Written Testimony of Mimi Lufkin
Chief Executive Officer
National Alliance for Partnerships in Equity (NAPE)

Before the Subcommittee on Early Childhood, Elementary and Secondary Education
House Committee on Education and the Workforce
United States House of Representatives
Hearing: ***Providing More Students a Pathway to Success by Strengthening Career and Technical Education***

February 28, 2017
2175 Rayburn House Office Building
National Alliance for Partnerships in Equity

www.napequity.org
mimilufkin@napequity.org
717-407-5118 (office)
610-761-9000 (cell)

Good morning and thank you Chairman Rokita, Ranking Member Polis and members of the Subcommittee [as well as Chairwoman Foxx and Ranking member Scott] for the opportunity to testify before you today to discuss the important issue of ***Providing More Students a Pathway to Success by Strengthening Career and Technical Education***.

My name is Mimi Lufkin, Chief Executive Officer for the National Alliance for Partnerships in Equity (NAPE).

The National Alliance for Partnerships in Equity is a 501c3 consortium of state educational and affiliate agencies providing national leadership for equity in education and workforce development. NAPE supports the work of state and local educators throughout the nation in carrying out the equity and special population provisions in the Carl D. Perkins Career and Technical Education Act as well as other education and workforce development legislation.

As a former agriculture educator and teacher educator, I know firsthand the value and difference that career and technical education (CTE) opportunities makes in the lives of young people. I wholeheartedly believe that CTE has been and will continue to be a game changer for education in America.

Nationwide, some 13 million students are enrolled in CTE programs. It is no secret that CTE is helping our nation meet the very real and immediate challenges of a rapidly changing, global economy. CTE programs in secondary and postsecondary institutions are developing America's most valuable resource—its people; helping them gain the skills, technical knowledge, academic foundation and real-world experience they need to prepare for high-skill, high-demand, high-wage careers—and keep America working—in every sense of the word.

CTE is generating higher personal income through lifelong education and preparation for high-skill, high-demand and high-paying positions. CTE provides a positive return on investment for both students and the economy. Students who earn a CTE-related associate's degree or certificate can make an average of $9,000 more per year that their peers who graduate with a humanities or social science focus. For high-demand fields such as healthcare, students can make $20,000 more per year.[1] Students in postsecondary CTE programs are more likely to be employed within five years than those in an academic field of study. Armed with technical knowledge, employability skills and an industry-recognized credential in their field of study, CTE students are finding success in the workplace and employers are recognizing the value being added to their companies.[2] It all adds up to a better education, better prepared workforce—and that means a more robust economy across the entire nation.

---

[1] http://files.eric.ed.gov/fulltext/ED504078.pdf

[2] https://nces.ed.gov/surveys/ctes/tables/B03.asp

Early evidence shows that students engaged in high-quality CTE, like programs of study, do have higher achievement in academic subjects, such as English.[3] In Indiana, CTE concentrators scored 10 percentage points higher on state Algebra exams when compared to all students.[4] Between 1990 and 2009, the percent of CTE students completing a "college-prep" curriculum increased significantly. In fact, graduates who took between two and four CTE courses were the most likely to complete a college-prep course load. Sixty percent of those CTE students completed a college-prep curriculum compared to 56 percent of all high school graduates.[5]

Students who participate in CTE are also more likely to graduate from high school.[6] The high school graduation rate for CTE concentrators is about 93 percent, approximately 10 percentage points higher than the national average.[7] A 2013 study from Mississippi State University found that students taking any CTE course graduated at a rate of 77.5 percent. CTE students in Career Pathways graduated at a rate of 81.1 percent. Both graduation rates were "considerably higher than the state-reported graduation rate of 73.7 percent for all high school students."[8]

A 2016 study of Arkansas students by the **Thomas B. Fordham Institute** found that *"the more CTE courses students take, the better their education and labor outcomes,"* and that, "[CTE] concentrators are 21 percentage points more likely to graduate from high school than otherwise identical students." The study also found that after high school, CTE concentrators are "more likely to be employed... have higher average quarterly wages… [and are] more likely to be enrolled in a two-year college than similar, non-concentrators.[9]

Too often, there is a false choice between being "college" ready and being "career" ready. With more than two thirds of jobs requiring education and training beyond high school, the reality is that post-secondary education is now a part of any student's career pathway.[10] Many CTE programs across the country are utilizing dual enrollment options for students to boost student engagement, performance and post-secondary transition. Dual enrollment is when a high school student takes a credit-bearing postsecondary course, be it on a college campus, within a high school taught by college faculty or a high school teacher who qualifies as a college adjunct, or online through distance education. One study of CTE students in **Florida** taking dual enrollment

---

[3] http://www.nrccte.org/sites/default/files/publication-files/nrccte_mature_pos_final.pdf
[4] http://www.doe.in.gov/sites/default/files/cte/2015-cte-data-analysis-report-final-6.23.2015.pdf
[5] http://s3.amazonaws.com/PCRN/docs/NACTE_FinalReport2014.pdf
[6] http://s3.amazonaws.com/PCRN/docs/NACTE_FinalReport2014.pdf
[7] https://s3.amazonaws.com/PCRN/uploads/Perkins_RTC_2013-14.pdf
[8] https://www.rcu.msstate.edu/Portals/0/Reports/Graduation%20Rates%20and%20Contributing%20Factors%20in%20CTE%20Students%20versus%20Traditional%20Academic%20Students_rev%2011-19-13.pdf
[9] https://edexcellence.net/publications/career-and-technical-education-in-high-school-does-it-improve-student-outcomes
[10] https://georgetown.app.box.com/s/dq4fqvuid4oui7rp8u8k

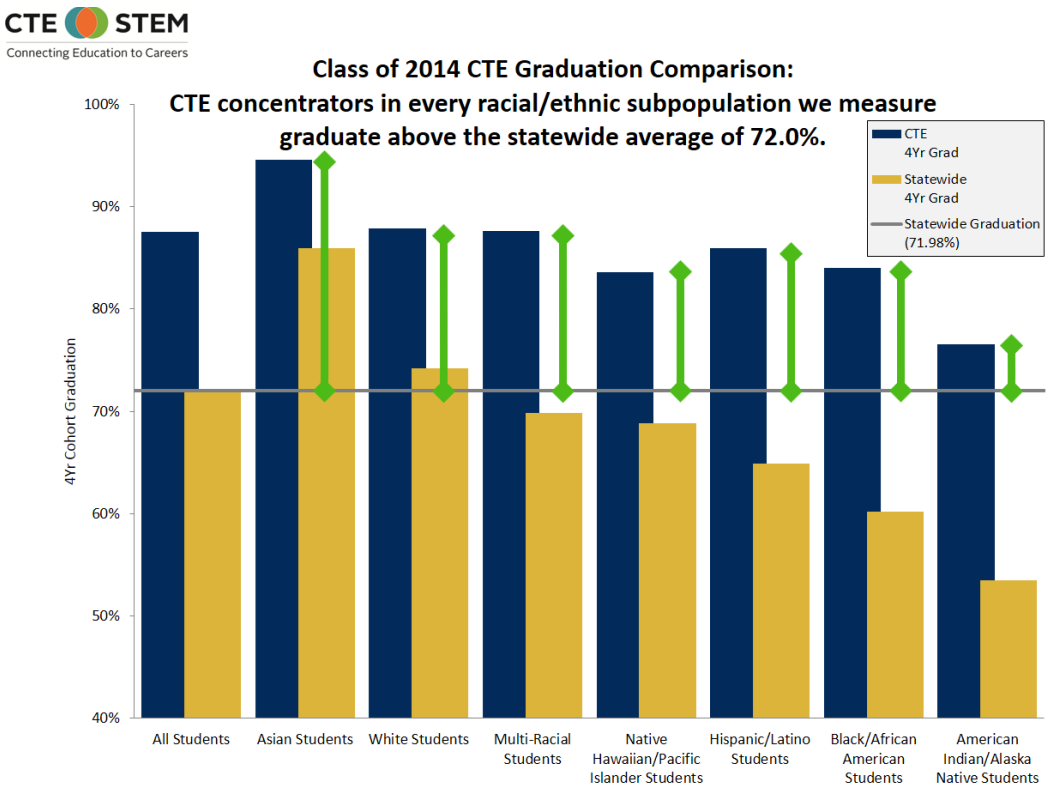
courses found that they were more likely to attend postsecondary institutions (72 percent of dual enrollment students compared to 50 percent for non-dual enrollment CTE students) and persist to their second term.[11] Many states, districts and/or institutions cover most or all of the cost of dual enrollment participation. In **Indiana,** the **Ivy Tech Community College** (the statewide community college system) estimated savings of $14.1 million in tuition costs based on the 2011-12 enrollment of over 29,000 high school students in dual credit courses.[12]

Numerous studies have shown that workforce diversity increases business financial performance and innovation. In a recent study by MIT, economists found that gender balance in a company's workforce leads to roughly 41% higher returns.[13] [14] Workforce diversity has proven to increase the capacity of groups of individuals to solve problems, be more diligent, work harder and be more innovative.[15] CTE plays a critical role in creating a skilled workforce and therefore a more diverse workforce. Since its reauthorization in 1972, The Perkins Act (then the Vocational Education Act) has contained provisions supporting disadvantaged students and special populations access and success in CTE programs. As a result, CTE programs of study have provided successful college and career readiness avenues for special population students (low income students, students with disabilities, English language learners, single parents, displaced homemakers and students pursuing nontraditional careers).

The National Dropout Prevention Center/Network has identified CTE as one of 15 strategies with the most positive impact on the dropout rate.[16] Attendance in a CTE program more than doubles the rate of college entrance for minority students.[17] Minority students in CTE also report higher academic engagement than their White counterparts.[18] In the graduating class of 2014, Oregon CTE concentrators were 15.5 percentage points more likely to graduate high school in four years than were students statewide. The graph below shows that Oregon CTE concentrators across every racial/ethnic student population graduated at levels higher than the statewide average of 72.0 percent and the increase in graduation rates for CTE concentrators is greatest for historically underserved students.[19]

---

[11] http://ccrc.tc.columbia.edu/media/k2/attachments/dual-enrollment-research-overview.pdf
[12] http://www.in.gov/icc/files/Career_Council_CC_Best_Practices_Recommendations-Final.pdf
[13] http://news.mit.edu/2014/workplace-diversity-can-help-bottom-line-1007
[14] http://economics.mit.edu/files/8851
[15] https://www.scientificamerican.com/article/how-diversity-makes-us-smarter/
[16] http://dropoutprevention.org/effective-strategies/#CTE
[17] *A Model for Success: CART's Linked Learning Program Increases College Enrollment, Irvine Foundation 2011*
[18] http://www.nrccte.org/sites/default/files/external-reports-files/fulltext.pdf
[19] https://www.oregonlegislature.gov/dembrow/WGitemsyouthEmployment/5-26%20CTE%20Achievement%20Gap%20in%20Oregon.pdf



Increasing access to high quality CTE programs for every student, especially for underrepresented students, must be a priority in federal policy. Increasing the diversity of students who experience the positive outcomes of CTE will provide businesses with the diverse workforce they are desperate for.

There is however much work that still needs to be done in CTE to meet businesses demand for a diverse workforce so they can see the benefits that a diverse workforce brings. By 2024 employers need to fill more than 2 million middle-skill jobs, those that require less than a baccalaureate degree. These jobs are in information technology, manufacturing, and transportation, distribution and logistics - all fields that are critical to the health of our nation's economy and security. Only 11 percent of the workers in these fields are women.[20] In the 2014-15 school year women represented only 23 percent of IT concentrators, 12 percent of manufacturing concentrators, and 9 percent of transportation, distribution and logistics concentrators in postsecondary CTE programs. In addition, men represent only 19% of concentrators in health careers programs.[21] These high demand fields experiencing worker shortages, especially in middle skill jobs, cannot afford to not have half the population as potential members of their workforce pool.

[20] http://womenandgoodjobs.org/app/uploads/2016/03/Middle-skills_layout-FINAL.pdf
[21] https://perkins.ed.gov/pims/DataExplorer/

The outcomes of CTE students are exceptional and continue to be on of the best kept secrets in education today. CTE is no longer the "shop" programs of your grandparents time, but are highly technical programs that promote college AND career readiness for students. The transformation of vocational education to career and technical education and the outcomes I just described have been driven by the provisions in the Carl D. Perkins Career and Technical Education Act (Perkins Act) and the visionary work being done by states in implementing those provisions and supporting innovative programs at the state and local level. Provisions that encourage dual enrollment, development of programs of study, providing supportive services for special population students and focusing on high skill, high wage and nontraditional career fields have all been part of the changes that are making CTE students so successful. This national "vision" for the transformation of CTE is a critical part of what the Perkins Act provides.

CTE is for Every Student

Through federal guidance around Special Populations within the current Perkins Act, states are required to monitor the recruitment, retention, and program completion through disaggregated data of identified student groups. Largely, these student groups are traditionally underserved and underrepresented in various industries and career occupations. This equity assurance speaks to the vitality of diversity in the American workplace.

I would like to highlight some exceptional work being done in a few states to increase student access and success in CTE and meet the needs of a diverse workforce.

Oregon Program Improvement Process for Equity (PIPE) is a collaborative project of the National Alliance for Partnerships in Equity funded by the Oregon Department of Education and the Higher Education Coordinating Commission - Office of Community Colleges and Workforce Development. PIPE is based on practical yet rigorous methods and tools that are used to guide state and local efforts to improve access, equity, and diversity in nontraditional occupations and CTE and STEM fields. Through a five-step process PIPE engages teams of administrators, teachers, and counselors in conducting a student data-based performance gap analysis, identifying root causes for the gaps, and then moving on to developing an action plan based on research-based strategies proven to close the identified gaps.

Douglas Education Service District in Roseburg, OR participated in PIPE training resulting in an increase in enrollment of girls in their welding program from four in Fall 2015 to 38 in Spring 2016. They were able to sustain this growth with 36 girls enrolling in welding in Fall 2016. In addition to the impact on students, the PIPE process really changes educators knowledge and skills to implement effective policies and practices that change the culture of schools to be more inclusive. Dr. Analicia Nicholson, leader of the PIPE team says "I just wanted to say "thanks". I've participated in two meetings this week that the conversation would have been different if NAPE wasn't a part of my mindset/thinking/knowledge base. Both meetings were attempting to develop strategies for MORE students to graduate. Both meetings were focused on solutions for

career training and exploration. Because of NAPE's research and your impact on my thinking, I was able to redirect the conversation from "guesses" or "I think" to here's what the research says about "why" this solution may work for young men and not young women. The research's accessibility paired with strategies that work, moves conversations along quicker and helps groups make better decisions for kids. A favorite quote of mine by Dr. Rick Rigbys is, 'make an impact, not an impression'. You and NAPE have done so."

Colorado has also been working with NAPE to implement professional development for CTE educators focused on increasing the participation and completion of students in nontraditional CTE programs. The state participated in NAPE's National Science Foundation funded STEM Equity Pipeline projected where teams of educators from secondary and community colleges implemented the Program Improvement Process for Equity in STEM. These teams identified the root causes and implemented research-based strategies the were specific to the participation and performance gaps found in STEM-related CTE programs through a thorough performance gap analysis. Teams looked at gaps based on gender, race/ethnicity, socioeconomic status, disability, English language proficiency and other demographic characteristics. For example, Otero Junior College (OJC - La Junta, Colorado) PIPE team has been successful in increasing their performance on the Perkins nontraditional measure above the state average and over the state's negotiated performance measure.

OJCs commitment to equity in CTE started nineteen years ago with a one day hands-on conference, called Girls in the Middle, for 6th, 7th and 8th grade girls to learn more about STEM careers. This program, in partnerships with the Air Force Academy, Colorado School of Mines, US Dept. of Interior, Office of Surface Mining, Reclamation and Enforcement, Colorado Workforce Center, and local sponsors has changed girls lives. For example, 19 years ago a student attended as a 6th grader - registered late and was put into the physical therapy pathway for the day even though at the time she said she wasn't interested in the field. She found out she loved it and is now a physical therapist. Another girl learned about dual enrollment while at the program, graduated from high school with 36 college credits and graduated from college in three years. She is now employed in the information technology sector.

Staff from the Colorado Department of Education and the Colorado Community College system have noticed, since their involvement in NAPE's programs, a significant increase in the number of requests for professional development and technical assistance focused on closing equity gaps in CTE. This work has impacted educators beyond CTE with initiatives being implemented with adult education providers, and educators working with out-of-school youth and opportunity youth. The staff have seen noticeable improvement in the policies and practices of community colleges that have participated in training. These changes have included more inclusive outreach practices, the hiring of equity staff, and improvement in the engagement of a more diverse student population.

In **Pennsylvania**, NAPE has been working with the Chester County Intermediate Unit (CCIU) implementing PIPE with teams at the three Technical College High Schools. For the first time last year CCIU has met its negotiated performance measure for nontraditional completion. The teams at each site implemented a variety of activities including: providing students with the opportunity to explore nontraditional programs; having a panel of nontraditional students talk with the counselors from the sending schools about their success; conducting professional development with teachers and implementing a targeted recruitment program. Hear from the CCIU students in this video at the CCIU Careers Have No Gender website - http://www.cciu.org/Page/1590

The **California** Joint Special Populations Advisory Committee is part of a joint effort between the California Department of Education and the California Community Colleges Chancellor's Office to promote equity and develop the academic, career and technical skills of secondary and postsecondary students from special populations who elect to enroll in career and technical education programs. The JSPAC 's mission is to promote equity and success in CTE for students from special populations by providing educators research based professional development, instructional strategies and resources. The JSPAC was instrumental in partnering with NAPE to implement PIPE with teams across the state.

A California participating teacher was looking to fill an instructional aide position in his auto technology program. After completing the training he chose to hire a highly qualified female applicant for the position. Over two years, the number of females in the program increased from 4 to 15. The teacher attributed the change to the hiring of the female aide, a decision he made because of what he had learned from participating in the PIPE professional development. (Anonymous response to evaluation interview). A team of teachers from Cordova High School, Cordova, CA participated in PIPE training in 2012-13 and focused their efforts on increasing female participation in their Project Lead the Way program. The Introduction to Engineering Design course in 2012-13 had four girls. After implementing their identified strategy fourteen girls enrolled in the course in 2013-14.

In **Ohio**, fourteen Career Technical Planning Districts (CTPD) teams were trained in PIPE with positive results. Some examples include: Whitmer Career and Technology Center in Toledo increase their Project Lead the Way (PLTW) (pre-engineering program) enrollment from 0 females to 9 in one year; Mansfield Senior High School started a PLTW program using equity outreach strategies and enrolled 40% females and 35% African Americans (boys and girls) in the first 9th grade class and the following years the 10th grade class had 43% females.; Morgan Local Schools increased the enrollment of boys in health sciences to 50%; and Cuyahoga Valley Career Center increased its female enrollment in drafting/architecture from 4% to 26% and its male enrollment in dental assisting from 4% to 21% .

These examples in Oregon, Colorado, Pennsylvania, California and Ohio are representative of

innovative CTE programs across the country that have been incentivized by the equity provision in the Perkins Act. I want to congratulate the House Education and Workforce Committee for its bipartisan commitment to equity in CTE by passing HR 5587, Strengthening Career and Technical Education for the 21st Century Act, in the 115th Congress. HR 5587 built on and strengthened many of the provisions in current law that support equity in CTE, including: the state leadership funds to assist eligible recipients in providing services supporting students pursuing nontraditional careers; accountability measures to increase student access and success in nontraditional careers; the disaggregation of data; the conduct of a comprehensive needs assessment at the state and local level to remove barriers for special population success in CTE; required uses of funds at the state and local level to ensure success of special populations in CTE; and the inclusion of a GAO study to evaluate the strategies being used to successfully assist underrepresented students in pursuing and completing programs aligned to high-skill, high-wage occupations; to name a few.

States play a critical role in leading the implementation of innovative and high quality CTE programs. The sharing of these best practices, providing technical assistance on the implementation of the Perkins Act, collecting and sharing disaggregated accountability and participation data, ensuring civil rights enforcement and conducting research are all critical roles that the federal government plays. In the past, the CTE community has benefited from the initiatives that the US Department of Education's Office of Career, Technical and Adult Education has led such as: the Data Quality Institutes; the Peer Collaborative Resource Network; and the Advancing Equity in CTE project to name a few. Our state members have also found the US Department of Education's monitoring visits to be valuable in highlighting successes and uncovering opportunities for improvement, particularly in regards to ensuring that the needs of special populations are being met. NAPE has benefited from access to national data on accountability measure performance and CTE concentrator and enrollment data disaggregated by gender, race/ethnicity and special population status as we work with states and local education agencies to close participation and achievement gaps. It is critical that the federal role be maintained in the Perkins Act to ensure that CTE continues to transform itself to meet the needs of business and a workforce competing in a global economy.

I encourage the committee to look carefully at the recommendations made by NAPE for the reauthorization of the Perkins Act and want you to know that we stand ready to provide you any assistance you need in understanding more about how these provisions in Perkins have been critical in continuing to provide the incentives and direction necessary to close equity gaps in CTE. Our nation needs every individual to be able to access high quality CTE programs that lead to occupations with a family sustaining wage and our nation's economy needs a diverse workforce to ensure we continue to be globally competitive and be the world leader in innovation.

Conclusion

Thank you to the members of this Committee for allowing me to testify before the subcommittee.

Please allow me to leave you with these final thoughts. The legacy of former House Education Committee Chairman, Carl D, Perkins of the great state of Kentucky is ever apparent today. Federal supports for education makes all of us stronger-- especially those in CTE.

CTE improves the return on our investment in education at the local, state and federal levels by developing a more highly-educated diverse workforce with better work-ready skills, technical expertise and problem solving skills.

I appreciate the opportunity to provide the Committee with an overview of the importance of strengthening and expanding high quality CTE and I welcome any questions you may have.