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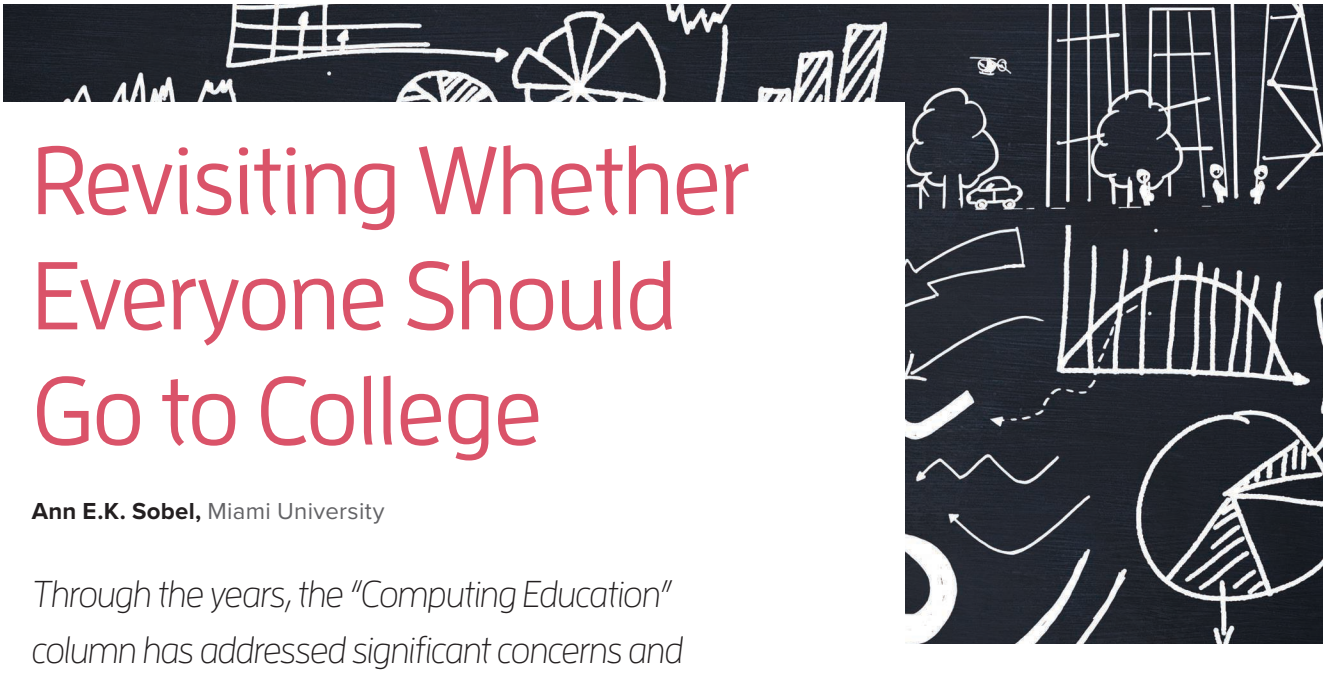

Revisiting Whether Everyone Should Go to College

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Through the years, the "Computing Education" column has addressed significant concerns and counterarguments about making college free. Lately, increased calls for free postsecondary education and data from new employment studies indicate that another discussion on this issue is warranted.

It certainly sounds enticing—the idea that everyone could go to college for free. Many suggest that current college costs are too great, especially when that money, even if it were readily available, could be used for so many other noteworthy causes. Therefore, as a community, we should consider whether such an extremely high cost can be balanced against a perceived need for everyone to attend college.

Prior "Computing Education" columns have noted that there are numerous potential students who neither want nor need a bachelor's degree. There are many reasons for this: not everyone is interested in pursuing a career that necessitates a college degree, such as STEM vocations; some may not want to invest the time necessary to obtain the degree, particularly if remedial coursework is needed; and not everyone has the character traits or the abilities to navigate the arduous journey to obtaining a degree.

According to the National Center for Education Statistics, 45% of high school graduates go for a bachelor's degree (almost double the percentage if referring to college in general). Are there currently a sufficient number of jobs that require a bachelor's degree? The answer is no, and by a significant amount (close to 50%). Because of this, college graduates are filling entry-level positions that do not require college degrees. Unfortunately, it is not only college graduates who are hurt by this situation; harm cascades downward as job opportunities are eliminated for those who want and need those entry-level positions but have only a high school diploma. Even if landing a career-oriented job isn't the goal, a student can benefit from postsecondary education through expanding his/her judgment, enrichment, and overall individual growth, but this approach to obtaining maturity is expensive and time consuming. What about those who attend college but don't get a diploma? Many colleges have very low graduation rates, and students average well more than four years to obtain their degrees.

Journal of Labor Economics published an article on a 10-year study of increasing salary rates.[1] It had been true that, over the span of a career, the salary of an employee with a bachelor's degree well outpaced the actual cost of obtaining

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the degree. In this study, however, the rise in salary over a decade for college-degree holders was relatively flat, which indicates that one of the strongest benefits of obtaining a college degree may no longer exist.

It is disingenuous to suggest emphatically that one cannot succeed in life without a college diploma—and not just any diploma, but one from a top school. This emphasis has driven those with means to buy their children into top colleges through athletic programs, bypassing admission requirements to obtain a spot on a team for a sport that their children may have never even played. I suspect that those same parents had plans for how their children would manage to complete their degree requirements, because it is generally easier to get into college than to leave it with a degree in hand.

For adults who can no longer pursue their current employment path and must make a career shift, it is wrong to suggest that college is the best answer. Those seeking retraining are very different students than those fresh out of high school. The latter group has a much better chance in the standard college core of math and sciences, whereas the former hasn't studied either in years or even decades. Placing a retraining student in college leads to a high incidence of failure. The alternative approach of placement in a trade school fits the retraining model quite nicely by focusing on the particulars of a craft, having no general requirements to satisfy, being expedient and moderately priced, and not having related extra costs such as campus living and athletic fees.

Being able to pay the tuition bill isn't the only thing that keeps a student from entering college. There is an incoming class size that is determined not only by resources within the college but also by state regulations. There are also admission standards, which include high school diplomas, grade point averages, and scores on standard admission tests, such as the SAT and ACT. Although the removal of the financial burden of college may open the door to more students, there may still be financially oriented impediments; for example, the scores on standardized tests have been shown to favor successful family environments (where "success" involves income and concern for education). There are many more issues to address on this topic, but suffice it to say that the devil is in the implementation details, which are both numerous and very gray.

REFERENCE

1. P. Beaudry, D. Green, and B. Sand, "The great reversal in the demand for skill and cognitive tasks," *J. Labor Economics*, vol. 34, no. S1, pp. S199–S247, 2016.

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ERRATUM

In [1], the biography for Chih-Ting Lin was incorrect due to a production error. It should have read as follows:

CHIH-TING LIN is with the Graduate Institute of Biomedical Electronics and Bioinformatics at National Taiwan University, Taipei. His research interests include biomolecular sensing technologies and microstructured or nanostructured sensing devices. Lin received a Ph.D. in electrical engineering and computer science from University of Michigan, Ann Arbor. Contact him at timlin@ntu.edu.tw.

REFERENCE

1. C.-H. Tseng et al., "Cloud-based artificial intelligence system for large-scale arrhythmia screening," *Computer*, vol. 52, no. 11, pp. 42–51, 2019.

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