled with too much debt. They wonder if it’s worth the effort. Unfortunately, the debate over dollars and cents is obscuring the simple fact that a college degree is still the best investment people can make in their own futures.

That Bill Gates dropped out of Harvard is well known. But while he was there he was mentored by world-class professors, challenged by bright students and engaged by the classes he audited to supplement his applied math major. He also spent much of his time using Harvard computers to create code. Michael Dell repaired and upgraded personal computers in his dorm room at the University of Texas before starting to assemble new machines and selling them to his classmates.

Steve Jobs dropped out of Reed College after six months but subsequently audited courses. Because he dropped in on a single calligraphy class, Jobs told Stanford graduates at commencement, the Mac was set up with multiple typefaces and proportionately spaced fonts.

Degree or not, attending college profoundly shaped these entrepreneurs — introducing them to knowledge, helping them build relationships and exposing them to new career opportunities. The same things happen to most other college students.

The Pew Charitable Trusts found that in 2012, the average annual earnings of Millennials (people between 25 and 32) was \$28,000 for high school graduates, \$30,000 for those with some college (or an associate degree) and \$45,500 for those with bachelor's degrees or more. Another study by the New York Federal Reserve shows how this plays out over one's lifetime: on average, college graduates earn at least one million dollars more than high school graduates.

Pew also noted that the unemployment rate for Millennials was 12.2% for high school grads, 8.1% for those with two-year degrees (or some college) and 3.8% for those with at least a bachelor's degree. During the recession, college graduates held onto their jobs longer, and when they lost them they found new ones more quickly than those without degrees. A college education is also a hedge against poverty. According to the Pew study, 5.8% of Millennials who are college graduates live in poverty, versus 14.7% of the Millennials with two-year degrees (or some college) and 21.8% of those with only high school diplomas.

A generation ago, workers with only high school degrees could expect to support their families and hold onto their jobs for life. With the decline in manufacturing in North America and whole industries moving off shore, neither assumption is true today.

The lack of a college degree puts one in greater jeopardy because the jobs of the future will require new training and skills. The pace of innovation is accelerating, with technology increasing much faster than the high school curriculum is developing. A Georgetown University study found that 72% of the jobs available in 1972 required a high school diploma or less. At the time, tablets referred to school notepads, not electronic devices with more computational power than mainframe computers of that day. Phones were tethered to wires rather than being "smart" on-ramps to the Internet — which hadn't yet been created.

By 2010, only 41% of all jobs could be done by people with high school degrees. The Georgetown study projects that of the 164 million jobs expected in 2020, nearly two-thirds (64%) will require some college. Several years ago, an Intel executive told a group of California university presidents that 90% of the company's revenue the previous year came from products that had not existed 18 months earlier. Intel, she said, was looking for talent, not the cheap labor available all over the world.

A recent Michigan State University study called *Recruiting Trends*, an annual survey based on nearly 5,700 companies in the United States, concluded that hiring for the class of 2014-2015 is expected to jump 16% for those with bachelor's degrees. Economist and project director Philip Gardner, says: "Employers are recruiting new college graduates at levels not seen since the dot-com frenzy of 1999-2000." This anticipated increase in hiring is strongest in information services (up 51% over last year) and finance and insurance (up 31%), but also includes sharp increases in the professions, health services, business and scientific services.

As the educational bar continues to rise, those lacking 21st century skills risk becoming part of a permanent underclass. The knowledge economy requires critical thinking, problem-solving, communication and interpersonal collaboration as well as an understanding of technology and media — all part of today's liberal arts education. This training enables people to prepare for jobs that don't yet exist. People who base their future prospects on high school level skills could become as obsolete as the lamplighter, type- setter and elevator operator.

A college education, however, is more than an investment in one's own financial security. It also improves the quality of life of that individual's community.

In their seminal book, *How College Affects Students*, Ernest Pascarella and Patrick Terenzini summarize thousands of studies over three decades of research on how college changes students, specifically development that cannot simply be attributed to maturation. Since the process of growing up affects everyone whether or not they enroll in college, the researchers looked only at studies that controlled for normal growth and development.

They found that college degrees increase students' levels of critical thinking, verbal and quantitative skills and general knowledge. Students benefit not only from what they learn, but also from the people with whom they interact. Controlling for age, gender, grades and credit hours completed, the level of interaction with faculty has a significant, positive effect on students' preparation for careers. Engaging with professors prepares students for the marketplace in ways that go beyond the classroom.

College graduates, these studies show, not only demonstrate greater self-confidence and leadership, they have stronger social support systems and suffer lower levels of abuse and family violence than non-graduates. They are also more likely to exercise, less likely to smoke or engage in substance abuse and more likely to live longer and carry health insurance. Based on these effects, college education is a public good — not just a personal benefit.

When we earn college degrees, it makes a difference to our communities. Pascarella and Terenzini found that people with some college are more likely to vote, participate in the political process, give blood and serve as volunteers. They are also less likely to draw on public assistance, but more important, college increases students' "level of principled moral reasoning." The authors argue that this happens not only because students study ethics in the classroom, but because they are exposed to a wide range of intellectual, cultural and social experiences, and encounter divergent perspectives that force them to examine moral issues. Given that many people appear to have lost their moral compasses, these are important lessons for 21st century citizens.

Society will always produce some creative geniuses that invent new products, create new business models and develop new marketing strategies — with or without college degrees. The probabilities, however, are stacked against people without them; they put themselves at a distinct disadvantage relative to their college-going peers. We wouldn't

think of telling a high school basket- ball player to skip college for an immediate shot at the NBA just because Kobe Bryant and LeBron James made it. If we wouldn't say this to student- athletes based on the accomplishments of a few superstars, let's not advise other students to do so based on the success of a few inventor-geniuses.

The world has changed. A high school diploma is no longer sufficient for most people who want to build successful careers in our rapidly changing world. College is the foundation for knowledge creation and the development of 21st century skills. We should help high school students and their families view a college education as an investment in the future — theirs and ours.

And, by the way, according to *Payscale.com*, the average salary of a physician is around \$200,000, while the average plumber tops out at \$75,888. ♦

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