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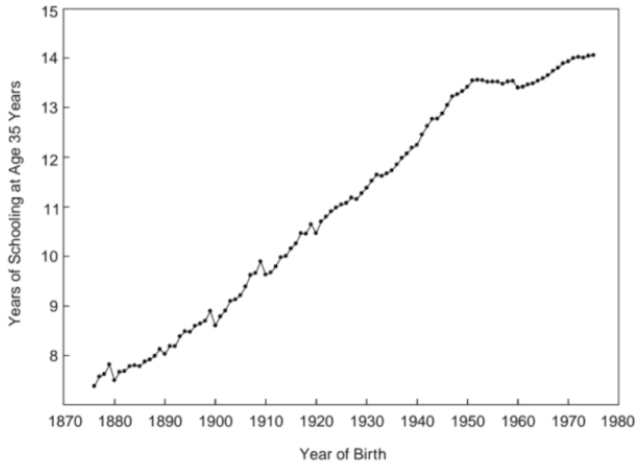
Restoring Quality of High School Skilled Education

Goldin and Katz conclude that the solution to addressing rising inequality in the US is to restore the growth of educational attainment (years of schooling), implying that doing so would increase the supply of educated and skilled labor. To provide a more feasible and interesting discussion, I suggest a more targeted solution of improving high school education to restore the quality and supply of American skilled workers.



[1]

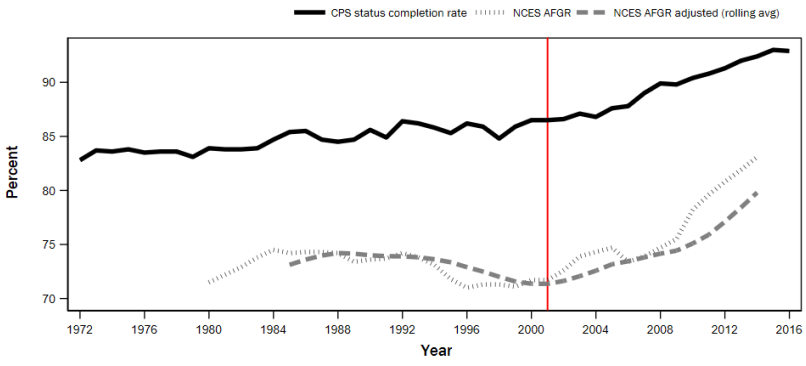
Goldin and Katz write that prior to the popularization of high school, most individuals in skilled industries learned relevant cognitive skills on the job, not in the classroom. However, once relevant cognitive skills such as geometry and mechanical drawing were integrated into high school curricula, secondary school attendance began to increase. Thus, the supply of individuals who were able to become skilled workers also "greatly increased."[2] I claim that the

[1] Weil, "Module 8 Wage Inequality".
[2] Claudia Goldin and Lawrence F. Katz, "The Race Between Education and Technology".

high school curricula has not progressed to match the industry need for cognitive skills. One example of an essential modern skill that has not been taught enough is computer science and programming. According to Code.org, only 51% of US high schools offer computer science courses, of which 4.7% of students are enrolled in.[3] While programming is not the only example of a relevant cognitive skill, it serves as a proxy for understanding the lack of high school curricula growth.

While high schools have fallen behind in providing skills training to students, national high school graduation rates have been steadily increasing over the past several decades. This poses the following question: why not provide technological skill training for American students in high school? By meeting students where they already are, educators would be able to implant the possibility of pursuing a career in a skill-intensive industry by demystifying the field of technology, which serves as a large barrier to entry. This goes against Goldin and Katz's recommendation as it doesn't seek to increase the number of years of schooling, but rather the quality and relevance of education.

Figure 1: The national rise in high school graduation rates



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[3] https://advocacy.code.org/2021_state_of_cs.pdf

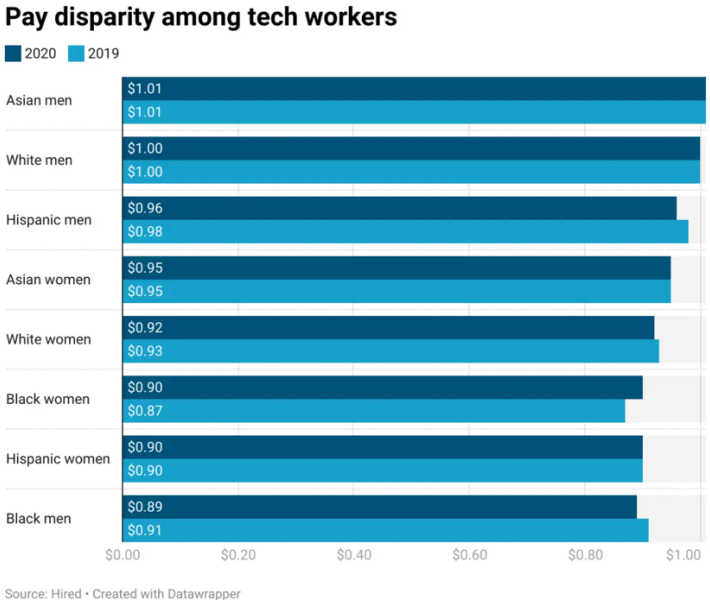
[4] https://www.brookings.edu/blog/brown-center-chalkboard/2020/03/02/are-americas-rising-high-school-graduation-rates-real-or-just-an-accountability-fueled-mirage/

I also claim that this disconnect between the skills taught in high school and those demanded by modern skilled industry has driven the norm of requiring a college degree for most skilled jobs. However, from Goldin and Katz, we are given that the growth in college educational attainment has fallen. Thus, the US has not been supplying enough skilled high school and college graduates—an issue that could be mitigated by increasing technical training in high schools, where attendance is already high.

A logical rebuttal to providing technological skill training to high schoolers would be one that challenges the competency of high schoolers to understand the intricacies of technology. However, as someone studying computer science, I claim that technology is made out to be more complicated than it seems. Sticking to our example of programming, most entry-level software engineer positions only require two semesters of CS coursework. The most important skill in the technology industry is not genius math ability, but rather the desire to quickly learn new things and the willingness to constantly improve upon existing frameworks. Those who can overcome the steep learning curve experienced in their first year of learning have already set themselves up for success.

Thus, the main issue becomes with how to get more individuals interested in learning about skilled work. This challenge is similar to what was discussed by Chetty in his work with mobility scorecards. Developing a strong technical skillset is akin to attending an Ivy league institution; it is difficult to get people in the position to pursue it, but those who do are rewarded. I suggest that national efforts to expand relevant, skill-enhancing opportunities to all high schools would not only restore the skill premium to 20th-century levels, but also improve the demographic distribution of skilled workers. This would be a mechanism for improving

inequality, as the technology industry observes more modest pay disparities among their workers as well.



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Yet, there are a few reasons why restoring the quality of high school skilled education may not be completely effective in restoring the skill premium to 20th century levels. First, this is only a viable solution to rising inequality for those entering the workforce, as it relies on improving secondary school education. This problem is also present in Goldin and Katz's solution. Additionally, individuals may not be very market-driven when considering majors, especially within the US. The American ideal of "following your passions" may still be the main driver of inspiring kids to pursue careers outside of the skill-biased industries experiencing the most growth. A revamped high school curricula by itself may not be enough to significantly increase the supply of skilled workers.

[5] https://www.morningbrew.com/emerging-tech/stories/2021/05/24/report-finds-tech-racial-gender-pay-disparities-narrowing-still-present