

Learning a Living

David D. Thornburg, Ph.D.

Senior Fellow

Congressional Institute for the Future

dthornburg@aol.com

<http://www.tcpd.org>

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It has become popular in the past few years to say, “What you learn determines what you earn.” Catchy phrase (and obvious logic) aside, it is worth exploring whether there is any hard data to support the allegation that the level of education correlates strongly with average earned income.

The following graph uses data obtained from the United States Census Bureau:

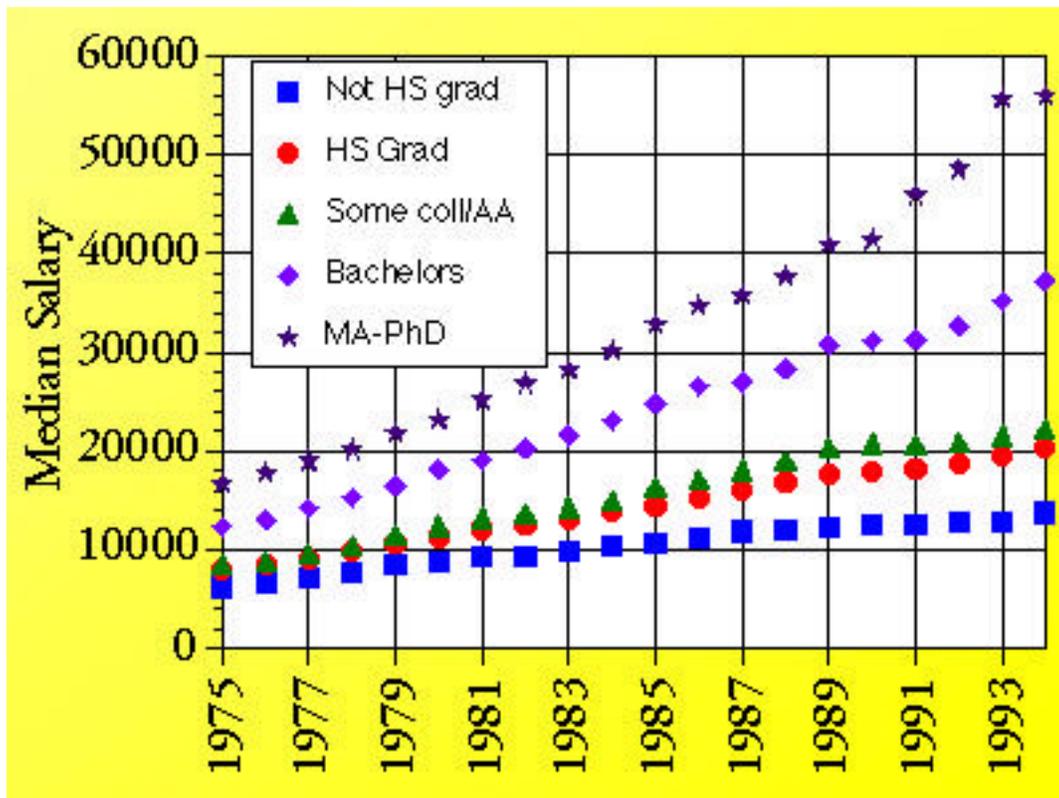


Figure: Plot of median income for different levels of educational attainment over time (numbers are NOT adjusted for inflation)

This plot uses data from high school dropouts, high school graduates, those who

attended some college or received an AA degree, college grads (Bachelors level), and those who attained higher degrees including Masters, Doctorates and professional degrees (MD's, JD's, etc.)

A quick glance at the data confirms expectations: Level of educational attainment correlates quite strongly with median income, and the connection is growing stronger over time.

While education has always been related to income, the connection between median salary and education is accelerating. The most obvious change is the increasing gap between the lowest and highest educated sectors of the public. The median salary gap between the highest and lowest educational levels was about 2.7:1 in 1975. By 1994 this gap had increased to over 4:1. Furthermore, the median salary for high school dropouts started to level off in 1987, and has been virtually flat ever since. On the other hand, the median salaries of college graduates (with or without advanced degrees) are growing at an increasing rate.

While the salary gap between high school graduates and dropouts was not very large in 1975 (\$1,645), by 1994 it had increased to \$6,551, a level greater than the 1975 dollar gap between high school dropouts and college graduates (\$6,134)!

The cost of advanced degrees has increased over the period studied, but the rapid increase in median salaries between high school graduates and college grads, or those who do post-graduate work has increased even faster, shortening the payback period needed to recover lost income for the time spent in college.

With inflation currently stabilized in the region of two to three percent, it is interesting to observe that the rise in median salaries for highly educated workers is increasing much faster than inflation. Upward pressure on salaries for highly skilled workers comes from the current shortage of talent in the marketplace -- especially in the realm of information technologies. A recent study published by the Information Technology Association of America (see <http://www.ita.org>) found that 190,000 high-skill jobs are currently vacant in that industry. This represents a vacancy rate of 1:10 jobs! As a result, recruitment in the IT arena is so vigorous that many employers are offering signing bonuses to new employees -- a concept borrowed from the field of professional sports.

This workforce gap is not restricted to the United States. Other countries are experiencing the same problems. This merely increases the need for a more highly educated workforce in the United States since we can't import the talent we need.

As we continue to develop more high-tech industries, and as small, dynamic cutting-edge companies continue to provide the bulk of new employment, the need (and median salaries) for highly-skilled workers will increase. At the same time, the continued automation and migration of low-skilled jobs will result in lower

demand and downward salary pressure for those who lack the skills needed to work in the new economy.

The message is clear: those with high levels of skill are likely to have a bright future ahead of them, while those lacking in the education and skills needed for the coming years will have a very difficult time.

The beauty of the US educational system is that it is available to all our youth. What remains is for us to insure that every student is held to high standards of excellence and that effective pedagogical models are adopted to help students achieve these standards. It is also essential that the curriculum addresses the complex thinking skills that will be demanded of all those who will be working in the high skill jobs of the coming century. If we fail to confront these issues, our society will bifurcate into a two-class system similar to that found in many developing countries.

Education today, more than ever, is essential for all our citizens. It is truly the case that what you learn determines what you earn.

Author notes: Dr. Thornburg is Director of the Thornburg Center and Senior Fellow of the Congressional Institute for the Future. As a consultant for both education and industry, he is active in exploring the skill sets needed by highly skilled workers in the coming years.

His work on educational futures and the use of emerging technologies has resulted in several workshops, including one on Thinking Skills for the 21st Century. Information on this, and other, programs can be found at the Thornburg Center website: <http://www.tcpd.org>