United States House Committee on Education and the Workforce
Subcommittee on Early Childhood, Elementary, and Secondary Education

Hearing on "Preparing Students for Success in the Skills-Based Economy"

January 18, 2024

Written Testimony of Danny Corwin
Executive Director, Harbor Freight Tools for Schools

Good morning, Subcommittee Chairman Bean and Subcommittee Ranking Member Bonamici, and all the distinguished members of this Committee. My name is Danny Corwin, and I am the Executive Director of Harbor Freight Tools for Schools, which is the flagship program of The Smidt Foundation. The Smidt Foundation is a private foundation, established by Eric Smidt – the co-founder, CEO and owner of Harbor Freight Tools, the national tool retailer. The Smidt Foundation supports courageous people building, repairing and making our communities safe.

Eric co-founded Harbor Freight with his father at the age of 17. Their small mail-order tool business established in North Hollywood, California in 1977 now has over 1,400 stores and 27,000 employees across the United States. Grateful for a shop class that he took in high school and concerned that such programs were no longer available to many students around the country, Eric decided to do something about it and established Harbor Freight Tools for Schools.

We focus on skilled trades education, which is a subset of Career and Technical Education, and emphasizes the expert and creative use of tools, materials, and processes to solve a problem, meet a need, or build or repair products or structures, and is focused largely in the construction, transportation, electrification, and manufacturing sectors. Generally, this includes coursework in the study of agricultural mechanics, construction (including carpentry, plumbing and HVAC technologies), electrical, advanced manufacturing, welding, and transportation mechanics (including automotive, small engine, and aviation.)

Harbor Freight Tools for Schools® supports outstanding skilled trades education in our nation's high schools. With a deep respect for the dignity of these fields and for the intelligence and creativity of people who work with their hands, Harbor Freight Tools for Schools aims to drive a greater understanding of and investment in skilled trades education, believing that access to quality skilled trades education gives high school students pathways to graduation, opportunity, good jobs, and a workforce our country needs.

The United States is facing a severe shortage of skilled trades workers. Harbor Freight Tools for Schools is committed to investing in the next generation of tradespeople who will do this important work. We employ three major strategies in doing so: supporting skilled trades teachers, leveraging research and communications, and funding invention and models of excellence.

Our flagship initiative is the Harbor Freight Tools for Schools Prize for Teaching Excellence®, through which we award $1.5 million to 25 outstanding high school trades teachers across the country annually. The prize shines a light on outstanding skilled trades teachers and their valuable work inspiring students to learn a trade that prepares them for life after graduation. Since 2017, Harbor Freight Tools for Schools has awarded $7.5 million to 133 deserving teachers and their classrooms. Prizewinners join a national network of skilled trades teachers who convene throughout the year, including at LET'S BUILD IT℠, a four-day summer convening to share best practices and develop new ideas to advance high school skilled trades education.

Using research from the Association of Career and Technical Education Association (ACTE), combined with nearly two dozen sets of success indicators, we created a "Platinum Standard" to outline the elements of excellence in skilled trades teaching and learning in U.S. public high schools.

- At the center is an outstanding teacher:
    - With a love of the subject matter, and a deep belief in young people and their potential,
    - Highly skilled, knowledgeable and able to teach and adapt approved curriculum, with opportunities to learn and refresh their skills,
    - Supported: by colleagues, principal and policy; by competitive compensation; and by a community of practice,
    - Valued by and engaged in their community.
- Matched up with curriculum relevant to a career pathway and future work choices,
- With seamless synergy to next-step options, including employers, community colleges and universities,
- A safe, modern space in which to experiment and build, and with modern equipment and tools,
- Teacher-student ratios enabling hands-on learning by students, in teams and solo, with meaningful supervision and coaching,
- Connecting each student to learning in the world outside of school, with constructive guidance from a skilled tradesperson in that domain, and also connected to a community of practice, with opportunities to showcase skills and knowledge.
- Students have apprenticeships or internships, formal and informal, and optimally, paid.

- Resulting in a high school diploma and an industry recognized credential, and thus, opportunity and choices for the future.

Research on Skilled Trades Education in U.S. High Schools

To establish a deeper understanding of high school skilled trades education and attitudes about it, Harbor Freight Tools for Schools commissioned two research projects with leading experts. We undertook this research because it did not exist; while there were a number of studies of CTE overall and labor market trends, a comprehensive look at the state of skilled trades education in U.S. public high schools had never been done.

First, we commissioned a 50-state landscape study by Jobs for the Future (JFF), based on both qualitative and quantitative data, including course and program information, student and teacher data and demographics, enrollment, and outcomes data, where available.[1] This landscape research yielded key findings, including:

- Our education system is not well aligned with labor market needs (and this is particularly acute in the HVAC, electrical and plumbing fields.)
- High school skilled trades education offers students high-value opportunities, not just in the context of their trade – through technical skills and work experience – but also academically, socially and personally.
- High school trades courses face looming teacher shortages, exacerbated by retirements of an aging workforce – significantly older than the median teaching age of 41.
- There is no clear and comprehensive national data on high school skilled trades education. Many state education departments do not reliably collect basic information that could tell us how many young people enroll in and complete skilled trades programs in high school.
- In spite of these challenges, there are still promising practices and islands of excellence across the country from which we can learn and build.

Harbor Freight Tools for Schools also commissioned a companion piece of opinion research from NORC at University of Chicago to survey students, parents and voters on their views on skilled trades education and careers.[2] The results were overwhelmingly positive and reflected a desire for greater support of and access to trades coursework in our nation's high schools – among all groups. Notable findings in this report included:

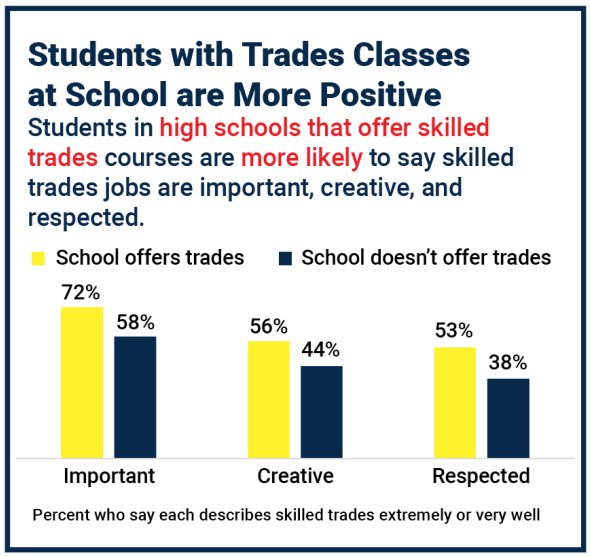
- Parents and voters want more skilled trades education in high school.
    - 83% of voters and 79% of parents said that school districts should make the funding of skilled trades education a high priority.

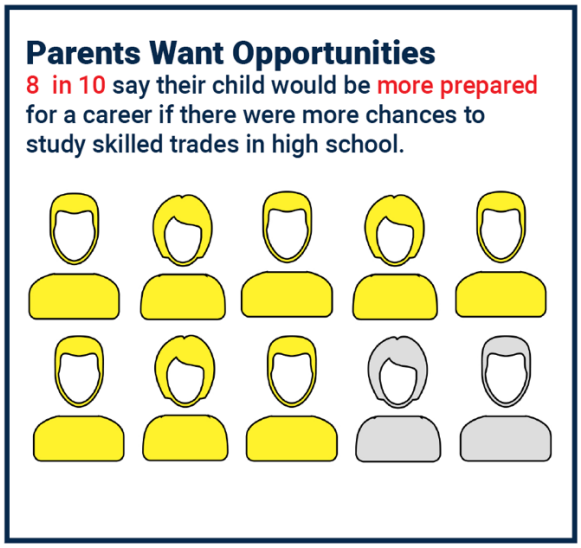
---

[1] JFF. (May 2020). *Breaking Ground: A First Look at American High School Skilled Trades Education.* https://hftforschools.org/wp-content/uploads/20.05.07-Breaking-Ground_Final-report-by-JFF-revised.pdf

[2] Harbor Freight Tools for Schools. (May 2020). *Skilled Trades in High School: What Voters, Parents and Students Want from Policymakers and Educators.* https://hftforschools.org/wp-content/uploads/20.05.08-NORC-poll.pdf

- 84% of voters think that their elected officials should be doing more to support skilled trades and hands-on learning in school, including 46% who think these officials should be doing “much more.”
- 8 in 10 parents say their children would be better prepared for a career if there were more chances to study skilled trades in high school.
- Students in high schools that offer skilled trades courses are more likely to say that skilled trades jobs are important, creative and respected.





<u>High School Skilled Trades Education benefits our students and our economy.</u>

We know that high school skilled trades education – and all types of high school CTE– are critical to our nation’s future. Our economic vitality rests on our ability to create a skilled workforce – highly-educated professionals to design, build and repair the very fabric of American life, from the roads we drive on to the homes we live in, to the electrical grid and energy sources that power it all. Even the simple act of turning on a light switch would not happen without the work of multiple trades professionals, and these jobs are not going anywhere.

Leaders in these industries will tell you that there is a serious shortage of skilled workers at this time, and the problem is only getting worse. A recent survey by the Association of General Contractors found that 88% of construction firms surveyed had trouble finding skilled workers.[3] The Bureau of Labor Statistics estimates that there will

[3] Associated General Contractors of America. (2023, September 25). *Survey Shows 88% of Construction Firms are Having a Hard Time Filing Vacancies, Reveals Flaws in Nation's Approach to Preparing Workers for Construction Careers.* [Press Release] https://www.agc.org/news/2023/09/25/survey-shows-88-construction-firms-are-having-hard-time-filing-vacancies-reveals-flaws-nations

be 73,500 job openings every year for electricians alone.[4] Retirements are exacerbating this problem. JFF's landscape research showed that among the 1.3 million annual openings in the trades, for each new job created, there are 15 openings due to replacements. The trades offer many engaging, fulfilling, family-supporting careers, and there are thousands of jobs available to those with cutting-edge skills and education.

Taking a trades class is not just beneficial to a student's future employment potential. High school skilled trades education leads to better educational outcomes and better experiences for high school students. JFF's landscape research showed that students who concentrate in skilled trades coursework are more likely to graduate high school than the national average, and a U.S. Department of Education study showed that CTE concentrators are more likely to enroll in post-secondary education than their peers.[5]

We have also seen that participation in CTE classes offers socio-emotional benefits that enhance students' experience of high school and their enthusiasm for learning. A survey of students in Sonoma County, California by YouthTruth found that students who participate in CTE classes or work-based learning are a full quartile more likely to report taking pride in their school work.[6] It also found that these students are more than twice as likely as those who don't take such classes to say that there is an adult at school they can talk to when feeling upset, stressed or having problems.

Obstacles to Widespread Availability of High School Skilled Trades Education

If high school skilled trades education yields such powerful benefits to both students and employers, why are excellent trades classes not available to every American student? A multitude of factors contribute to the shortage of these courses, but key obstacles include the following:

The college-for-all mentality has limited student options and created stigma around trades careers. While increasing the percentage of students with access to college is a laudable and necessary goal, it has had the unintended effect of closing off options for students who may choose to pursue a different path.[7] Often support for CTE pathways – particularly in the trades – is framed as an either/or proposition relative to college-going, but this is not the case. Many students who take trades and other CTE classes go on to attend college, armed with the technical and professional skills that high-quality CTE coursework provides. Nonetheless, not every young person

---

[4] Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Construction and Extraction. https://www.bls.gov/ooh/construction-and-extraction/electricians.htm#tab-6

[5] U.S. Department of Education. (2019 September). *Bridging the skills gap: Career and technical education in high school.* https://www2.ed.gov/datastory/cte/index.html

[6] YouthTruth. (2023). *Leading through Listening: Student and Community Voices in Sonoma County.* https://youthtruth.surveyresults.org/public/#/reports/65797/sections/2041867

[7] A recent survey by the ECMC Foundation found that 75% of students felt pressure to pursue a four-year degree, but that 63% were open to pursuing another path. ECMC Group. (June 2023). *"?uestion the Quo"* https://www.questionthequo.org/media/oj5p3gaz/question-the-quo-june-2023-report.pdf

wants to go to college, and many are worried about the significant debt they may incur by doing so. With such a rigid definition of success, achievement and value baked into our educational system, we miss many talented and creative young people who thrive with hands-on, project-based learning.

There is too little alignment among the K-12, post-secondary, workforce development and industry sectors. Often each of these sectors functions with its own directive: the K-12 system is geared towards traditional academic or "college-prep" coursework; potential industry partners are wary of high school-age apprentices and focus on adult potential employees; the trades are sometimes seen as the domain of the post-secondary education system, and not prioritized as opportunities for dual enrollment. Outstanding high school coursework is a critical part of the larger trades workforce development pipeline, and must be fully included in it.

Too few resources are directed to CTE and career-oriented learning. Decades into the College-for-All effort, six in 10 American adults still do not have a college degree. At the same time, spending on CTE makes up just three percent of the estimated overall funding for high school and middle school education in the United States.[8] Our state and federal funding frameworks must be significantly re-aligned to serve the nation's students and their futures.

There is an acute and increasing shortage of high school skilled trades teachers. As noted above, the JFF landscape research showed that a wave of high school trades teacher shortages loom, exacerbated by retirements of an aging workforce. While data on trades teachers is scarce, Harbor Freight Tools for Schools estimates that nearly a quarter of American skilled trades teachers plan to leave teaching or retire in the next three years. Outstanding trades education simply cannot happen without a great teacher, and we must urgently implement strategies to strengthen our nation's teacher pipeline. Promising practices in this area have included pay scales that honor industry experience, Grow-Your-Own teaching programs, and setting salaries competitive with local industries.

Promising Practices and Solutions

While significant obstacles exist in the quest to provide every U.S public high school student with access to outstanding skilled trades education, many promising practices have developed across the country. We have identified some of our nation's best teachers through the Harbor Freight Tools for Schools Prize for Teaching Excellence, and many of their programs demonstrate strategies to bring outstanding trades education to a wider audience.

[8] Wartzman, Rick. "'College for all' has failed America. Can the education system be fixed?" Fortune, December 14, 2023, https://fortune.com/2023/12/14/college-for-all-bachelor-degree-income-inequality/?mc_cid=6f517dc043&mc_eid=UNIQID

Integrating skilled trades and "traditional" academic coursework: The Geometry in Construction (GIC) program teaches students both skilled trades and geometry through the process of building affordable homes for families in need. Co-developed by prizewinning teacher Scott Burke in Colorado, the curriculum seamlessly integrates the two subjects through contextualized and project-based learning. Many of the students who take a GIC course have never enrolled in a trades class before, and teachers have reported that students in GIC courses perform better on standardized testing than their peers in traditional geometry classes. Over 700 schools nationwide have adopted the program, and Burke has also co-developed an "AMPED on Algebra" curriculum to apply hands-on learning in the trades to Algebra I.

Incorporating project-based learning to impart core concepts and teach professional skills: Roxanne Amiot has taught automotive repair in Bridgeport, Connecticut for 34 years. Her classroom is a live, licensed repair facility. Students work on customer vehicles in teams, learning every aspect of the professional process, from repairs to customer interaction and time management. Giving more teachers the flexibility to incorporate this type of real-life, work-based learning into their curriculum would give more students access to the experience, expertise, and professional skills they seek.

Work-based learning experiences provide concrete benefits to students and employers not available in school-based CTE programs. The Harbor Freight Fellows Initiative® was created by Big Picture Learning in 2016 to offer high school students interested in the skilled trades the opportunity to learn from professional mentors in authentic and real-world settings. Results of the 120-hour earn-and-learn program have included accelerated acquisition of both trades and professional skills, relationships that lead directly to further educational opportunities, immediate hiring of high school graduates, and a deeply satisfying experience for workplace mentors.

Expanding opportunities for dual enrollment and college credit to give CTE students a head start on post-secondary education and careers: Cesar Gutierrez teaches precision manufacturing at Tucson, Arizona's Desert View High School, where students can receive up to 25 college credits—nearly a full year of school—toward their associate degree in industrial technology, thanks to a dual enrollment partnership with Pima Community College. Gutierrez's program was built in part to address local employer concerns that prospective employees in the defense and aerospace industries were in short supply, and many of his former students have continued on into the field.

Leveraging out-of-school hours, flexible schedules and summer learning to give students more access to hands-on learning: Troy Reichert of Guernsey, Wyoming created the "Sunrise Wyoming Project" summer camp to teach high school students construction skills by revitalizing historic sites in Sunrise, once a thriving mining town. Students refurbished the oldest YMCA in Wyoming, earning industry-recognized credentials and meeting construction experts in the process. In Los Angeles County,

Harbor Freight Tools for Schools supports six summer programs where students can earn high school and college credit, valuable industry credentials, and a summer wage. In Phoenix, students at Western Maricopa Career Center (West-MEC) spend half their days taking traditional academic classes at their home high school, and half accessing cutting-edge CTE classes in the trades, public safety, medical and other in-demand fields. While trades coursework should be an integral part of the traditional school day, educators and policymakers should support innovative models that reach students when and where they can.

Thank you for the opportunity to discuss the pressing need to advance skilled trades education across the country, and I look forward to responding to your questions.