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The Lack of CTE Teachers in American High Schools

Everyday, we hear how important it is to get an education because allows us to achieve our goals in life. But I want to take that back a notch. What do people really mean by the word “education”? Education is such a broad term, and for the purposes of this speech, I would like to focus on CTE, which stands for career and technical education. To start us off, I’m sure most of you remember that one teacher, whether in elementary, middle, or high school, I’m talking about someone who truly inspired you, someone who motivated you to choose your major or the career of your dreams? Or, maybe he/she taught you a set of real-world skills, which are really starting to come in handy for those of us in the workplace. But, if you can’t think of anyone who’s really done that for you, then according to my research, you are not alone. In the United States, only 14% of all teachers are certified CTE educators, yet only a fraction of that 14% is fully trained to give our students a proper education. This is a serious social and political problem, because as technology advances and workers in middle-class jobs are retiring with not enough people to replace them, the need for career and technical education has never been greater. Today’s policymakers still don’t value CTE education as the top priority for our students; our future engineers, doctors, and lawyers, you name it!

So what does this mean for those of us who’ve attended high school here in Las Vegas? Based to my audience analysis, I know most of us would not be interested in becoming teachers because they don’t make very much money. At the same time, while there’s magnet schools that

emphasize CTE education, just recently I interviewed my former civil engineering teacher at WCTA, Mr. Daniel Leberger, who told me just how difficult it is to be a CTE teacher, “At West, I have to teach all four classes of engineering, from the freshman to senior class, because the other two engineering teachers retired around two years ago. I’m still relatively new as a teacher, having only taught for 3 years, and teaching all of these classes requires me to put in a lot of extra time preparing. There’s hardly any time for myself, so there are times when I only have an hour to prepare for lessons. Because of this, sometimes my lessons aren’t as in-depth as they should be, and my mornings are dominated by red pens and coffee, above all, I don’t want my students to think that I’m cutting corners when I’m really just trying my hardest to teach them engineering. Don’t forget, I also have to grade hundreds of assignments and deal with admin expectations, so I have to dedicate time towards that as well. I realize CCSD has a tough time hiring STEM teachers, because an engineer or scientist for the most part will not step down from their high pay scales to teach.” So after having Mr. Leberger as my teacher for just a couple of years in high school, he has become my role model, and he genuinely cares about his students’ success as future civil engineers. But just like every teacher in the CCSD valley, he earns a very low salary for the work he does, which is why he also works on/off as an engineering consultant every month or so to earn more money. Still, both incomes combined don’t make nearly as much as a civil engineer. So why does he stay teaching? Why doesn’t he just work as a full-time civil engineer? He does it because he understands we don’t have very many teachers who are willing to teach engineering, and he runs West CTA’s program because he believes a good STEM education is the only way to create future engineers in college and beyond.

To provide an expert testimony on the problems facing CTE education, and why it is so

important in high schools, I reached out to my former AP World History teacher, Mrs. Jessica Sanchez, who first explained to me how CTE programs do not provide equitable access to all students. Bus transportation is extremely limited, and when you think about how difficult it is for a high school freshman or sophomore who probably isn't able to drive to school yet to get to school each morning when their CTE program is very far from home, this becomes a problem. If that wasn't enough, what about students who don't speak English as their primary language; how will they, or their parents, obtain the information they need to apply to a CTE program? As you can see, when there's not enough career and technical schools, and more importantly, not enough CTE educators, there comes other problems that policymakers and school boards aren't taking into consideration, such as transportation and equal access to these programs.

Now that we're in college, though, why should we care about CTE as a solution? Well, just last spring, I graduated from West Career and Technical Academy, which is a magnet school here in Las Vegas that offers nine technical programs. Each program is designed to encourage high school students to pursue careers in biology, engineering, business, and even animation. As an engineering student, I've had excellent CTE teachers, many who motivated me to continue at UNLV by choosing civil engineering as my major. Now that I'm at UNLV, compared to most of my peers, learning about engineering in high school allowed me to gain an early understanding of college curricula, such as surveying geomatics and engineering physics, which are two classes you won't learn at a regular high school. At the same time, some of my former classmates who didn't go straight into college after high school ended up with internships in drafting or computer science, by having a strong vocational education with a skill assessment exam to prove it.

There's another side to this issue, which is the quality of currently existing programs.

According to the Great Teachers and Leaders Center at the American Institute for Research in 2014, which made a special issues brief on CTE, “policymakers have paid insufficient attention to developing and supporting CTE teachers as part of wider human capital management reform efforts. CTE teachers, who enter the classroom with a wealth of technical knowledge and skill, often have little preparation in classroom instruction and need mentoring and professional learning opportunities to fill the gaps” (p. 2). In this room, I’m under the impression that most of us are STEM majors. I want you all to imagine yourself 30 years from now, when you’re all experienced doctors or scientists, and you become interested in teaching biology at a high school. Even if you join the 75% of aspiring CTE teachers who take alternative teaching certification routes, you may still be underprepared to teach academic content effectively. Now, I don’t want to discourage any of you from becoming teachers, but there are many problems with traditional certification because the process is just too long to complete and it deters potential teachers due to how intensive these programs are.

So now that we know the problems with the lack of CTE teachers in the United States, policymakers must deliver a reasonable solution that can be implemented in the majority of high schools in the US. First, schools should increase funding for CTE teachers by reauthorizing the 2006 Carl D. Perkins Career and Technical Education Act, which boosted funding for vocational and technical education across the United States. This law was recently decommissioned on June 30, 2013, and after three years, I propose to reinstate it. According to the Association for Career and Technical Education, the federal government contributed about \$1.3 billion annually to this program, which “supports innovation and expands access to quality programs. [In addition,] state and local funding supports the career and technical education infrastructure and pays teachers’

salaries and other operating expenses” (para. 2). In 2012, President Obama released the Blueprint for Transforming Career and Technical Education, which sets priorities for what the next update of the Perkins Act should encompass. As stated by Arne Duncan, the Secretary of Education in Washington DC, “Our federal investment in CTE must be dramatically reshaped to fulfill its potential to prepare all students, regardless of their backgrounds or circumstances, for further education and cutting-edge careers. The need to strengthen and elevate CTE is urgent. This is not a time to tinker with CTE—it is a time to transform it” (para. 5)

If the next president focuses on expanding CTE programs in schools around the United States, through either the reauthorization of the 2006 Carl Perkins Act or by developing a new act, then, according to Michael Hansen, reporter at US News & World Report, “career-oriented coursework may actually improve both college attendance and employment outcomes, a two-for-one that provides some benefits to all students... after leaving high school.” At the same time, this policy will address two key populations that have struggled to adjust to the transition between high school and college due to a lack of college-prep and technical career prep: males and lower income students. You might be thinking, well in the engineering fields, there’s mostly males and they’re all math geniuses. Well, you would be wrong to assume that, because those who became math geniuses only represent a small portion of all engineering students, who probably went to good schools or had decent CTE training at some point in their education. US News and World Report contended this by saying, “the most in-demand career specializations, based on the most recent data, are in health science and STEM areas (science, technology, engineering, and math).” Finally, even if policymakers expand career and technical education programs, there is still the argument for quality that must be addressed. My CTE teachers in high

school were particularly excellent; however, according to Jacques and Potemski, “students in CTE programs have graduation rates of more than 90 percent, whereas the graduate rate for high school students overall is just under 75 percent (ACTE, n.d).” That other 10% is still very much impacted, because of low-quality CTE teachers, which can be effectively corrected if we aim to reauthorize the Perkins Act.

References

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