ATTRACTING THE NEXT GENERATION WORKFORCE

The Role of Career and Technical Education

MANUFACTURING Institute

ERCA
Educational Research Center of America

SkillsUSA

ABOUT THE PARTNERS

The Manufacturing Institute is the 501(c)(3) affiliate of the National Association of Manufacturers. As a non-partisan organization, the Institute is committed to delivering leading-edge information and services to the nation's manufacturers. The Institute is the authority on the attraction, qualification and development of world-class manufacturing talent.
http://www.themanufacturinginstitute.org

SkillsUSA improves the quality of America's skilled workforce through a structured program of citizenship, leadership, employability, technical and professional skills training. SkillsUSA enhances the lives and careers of students, instructors and industry representatives as they strive to be champions at work.
http://www.skillsusa.org

Educational Research Center of America is a not-for-profit research organization committed to helping high school students and their families consider all of their future options, including community colleges, four-year institutions, vocational opportunities, and career choices.
http://www.studentresearch.org

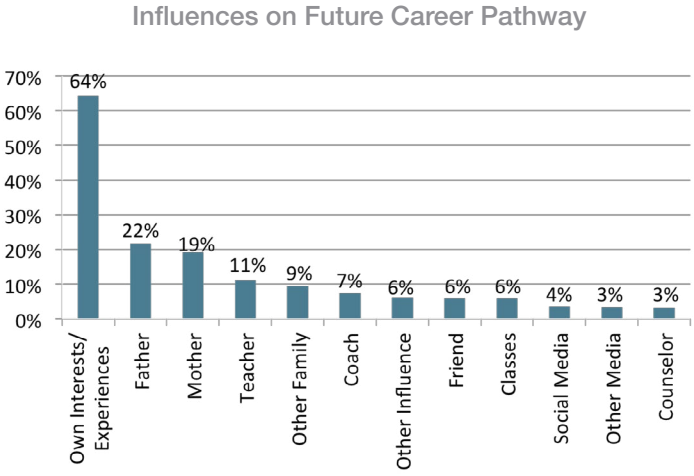
KEY FINDINGS

The Manufacturing Institute, in partnership with **SkillsUSA** and the **Educational Research Center of America**, produced a survey to identify the characteristics of experiences that impact student career choices. The purpose of the survey is to inspire dialogue between parents, educators, counselors and students, with the goal of better aligning programs and services with students' needs and preparing them for careers ahead.

The study provides insight into students' perceptions of the value of Career and Technical Education (CTE) preparation and influences on career choices. The findings serve to inform industry-driven strategies to attract the next generation workforce.

STUDENTS

A simple question that nearly all industries ask when designing strategies to attract the next generation workforce is: How do young people make career decisions? There is such a wealth of information available to kids today; what is it that most influences the future direction and career choices of high school students? There are guidance counselors, whose job description is to advise students. There are parents, whose advice teenagers ignore more often than not. And there are peers, which in the age of social media, many believe are the greatest priority of and have the most influence over students. But as the parent of any teenager can attest, they are their own person.



So it should come as no surprise that a large majority of high school students (64%) report that the greatest influence on their future careers is their own experiences and interests. This is followed by their father and mother (22% and 19% respectively) and their teachers (11%). Interestingly, some of the least important influences were places where they seemingly spend the most time, social and other media (4% and 3% respectively). And finally, in a signal that perhaps college and career counseling services need to be rethought, guidance counselors are the least important influence on a student's career choice (3%).

An overwhelming number of students identified personal experiences as having the greatest influence over their career decisions.

This data aligns with results from the ***2015 Public Perception of Manufacturing Report***, by The Manufacturing Institute and Deloitte, which found that individuals who are familiar with manufacturing are more than twice as likely to recommend or pursue a career in the industry.

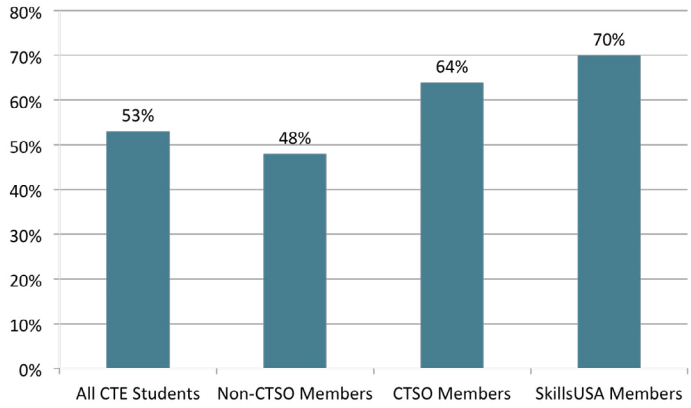
Knowing that personal experience plays such a big role in the career decisions of the next generation, The Manufacturing Institute runs a student engagement program called **Dream It. Do It.** Dream It. Do It. works to change the perception of the industry and inspire next-generation workers to pursue manufacturing careers by providing real-world manufacturing experiences.

So the challenge is clear: offer students greater opportunities to experience manufacturing and develop a familiarity with the industry. One way for students to gain that experience is through a Career and Technical Student Organization (CTSO) such as SkillsUSA. CTSOs provide students with a hands-on, project-based learning opportunity in a technical field, and teams from individual schools often participate in state, national, and even international competitions.

This survey found that only 31% of students enrolled in CTE courses participate in a CTSO activity. The following charts show that CTSO participation had a significant impact on their grade point average and career outlook.

Participation in CTE Improved Your GPA?

Percentage of Students Saying "Yes"



Grade Point Average (GPA) is the most immediate measure of the attainment of skills in high school and has a demonstrated correlation with future success. In a strong endorsement of career and technical education, 53% of students believe that their participation in CTE improved their GPA. But the effect on CTSO students was even greater with 64% of CTSO students (and 70% of SkillsUSA students) reporting an improved GPA because of their participation in CTE activities.

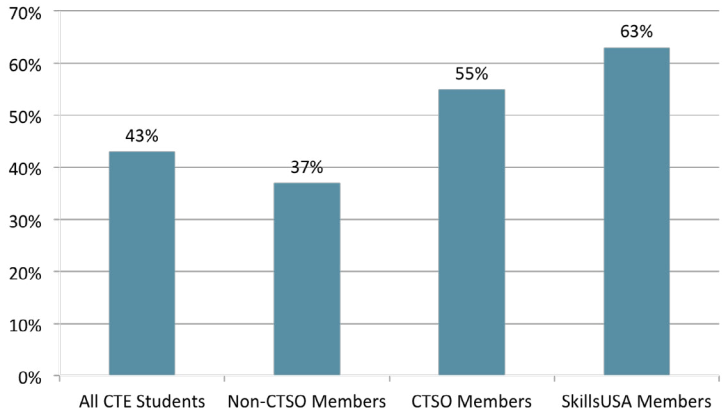
Over 50% of students believe career and technical education improves their grade point average.

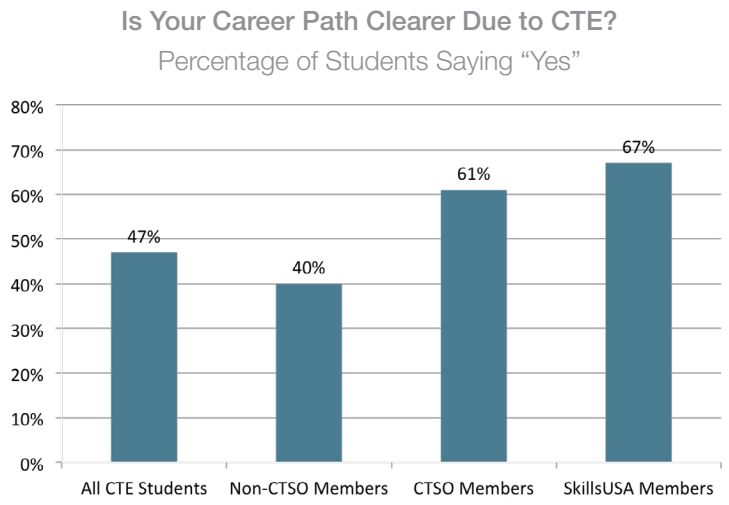
When considering what field to pursue a career, 43% of all CTE students indicated they plan to purse a career in their CTE field of study. However, for students that participate in CTSOs, 55% plan to pursue a career in their field of study. And this rises to 63% for participation in SkillsUSA. In comparison, only 37% of CTE students not participating in CTSO activities will pursue a career in their field of study.

Students engaged in career and technical student organizations (CTSO) and activities are almost 50% more likely to pursue a technical career.

Do you plan to pursue a career in the CTE field you are studying?

Percentage of Students Saying "Yes"



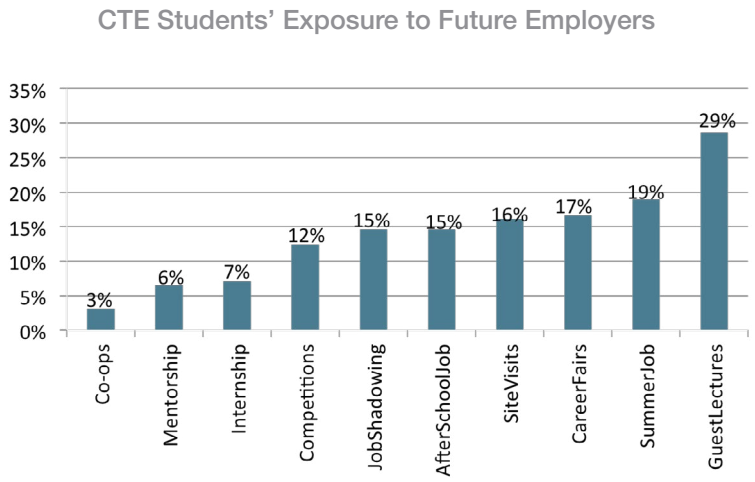


A similar pattern can be found in the response to the question about whether the career path is clearer due to CTE. 61% of CTSO students (and 67% of SkillsUSA students) believe that their career path is clearer due to CTE while only 40% of non-CTSO students believe that to be the case.

The impact of CTSO participation, as seen in these results, should encourage a greater number of schools and students to participate in CTSO activities.

CTSO is not the only way to gain experience and familiarity with the industry though. Direct participation with local companies through summer jobs, internships, or co-op study programs provide students with the immediate benefits of learning in an on-the-job environment while also providing companies with the benefit of discovering future employees. Unfortunately, very few students have enjoyed direct experiences with local employers.

Less than 10% of students experienced internships, mentorships or cooperative education programs.



Fewer than 20% of CTE students have participated in summer jobs, job shadowing, and site visits, and fewer than 10% have done internships or co-op study programs or benefited from industry mentors. This last figure is particularly troublesome because the ***2015 Public Perception of Manufacturing Report*** found that internships and work-study programs were the best way to increase interest in manufacturing.

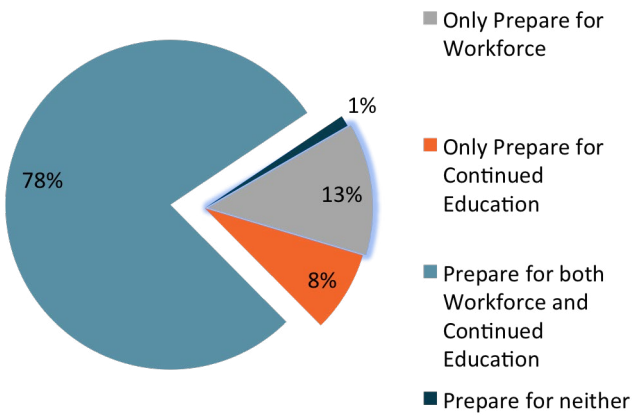
These responses demonstrate the need for greater involvement by local companies in the career and technical education programs of the area high schools. At a time when the large majority of manufacturers are reporting a significant skills gap, the opportunity to engage with students in programs delivering manufacturing skills should not be missed.

Knowing how critical personal experience is to students, employers must seek new ways to engage the next generation. The Manufacturing Institute's Dream It. Do It. network has created an **Ambassador program** to provide manufacturers with all they need to begin engaging their future workforce and expose more students to careers in manufacturing.

EDUCATORS

While students are learning valuable workplace skills in career and technical education programs, many jobs in today's economy require credentials beyond a high school diploma. The general perception of CTE programs though is that such programs are tailored for students directly entering the workplace out of high school and that those programs do not prepare students for postsecondary education.

Most CTE Teachers Say CTE Prepares Students for Workforce and Continued Education

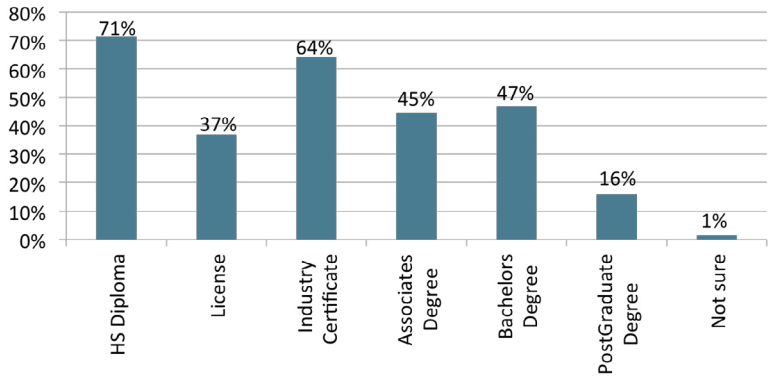


This study asked CTE teachers whether this perception was accurate and nearly 80% of them reported that today's CTE classes prepare students for both the workforce AND postsecondary education. With better marketing to parents and students about this dual preparation, it may be possible to greatly increase the number of students participating in CTE activities. This would present a far greater number of career opportunities to students while still preserving the full array of postsecondary education options.

CTE education allows students to forge their own path, whether that is continued education or entering the workforce.

Educators note that after graduating high school, industry certificates are the most valuable educational credential.

CTE Teachers Differ Over Which Educational Credentials Are Most Valuable to Students for Beginning their Careers



In recent years, a great amount of attention has been given to industry-based credentials. Employers have begun to use them as verification of skills attainment and schools have begun to incorporate them into their standard courses. This increased attention is reflected in the opinions of CTE teachers who now view an industry certificate as the most valuable postsecondary credential for students beginning their careers. It also aligns with the ***2015 Public Perception of Manufacturing Report***, which found that certification programs are second best way to increase interest in manufacturing behind internship programs.

The manufacturing sector has seen an over 100% increase in the number of technical credentials issued by **NAM-endorsed partners** in the last five years and the Manufacturing Institute has created an **M-List** to recognize those schools that offer industry credentials as a standard part of their course curriculum. 180 schools are currently on the M-List.

RECOMMENDATIONS

1. **Offer students greater opportunities to experience manufacturing and develop a familiarity with the industry.**
2. **Encourage more schools to participate in CTSO programs such as SkillsUSA.**
3. **Engage manufacturing companies in high school career and technical education programs.**
4. **Integrate industry credentials into the career and technical education programs.**

METHODOLOGY

The survey was conduced between March-May, 2015, in-class with students and teachers. In total, 23,086 high school students and 747 high school teachers responded.

Students participating in the survey were enrolled in at least one Career and Technical Education program of study.

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