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EXAMINING SUCCESS IN VOCATIONAL EDUCATION

HEARING

BEFORE THE

SUBCOMMITTEE ON EDUCATION REFORM

OF THE

COMMITTEE ON EDUCATION
AND THE WORKFORCE
U.S. HOUSE OF REPRESENTATIVES

ONE HUNDRED EIGHTH CONGRESS

SECOND SESSION

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EXAMINING SUCCESS IN VOCATIONAL EDUCATION

Tuesday, April 27, 2004
U.S. House of Representatives
Subcommittee on Education Reform
Committee on Education and the Workforce
Washington, DC

The Subcommittee met, pursuant to call, at 1:07 p.m., in room 2175, Rayburn House Office Building, Hon. Mike Castle [Chairman of the Subcommittee] presiding.

Present: Representatives Castle, Osborne, DeMint, Woolsey, Davis of California, and Grijalva.

Staff Present: Kevin Frank, Professional Staff Member; Alexa Marrero, Press Secretary; Stephanie Milburn, Professional Staff Member; Krisann Pearce, Deputy Director of Education and Human Resources Policy; Alanna Porter, Legislative Assistant; Whitney Rhoades, Professional Staff Member; Deborah L. Samantar, Committee Clerk/Intern Coordinator; Denise Forte, Minority Legislative Associate/Education; Joe Novotny, Minority Legislative Assistant/Education; and Lynda Theil, Minority Legislative Associate/Education.

Mr. CASTLE. Good afternoon. A quorum being present, the Subcommittee on Education Reform of the Committee on Education and the Workforce will come to order.

We are meeting today to hear testimony examining success in vocational education, and this is basically the startup on hearings on this leading to a markup later, probably next month.

Under Committee rule 12(b), opening statements are limited to the Chairman and Ranking Minority Member of the Subcommittee. If other Members have statements, they may be included in the hearing record.

With that, I ask unanimous consent for the hearing record to remain open 14 days to allow Members' statements and other extraneous material referenced during the hearing to be submitted in the official hearing record. Without objection, so ordered.

STATEMENT OF HON. MICHAEL N. CASTLE, CHAIRMAN, SUBCOMMITTEE ON EDUCATION REFORM, COMMITTEE ON EDUCATION AND THE WORKFORCE

Thank you for joining us today to hear testimony on successful vocational and technical education programs supported by the Carl

D. Perkins Vocational and Technical Education Act. Today's hearing provides the opportunity to examine the implementation of the reforms from the 1998 reauthorization, particularly the academic and technical integration highlighted in the law. This is our first hearing on vocational and technical education as we look toward reauthorization of the Perkins Act.

The Perkins law provides Federal assistance for secondary and postsecondary vocational and technical education programs at the high school level and at less than 4-year postsecondary institutions. The program provides one of the largest amounts of Federal investment in our Nation's high schools and is a key component of our efforts to provide opportunities for youth and adults to prepare for the future by building their academic and technical skills.

During today's hearing, we are focusing on the successes the law has fostered at both the secondary and postsecondary level. Progress has been made since the 1998 reauthorization of the Perkins Act in modernizing vocational and technical education programs by creating an initial performance accountability system and strengthening the focus on academic performance among participating students. Whether a student progresses directly to the workforce or goes on to an institution of higher education, it is imperative they have a strong academic base.

According to the Southern Regional Board, students completing a rigorous academic core of courses, coupled with vocational and technical education, have test scores that are equal to or higher than those of students identified as taking only college preparatory coursework. Vocational and technical education students also are more likely to pursue postsecondary education, have higher grade point averages in college, are less likely to drop out in the first year, and have better employment and earnings outcomes than other students.

However, we know that the education supported through the Perkins Act needs to reflect the changing reality of our dynamic economy. Technology and economic competition are combining in unprecedented ways to change education and work and redefine the American workplace. Unlike jobs a half century ago, many of today's jobs demand strong academic and technical skills, technological proficiency, and education and training beyond high school. Reinforcing this point, Federal Reserve Chairman Alan Greenspan reiterated during a recent full Committee hearing the importance of the "provision of rigorous education and ongoing training to all members of our society."

Today, we begin the process of hearing from individuals who have helped transform vocational and technical education. We will be hearing from three school districts that will provide us with lessons of how to achieve integration at the local level. In addition, we will hear from a technical and community college to learn how the school has partnered with the area secondary schools. Finally, we will hear from a business representative to learn about industry's efforts to partner with secondary and community colleges.

Our challenge during reauthorization of this act will be to ensure that all students pursuing vocational and technical education are academically prepared for either postsecondary education or employment of their choice. We hope to learn of promising practices

and how your institutions have used the reforms of the last Perkins reauthorization to achieve your successes. In addition, I am sure you will provide us with useful insight on additional Federal changes. Thank you for joining us.

I will now yield to Congresswoman Woolsey for any opening statement she may have.

[The prepared statement of Mr. Castle follows:]

Statement of Hon. Michael N. Castle, Chairman, Subcommittee on Education Reform, Committee on Education and the Workforce

Good afternoon. Thank you for joining us today to hear testimony on successful vocational and technical education programs supported by the Carl D. Perkins Vocational and Technical Education Act. Today's hearing provides the opportunity to examine the implementation of the reforms from the 1998 reauthorization, particularly the academic and technical integration highlighted in the law. This is our first hearing on vocational and technical education as we look toward reauthorization of the Perkins Act.

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I will now yield to Congresswoman Woolsey for any opening statement she may have.

STATEMENT OF HON. LYNN C. WOOLSEY, RANKING MEMBER, SUBCOMMITTEE ON EDUCATION REFORM, COMMITTEE ON EDUCATION AND THE WORKFORCE

Ms. WOOLSEY. Thank you, Mr. Chairman. I look forward to working with you on this and the Members of the Subcommittee to reauthorize the Carl Perkins Vocational and Technical Education Act.

The Perkins Act is one of the best investments we can make in American youth and in the American economy. As we go along, I am going to be fighting very hard that we keep WEIE, Women's Equity in Education, included in our reauthorization, not only because it is good for women, but in memory of Patsy Mink, who was our hero on that.

When the first Federal Vocational-Technical Act was signed into law in 1917, its stated purpose was to give young adults an opportunity for better careers and to ensure America's continuing ability to compete economically in the world marketplace. Close to 90 years later, with all of the changes that have taken place both in the American workplace and in the global market, these same goals must continue. They have to be the primary goals of vocational and technical education for our country.

While I certainly support efforts to increase academic achievement for all students, we must not sell short the goals and accomplishments of good vocational and technical education programs, programs which just do not prepare students for jobs, but also prepare them for careers. Good vocational and technical programs give students the education they need to enter high-skilled, high-wage careers, the kinds of careers that are essential to a strong American economy.

When a vocational education program is working well, students do not have to choose between learning academics and learning skills, because they actually learn both. A study evaluating California's career academy programs found that the students who participated actually had a greater increase in their academic knowledge than their counterparts in the general secondary education population.

In our efforts to improve public education, we cannot lose sight of the diverse interests and needs of American students. It is not a one-size-fits-all world. Not all students learn in the same way, and successful vocational education programs significantly reduce dropout rates, increase high school graduation rates, and increase the number of students who go on to postsecondary education, as well as going on to careers which actually pay a livable wage.

I look forward to hearing how our witnesses use Perkins funds to support technical and vocational education programs which meet their students' career and academic goals. I hope we will also hear some very good new suggestions on what we can do in this reauthorization to improve the Perkins Act, particularly ways that we can increase access to training for nontraditional careers and any other changes that we can make that will give more young Americans an opportunity to go and get the American dream.

I welcome all of you. I am anxious to hear your testimony. Thank you very much for coming.

[The prepared statement of Ms. Woolsey follows:]

Statement of Hon. Lynn C. Woolsey, Ranking Member, Subcommittee on Education Reform, Committee on Education and the Workforce

THANK YOU, MR. CHAIRMAN.

I LOOK FORWARD TO WORKING WITH YOU AND THE MEMBERS OF THE SUBCOMMITTEE TO REAUTHORIZE THE CARL PERKINS VOCATIONAL AND TECHNICAL EDUCATION ACT.

THE PERKINS ACT IS ONE OF THE BEST INVESTMENTS WE CAN MAKE IN AMERICAN YOUTH AND IN THE AMERICAN ECONOMY.

WHEN THE FIRST FEDERAL VOCATIONAL EDUCATION ACT WAS SIGNED INTO LAW IN 1917, IT'S STATED PURPOSE WAS TO GIVE YOUNG ADULTS THE OPPORTUNITY FOR BETTER CAREERS, AND TO ENSURE AMERICA'S CONTINUING ABILITY TO COMPETE ECONOMICALLY IN THE WORLD MARKETPLACE.

CLOSE TO NINETY YEARS LATER, WITH ALL THE CHANGES THAT HAVE TAKEN PLACE BOTH IN THE AMERICAN WORKPLACE AND THE GLOBAL MARKET, THESE MUST CONTINUE TO BE THE PRIMARY GOALS OF VOCATIONAL AND TECHNICAL EDUCATION IN THIS COUNTRY.

WHILE I CERTAINLY SUPPORT EFFORTS TO INCREASE ACADEMIC ACHIEVEMENT FOR ALL STUDENTS, WE MUST NOT SELL SHORT THE GOALS AND ACCOMPLISHMENTS OF GOOD VOCATONAL AND TECHNICAL EDUCATION PROGRAMS - PROGRAMS DON'T JUST PREPARE STUDENTS FOR JOBS BUT ALSO PREPARE THEM FOR CAREERS.

GOOD VOCATIONAL EDUCATION PROGRAMS GIVE STUDENTS THE EDUCATION THEY NEED TO ENTER HIGH-SKILL, HIGH-WAGE CAREERS – THE KINDS OF CAREERS THAT ARE ESSENTIAL TO A STRONG AMERICAN ECONOMY.

WHEN A VOCATIONAL EDUCATION PROGRAM IS WORKING WELL, STUDENTS DON'T HAVE TO CHOOSE BETWEEN LEARNING ACADEMICS AND LEARNING SKILLS, BECAUSE THEY LEARN BOTH. A STUDY EVALUATING CALIFORNIA'S CAREER ACADEMY PROGRAMS FOUND THAT THE STUDENTS WHO PARTICIPATED ACTUALLY HAD A GREATER INCREASE IN THEIR ACADEMIC KNOWLEDGE THAN THEIR COUNTERPARTS IN THE GENERAL SECONDARY SCHOOL POPULATION.

IN OUR EFFORTS TO IMPROVE PUBLIC EDUCATION, WE CANNOT LOSE SIGHT OF THE DIVERSE INTERESTS AND NEEDS OF AMERICAN STUDENTS. NOT ALL STUDENTS LEARN IN THE SAME WAY, AND SUCCESSFUL VOCATIONAL EDUCATION PROGRAMS SIGNIFICANTLY REDUCE DROP OUT RATES, INCREASE HIGH SCHOOL GRADUATION RATES AND INCREASE THE NUMBERS OF STUDENTS WHO GO ON TO POSTSECONDARY EDUCATION, AS WELL AS CAREERS.

I LOOK FORWARD TO HEARING HOW OUR WITNESSES HERE TODAY ARE USING PERKINS FUNDS TO SUPPORT VOCATIONAL AND TECHNICAL EDUCATION PROGRAMS THAT MEET THEIR STUDENTS' CAREER AND ACADEMIC GOALS. I HOPE THAT WE WILL ALSO HEAR SOME GOOD SUGGESTION ON WHAT WE CAN DO IN THIS REAUTHORIZATION TO IMPROVE THE PERKINS ACT, PARTICULARLY WAYS THAT WE CAN INCREASE ACCESS TO TRAINING FOR NON-TRADITIONAL CAREERS, AND ANY OTHER CHANGES WE CAN MAKE THAT WILL GIVE MORE YOUNG AMERICANS AN OPPORTUNITY TO GO FOR THE AMERICAN DREAM.

WELCOME, AND I LOOK FORWARD TO HEARING YOUR TESTIMONY.

Mr. CASTLE. Thank you, Ms. Woolsey.

We also thank Mr. Osborne, the vice chair of the Committee, and Mr. Grijalva and Mr. DeMint for being here as well. We look forward to a distinguished panel of witnesses.

I am going to start the introductions with the pride of Delaware, Ms. Sandy Walls-Culotta, who is the Principal of Sussex Technical High School located in Georgetown, Delaware.

Prior to her taking on the principalship 4 years ago, she was one of the three assistant principals at the school. Prior to joining Sussex Tech's administration, she was program coordinator, Principal of the School for Adolescent Special Education Students housed within the Sussex Technical School district.

In her spare time, she teaches career technical education courses for Wilmington College and works at schools throughout the country to help improve programs for their students.

Several of the witnesses here today are going to be introduced by Members. I will introduce Dr. White and then Ms. Woolsey will introduce Dr. Wong.

Dr. Roberta White is President and CEO of the Great Oaks Institute of Technology and Career Development in southwest Ohio. Dr. White taught for 17 years in suburban school districts outside Dayton and Cincinnati, Ohio. She sits on several national boards dealing with two of her major concerns: business education partnerships and vocational assessment. As Great Oaks' CEO since January of 2003, Dr. White has increased parent involvement, strengthened core academics and promoted collaborative partnerships with business and postsecondary institutions.

At this time, I yield to Ms. Woolsey to introduce the next witness on our panel.

Ms. WOOLSEY. Thank you, Mr. Chairman.

We have a pride in our community also, and his name is Dr. Carl Wong. Dr. Wong is the Superintendent of Schools for Sonoma County, California, one of the two counties that I represent north of the Golden Gate Bridge.

Sonoma County's public school system is comprised of 40 school districts with a combined student population of over 73,000. In this locally elected position, Dr. Wong provides county-wide leadership to support the success of the student schools and districts of Sonoma County.

I have worked with Dr. Wong for many years. In fact, Carl Wong was the Superintendent of the Petaluma High School District, where I lived for many years, before he was elected to the county position. He was well respected there, and he is well respected in his new position by educators and students alike.

He is terrific about letting my staff and me know when there is something we need to be doing to make vocational education better at the Federal level, and I so appreciate that.

Dr. Wong, thank you for making the effort to be here today. I know it was difficult, and I am pleased my colleagues will have the opportunity to benefit from your knowledge and your experience.

Mr. CASTLE. Thank you, Mrs. Woolsey.

Welcome, Dr. Wong.

Mr. DeMint will introduce our next witness, Dr. Barton.

Mr. DEMINT. Thank you, Mr. Chairman. We do have also here the pride of South Carolina, Dr. Tom Barton, a great friend of mine, legendary in our State for many reasons. Dr. Barton went to Clemson University where he played football under the legendary Frank Howard. He has been inducted into the South Carolina Athletic Hall of Fame. He completed his doctorate at Duke University and served in public education for years and was part of the early stages of development of Greenville Technical College. He is now the longest-serving president of a 2-year college in this country.

Tom Barton is known throughout the State. He has been given almost every award in the State from Person of the Year to Top Educator, and he has been a real innovator, most importantly in education. He has demonstrated, I think, as much as any other person, through the Greenville Tech institution how applied learning, career, contextual-type learning can teach academics in a better way.

He has been a major part of helping to develop the economy of the upstate of South Carolina by training workforces for new companies like BMW and Michelin that have moved in, and he has

done something that I think will set the pace in the rest of the State by actually starting a charter high school as a part of Greenville Tech. And the first graduating class of that high school had the highest exit exams of reading and writing in the school district, second in the State. One hundred percent of those students went on to college and many went on to their second year of college.

Through his innovation, we are seeing better ways to educate in higher education, but to take applied learning into high school and maybe even middle school someday to engage students in a way that we have not so far.

Dr. Barton, thank you for traveling up here. I am certainly looking forward to your testimony.

Mr. CASTLE. Thank you, Mr. DeMint.

Welcome, Dr. Barton.

Our final witness is Marie Zwickert who is the Area Academy Manager for the CISCO Networking Academy program for CISCO Systems, Inc., Ms. Zwickert manages the implementation of the CISCO Networking Academy program in the Northeast and Ohio Valley. She works with other secondary and postsecondary and other nonprofit educational entities to ensure their success relative to implementing the CISCO Networking Academy program.

Prior to her employment with CISCO Systems, Inc., Ms. Zwickert was the Assistant Director of Professional Development for Tri-Rivers Education Computer Association located in Ohio.

We welcome you also. You will be the cleanup hitter here.

Mr. CASTLE. Before the witnesses begin, let me tell you what will happen. You will each have 5 minutes. You will have a green light for 4 minutes, a yellow light for 1 minute, and then a red a minute thereafter. When the red light goes on, you might think about wrapping it up, and then each of us will have 5 minutes of questions and answers. So obviously we are looking for relatively brief answers to get in as many questions as possible. If we decide another round of questions is in order, we will go to it, but we will make that decision later.

I think you can sort of sense this is a relatively friendly hearing, and I say relatively because we never know what is going to happen. But you are all individuals who have succeeded in taking vocational education and producing students who are achieving. We want to know what the key to that success is, what have we done right and what do we need to change. We look forward to your testimony and will ask you some questions. Hopefully, you will get us off to a good start as we begin the reauthorization of an important piece of legislation.

Ms. Walls-Culotta, you may begin.

STATEMENT OF SANDRA WALLS-CULOTTA, PRINCIPAL, SUSSEX TECHNICAL HIGH SCHOOL, GEORGETOWN, DELAWARE

Ms. WALLS-CULOTTA. Thank you for your invitation to testify today.

I wish to provide to the Subcommittee with actual experiences from my school, Sussex Tech High School, to show how effective career technical education can make a significant difference for all students in their academic achievement when integrated with academics. I would like to emphasize that this type of educational pro-

gramming needs to continue so that all students are successful in meeting the requirements of No Child Left Behind.

Sussex Technical High School began as a shared-time vocational center in rural southern Delaware. The center's mission was to serve part-time students from seven independent feeder school districts. By the mid-1980's there were serious flaws. After 3 years of intensive planning through the utilization of frameworks provided by the National Center For Research in Vocational Education and the Southern Regional Educational Board's "High Schools That Work," the problem-laden shared-time concept was discarded. Sussex Tech became a High School That Works site, and followed that reform model. In September 1991, the center was changed to a comprehensive technical high school for students in grades 9 through 12.

The new school offers innovative concepts such as block scheduling, common planning for teachers, structured programs of study, career majors of strong and relevant college prep academic programs, and an integrated curriculum. Sussex Tech has been transformed from an area shared-time vocational school with declining student enrollment, low academic achievement, to a restructured clustered high school that offers students challenging integrated curriculum.

Today, Sussex Tech has more than 1,200 students, and at present, we have more than 300 students on the waiting list for next year's freshman class.

Sussex Tech was organized around four clusters, which provides a natural vehicle for students to develop specific skills in small learning communities. Similar career programs are grouped into technical clusters. The four clusters are automotive technologies, health and human services, communication and information technologies, and industrial engineering. Each student has a 3-year program of study that outlines their academic and technical coursework that is required for that particular cluster.

The clusters are managed by two managers, one being a technical teacher and one being an academic instructor. The cluster provides facilitation for ongoing improvement, implementation of the integrated curriculum, and instruction in overall school improvement. All clusters have a common planning time each day for the teachers to gather to discuss students, provide peer support, and develop better integrated activities. Our master schedule is developed so that all students with a specific cluster are scheduled into the same classes.

The heart of the program at Sussex Tech is the integration of academic and technical instruction. The term "techademic" was coined by an English teacher at our school to demonstrate the goal of integrating a career technical curriculum with academics.

All of our students are required to complete a minimum of 28 credits for graduation. Juniors are required to complete a research paper based on a topic from their technical area which is graded both by the English and the technical instructors. Seniors must complete a senior project which is composed of a research paper, a product that is built or produced and an oral presentation. In the oral presentation, to make sure students have communication skills, they must present in front of a panel of academic and tech-

nical teachers, administrative staff, and representatives from the business community.

Reform efforts at Sussex Tech have been ongoing since 1988. Since reform efforts began, the administration has placed a strong emphasis on professional development and the hiring of teachers who want to find ways to integrate the curriculum and work in teams across disciplines.

School reform and a full-time, comprehensive technical high school model has shown to be successful at Sussex Tech. Since 1993, Sussex Tech students have gained significantly in their academic achievement. On the Delaware Student Testing program, we are normally in the top three in the State. Our math scores for students meeting or exceeding standards have risen dramatically, and in all areas. Our attendance rate is 96 percent, our dropout is 1.7. Our graduation rate is 96 percent.

Sussex Tech High School is a model that demonstrates that sound integration of academics and career technical coursework does assist students in improving academic achievement. Academic instructors cannot do it alone. Career technical instructors are the missing link for students who have become frustrated with academics during their school careers. This link provides students reasons for learning algebraic equations, Ohm's law, the United States Constitution, and learning to write correctly so one's thoughts are understood. Career technical education does have an extremely important part in assisting all students to meet and exceed academic standards.

Mr. CASTLE. Thank you.

[The prepared statement of Ms. Walls-Culotta follows:]

Statement of Sandra Walls–Culotta, Principal, Sussex Technical High School, Georgetown, Delaware

I wish to provide the subcommittee with actual experiences from my school, Sussex Technical High School, that show how effective career-technical education can make a significant difference for all students in their academic achievement when integrated with academics and I would like to emphasize that this type of educational programming needs to continue so that all students are successful in meeting the requirements of No Child Left Behind.

Sussex Technical High School began as a shared-time vocational center in rural southern Delaware. The Center's mission was to serve part-time students from seven independent "feeder" school districts. By the mid-1980's, the serious flaws in this delivery system had become obvious. For example:

- Students from the feeder high schools had low-level academic skills and were unable to relate their academic studies to the workplace.
- Students scored at the "bottom of the heap" on standardized tests.
- Vocational-technical education at the center had fallen out of step with what business and industry leaders expected of their employees.
- The school calendars and bus schedules of seven feeder districts resulted in scheduling "nightmares" at the center.

After three years of intensive planning and through utilization of frameworks provided by the National Center for Research in Vocational Education (NCRVE), now known as the National Centers for Career and Technical Education (NCCTE) and the Southern Regional Education Board-State Vocational Consortium (SREB), the problem-laden, shared-time concept was discarded. Gene Bottoms of SREB provided technical assistance, Sussex Tech teachers and administrators attended the consortium's 1989 Staff Development Conference and visited SREB *High Schools That Work* sites to learn how other schools were implementing the *HSTW* key practices. When Delaware joined the SREB-State Vocational Education Consortium in 1990, Sussex Tech gained additional access to data and information on what worked in high school reform through *HSTW*. Sussex Tech adopted the *HSTW* reform model for the restructured school.

In September 1991, the District restructured the Center into a newly designed, comprehensive technical high school for students in grades 9 through 12. The new school offered innovative concepts such as block scheduling, common planning time, structured programs of study, career majors, a strong and relevant college prep academic program, and an integrated curriculum.

Sussex Technical High School has been transformed from an area shared-time vocational school with declining student enrollment and low academic achievement to a restructured, "clustered" high school that offers students a challenging, integrated curriculum.

Enrollment at Sussex Tech has risen dramatically to more than 1200 students and each year more than 600 eighth grade students apply for 300 openings. Seventy-six percent of the students are white, twenty percent are African-American, and the remaining four percent are Hispanic, Native American, and Asian. Twenty percent of students qualify for free or reduced lunch, and twelve percent of the students served are eligible for IEP services.

A New Vision

In September 1991, Sussex Tech opened its doors as a full-time comprehensive high school. The district and high school administrators are committed to the principles of high expectations for career-technical students, which involve integrating academic and career-technical (techademic) education and using instructional practices that actively engage students.

Sussex Technical High School is organized into four clusters, which provides a natural vehicle for students to develop specific skills in small learning communities. Similar career programs are grouped into technical "clusters." The four career clusters are Automotive Technologies; Health and Human Services; Communication and Information Technologies; and Industrial Engineering. Each cluster has a specific three-year program of study that outlines all academic and technical coursework required for students enrolled in that particular cluster.

In clusters, teams of teachers work together as a single unit to motivate and educate their students. Cluster members include English, math, science, social studies, special education, related electives, and technical teachers; a counselor, an assistant principal; and other support staff. Two "cluster managers" representing both academic and technical content areas guide each cluster. Cluster managers provide critical leadership to facilitate the on-going improvement and implementation of integrated curriculum, instruction, and over-all school improvement. A cluster manager is a paid extracurricular position elected by the majority of the cluster membership.

Clusters have common planning time each day to meet and plan integrated activities, discuss students, provide peer staff development, etc. Cluster managers meet with the principal and other administrators biweekly to discuss concerns, problem solve, share what is happening within each cluster, and to gather information to disseminate within the clusters.

The schedule at Sussex Tech has been radically altered to accommodate the cluster concept and promote integration. Classes are block-scheduled with technical classes meeting every day for 90 minutes and academic classes meeting for 90 minutes every other day. Every morning before students arrive, teachers are given a 30-minute common planning period. Clusters hold formal cluster meetings once a week during the 30-minute common time, with the remaining common planning periods reserved for ad hoc meetings among individual teachers. Once a month, in lieu of a cluster meeting, content area meetings are held for one hour. Content areas include English, math, social studies, science, technical, physical ed/health/driver education, foreign language, and support staff (guidance, nurses, school psychologist), special education teachers attend the content area in which they team teach.

The master schedule is developed so that all students within a specific cluster are scheduled into the same English classes, i.e., Auto English 10 has a combination of 10th-grade Auto/Diesel and Auto Body students, HHS English 12 has a combination of Criminal Justice, Cosmetology, Child Ed, and Health Professions students. Teacher schedules are developed in order to keep their classes within the same cluster. Most students will have the same English teacher for 11th and 12th-grade English; some students may have the same English teacher for three years.

Social studies is clustered, science is cross-clustered and determined by a student's program of study, and math follows a sequence depending on what level a student enters in 9th-grade. This scheduling creates many conflicts in a master schedule; however, integration of curriculum, research, small learning communities and team planning is enhanced by teachers sharing the same students.

The heart of the program at Sussex Tech is the integration of academic and technical instruction. The term "Techademic" was coined by an English teacher at our school to demonstrate the goal of integrating a career-technical curriculum with academics. All students are expected to complete the *HSTW* recommended curriculum of college prep academics and career-technical majors. All students are required to complete a minimum of twenty-eight credits for graduation:

- four credits in English

- three credits in math
- three credits in science
- three credits in social studies.
- ten credits in a career-technical major course and related technical courses, with industry standards as the basis for the technical curriculum.
- one credit for physical education
- one-half credit in health
- one credit in computer literacy
- two and one-half credits in elective courses

Juniors are required to complete a research paper based on a topic from their technical major, which is graded by both the English teacher and the technical teacher. Seniors are required to complete a senior project, a Senior Exhibition of Mastery, with three components: a written research paper; a product that is built or produced; and an oral presentation. There is funding available for seniors to write a "mini grant" to help defray the cost of technical or building supplies for their product. The oral presentation is made before a committee of academic and technical teachers, administrative staff, and representatives from the business community.

Past senior projects include:

- Social and Emotional Development of Toddlers
- Society's Effect on the Development of Serial Killers
- Recovery Plan for Osprey and the Delmarva Fox Squirrel
- The Effects of Exercise on the Normal Cardiac Function of the Heart
- Nutrient Runoff and the Chesapeake
- Fungus Cased by Artificial Nails
- The Efficiency of Fuel Cells

The commitment to integration at Sussex Tech is very serious. The National Center for Research in Vocational Education found, during an evaluation visit to our school, that "In most schools, teachers don't know what integration is. In your school, students can explain it to us."

Reform efforts at Sussex Tech have been an on-going process since 1988. Since reform efforts began, the administration has placed a strong emphasis on professional development and on hiring teachers who want to find ways to integrate the curriculum and work in teams across disciplines. Strategic hiring decisions have always been made to attract reform-minded teachers and support staff.

The administration at Sussex Tech invests in their teachers by promoting professional development. A culture of continuous learning is instilled with the teachers and staff through peer staff development on a weekly basis in cluster meetings, supporting attendance at outside staff development workshops and conferences, and tuition reimbursement for coursework.

Sussex Tech sets high expectations for all students and believes that all students can master challenging academic course content but may need extra time or help to do so. Help is provided after school for two-and-half hours in techademic coaching or in extra-time classes. Teachers are paid a stipend to provide the extra assistance to students. Transportation is also provided for those students choosing to remain at school and receive the extra assistance.

Block scheduling has allowed the teachers to focus on academic concepts in greater depth and to integrate academic and career-technical curriculum. The longer class time also allows more time for hands-on labs in all content areas.

School reform and the full-time, comprehensive technical high school model have been successful as evidenced by student achievement and recognition by external groups. Since 1993 Sussex Tech students have made significant gains in academic achievement. Students meeting or exceeding standards on the Delaware Student Testing Program have increased in mathematics from 5 % to 49%, in reading from 8 % to 82%, and in writing from 3 % to 84%. Science and social studies have only been tested since 2000. Students meeting or exceeding standards on the DSTP have increased in science from 40% to 64% and in social studies from 25% to 66%. Similar gains have been seen on the *HSTW* assessments since 1993. The mean combined SAT scores have increased from 790 to 948, while student participation has increased from 8% to 48%. The 2003 attendance rate was 96%, the dropout rate was 1.7%, and the graduation rate was 96%. These accomplishments would not be possible without a curriculum that integrates academics and technical course work, which provides students the basis for improving their academic achievement.

Sussex Tech has been recognized for its accomplishment by many outside agencies and groups for the school's continued improvement in education for all students. These are a few of the recognitions:

- A United States Department of Education National School of Excellence
- One of the Ten *New American High Schools*
- A model school for designing and implementing career pathways
- Delaware's Model Instructional Technology High School
- A nationwide model for implementing and presenting integrated curriculum
- One of ten high schools to receive the National Business Week Award for instructional innovation
- Fordham University and American Association of School Administrator's National Change Award

Sussex Technical High School is a model that demonstrates that sound integration of academics and career-technical coursework does assist students in improving academic achievement. This reform of the vocational-technical career center into a comprehensive technical high school required many hours of hard work, funding, and support from many. These components are still essential for the school to continually improve on what was begun in the late 80's The reform process at Sussex Technical High School has been assisted through the use of Perkins funding and other federal, state, and local funding sources. Technical assistance provided by Southern Regional Education Board's *High Schools That Work* program has been exceptional and crucial. For this type of program to work it is necessary for all stakeholders to be involved and willing to work for the shared vision that all students can be successful. Academic instructors can't do it alone! Career-technical instructors are the missing link for students who have become frustrated with academics during their school careers. This link provides students reasons for learning algebraic equations, Ohm's law, the importance of the United States Constitution in the workplace, and writing correctly so that one's thoughts are understood. Career-technical education does have an extremely important part in assisting all students to meet and exceed academic standards.

Mr. CASTLE. Dr. White.

STATEMENT OF DR. ROBERTA WHITE, PRESIDENT/CEO, GREAT OAKS INSTITUTE OF TECHNOLOGY AND CAREER DEVELOPMENT, CINCINNATI, OHIO

Dr. WHITE. Chairman Castle and Members of the Committee, thank you for giving me the opportunity to testify about the benefits of the Perkins legislation.

In today's competitive global economy, employers need and are demanding that employees have higher levels of academic and technical skills. The Perkins legislation is invaluable to Great Oaks and other career and technical school districts in preparing students to succeed.

Great Oaks is a public school that provides career and technical education programs for 36 school districts in 12 counties in southwest Ohio. Each year we educate over 3,000 junior and senior high school students on our four career campuses in full-day programs, and another 3,000 students in technology programs we offer in their home schools. Over 50,000 adults enroll in programs and services we provide at Great Oaks each year. We work closely with more than 1,000 employers in postsecondary institutions to keep our programs on the cutting edge.

The Perkins legislation recognized that businesses and postsecondary institutions were demanding more rigorous academic and technical skills from their employees and students. The Perkins Act directly addressed this need by requiring that core academics be integrated into the technical curriculum. In response, Great Oaks has made and continues to make significant improvements in the curriculum and in the way we deliver it. We now prepare students for both careers and for continuing education.

The first significant improvement is the increased emphasis on more rigorous, integrated academics. General math and science classes have evolved in advanced algebra, calculus, microbiology and anatomy. Competencies are aligned with the standards of the Ohio Department of Education, industry certifications and postsecondary requirements. Teams of teachers, both academic and technical, collaborate to ensure these competencies are integrated into their curricula.

The value of career and technical education is that students have an opportunity to learn a concept in a variety of ways. In math and physics, a construction student learns about loads and vectors and then applies them in her lab.

The second major improvement in our delivery system is an increased emphasis on continuing education. Since the Perkins Act was last reauthorized, Great Oaks has seen the percentage of graduates who continue to go immediately into postsecondary education nearly double. In 1998, about 20 percent of our graduates went directly into postsecondary education. In 2003, over 35 percent did. Great Oaks has 132 articulation agreements with postsecondary institutions and apprenticeship programs throughout the country. Through these agreements, students earn advanced credit in their areas of specialization.

Our goal is to enable students to move seamlessly from Great Oaks to a postsecondary institution and to arrive with about 35

hours of college credit already in place. Students from our police academy can enter Xavier University with 24 college credits and those in health technology can receive 26 college credits at the University of Cincinnati. Because Perkins III created core performance measures within a year of graduation, 98 percent of our graduates are employed, continuing on to postsecondary education or both.

Our third significant improvement is an individualized academic plan for each student. We are customizing each student's career path, constantly measuring student progress and providing intervention services as needed. Students, their parents, teachers and counselors agree on a plan that outlines what students need to graduate and to continue on a specific career path.

For over 20 years, the Perkins Act has regularly given career and technical education goals in workforce development that enable us to meet the needs of employers and thereby better prepare our students for careers. Perkins funds help us in targeted and important ways, including professional development for instructors, placement for high school and adult students, support for students with disabilities, and career education services.

Thank you very much for this opportunity to tell you about our success with Perkins, and about the opportunities for continuing that success.

Mr. CASTLE. Thank you, Dr. White. We appreciate your testimony as well.

[The prepared statement of Dr. White follows:]

Statement of Roberta White, President/CEO, Great Oaks Institute of Technology and Career Development, Cincinnati, Ohio

Introduction

Chairman Castle, members of the committee, thank you for giving me the opportunity to testify about the benefits the Perkins Act delivers in southwest Ohio. Great Oaks serves two major constituencies that have benefited from the direction set by this legislation. The first is the students – both high school students and adults. The second group is businesses, industries, and government agencies.

In today's globally competitive economy, employers need, and are demanding, that employees have increasingly high levels of academic and technical skills. The goals the Perkins Act sets, and the funding the Act provides, are invaluable to Great Oaks and other career and technical school districts in preparing students with these skills.

Great Oaks

Let me tell you briefly about Great Oaks. We are a public school district, funded primarily by local tax dollars, along with state and federal allocations. We provide the career and technical education programs for 36 public school districts spread across 12 Ohio counties – an area the approximate size of the State of Rhode Island. There are urban, suburban, and rural school districts affiliated with Great Oaks. Some are well financed; others are economically disadvantaged.

Each year we educate some 3,000 junior and senior high school students on our four campuses in full day programs, and another 3,000 in technology programs we offer in their home schools.

We coordinate career education services for 120,000 students in grades K through 12 with the support of Perkins funds.

Over 50,000 adults a year enroll in programs or receive services. These range from police, fire and emergency medical training to electricity and culinary programs.

We work closely with more than 1,000 employers and post-secondary institutions to keep our programs on the cutting edge. Our business partners range from small, independent businesses to global corporations including Procter & Gamble, GE, and Ford.

Evolving System of Career Preparation

The Perkins legislation recognized that businesses and post-secondary institutions were demanding more rigorous – and ever changing - academic and technical skills from their employees and students. The Perkins Act reauthorizations directly addressed this need by requiring that core academics – math, science, language and social studies – be integrated into the technical curriculum.

In response, Great Oaks has made – and continues to make – significant improvements in the curriculum that is delivered and the way we deliver it. We now prepare students for careers ... for continuing their education, for continuing to learn new skills.

This *first* significant improvement is the increased emphasis on more rigorous, integrated academics. General math and science classes have evolved into advanced algebra, calculus, microbiology and anatomy. Competencies are aligned with the standards of the Department of Education, industry certifications and post-secondary requirements. Teams of teachers – both academic and technical – then collaborate to ensure that these competencies are integrated into their curriculum.

The value of career-technical education is that students have an opportunity to learn a concept in a variety of ways. In math and physics, a construction student learns about loads and vectors. She then goes into her lab and applies these principles to build a bridge.

Beginning this year, senior students are required to complete Capstone Projects to demonstrate their mastery of competencies they have learned. The project must be related to their career path. They will conduct research and present their findings to a panel of experts.

The *second* major improvement in our delivery system is an increased emphasis on continuing education. Since the Perkins Act was last reauthorized in 1998, Great Oaks has seen the percentage of graduates who continue immediately onto postsecondary education nearly double. In 1998, about 20 percent of our graduates went on directly to postsecondary education. In 2003, more than 35 percent did.

Great Oaks has 132 agreements with community colleges, four-year institutions, technical institutes and apprenticeship programs throughout the country. Through these agreements, students earn advanced credit in their area of specialization. Our goal is to enable students to move seamlessly from a Great Oaks campus to a post-secondary institution – and to arrive with up to 35 hours of credits already in place. Students from our Police Academy can enter Xavier University with 24 credits and those in Health Technology can receive 26 credits at the University of Cincinnati.

Because in 1998, Perkins Act III created other core performance measures, I want to note that within a year of graduation, 98% of our graduates are employed, continuing on to postsecondary education or both, or have been accepted into the Armed Forces.

Our *third* significant improvement is an Individualized Academic Plan for each student. For a successful education, we are customizing each student's career path, constantly measuring student progress, and providing counseling and other support services. Perkins funding is extremely helpful in enabling us to meet students' needs for career counseling and other support services. Starting with the coming year, students, parents, teachers and counselors will agree on a plan that outlines what that student needs to graduate and continue on a specific career path. It is the optimum way to ensure that students receive the education they need to continue on to a productive career.

Conclusion

Over more than 40 years, the Perkins Act has regularly given career and technical education goals in workforce development that enable us to meet the needs of employers – and thereby to better prepare our students for careers.

And Perkins funds help us in very targeted and important ways: recruitment of instructors, professional development, placement, support for students with disabilities and career education services.

The Perkins Act serves the nation's economy and career and technical students well. I am confident that you and your colleagues will write Perkins IV to meet the needs of American business as our employers seek to thrive in a highly competitive global economy. The corollary to that proposition is that Perkins IV should continue to assist the many, many young people and adults who learn best in the hands-on environment of career and technical education.

Thank you very much for this opportunity to tell you about Great Oaks success with Perkins and about the opportunities for continuing that success.

Mr. CASTLE. Dr. Wong.

STATEMENT OF DR. CARL WONG, SONOMA COUNTY SUPERINTENDENT OF SCHOOLS, SONOMA COUNTY OFFICE OF EDUCATION, SANTA ROSA, CALIFORNIA

Dr. WONG. Good afternoon, honorable Members of the Subcommittee on Education Reform. My name is Carl Wong, County Superintendent of Schools in Sonoma County. On behalf of our county, our 40 school districts, our 73,000 students, I express my appreciation for this opportunity to address the Subcommittee on the topic of examining success in vocational education.

I began my education career 33 years ago as a high school industrial arts teacher, but I have more of a personal connection. When I was in high school, I took all of the industrial arts courses possible. Upon graduation from high school, I served a 4-year apprenticeship at Mare Island Naval Shipyard in Vallejo, California, and actually am a journeyman machinist by trade. With that background, my testimony today is both from a personal and professional perspective.

I would like to focus on how schools in Sonoma County are integrating vocational and technical education with our rigorous academic standards, as adopted by the State of California.

There are 15 comprehensive high schools in Sonoma County serving over 23,000 students in grades 9-12. All of the high schools in the county do receive Perkins funding, and the Perkins fund is complemented by State general funds, district general funds; and we also integrate the Perkins funds with the Regional Occupational Program, more commonly known as ROP, which is a California State-funded program specifically for vocational preparation, and also the tech-prep program which is aligned with our local community college.

The Santa Rosa Junior College is one of the largest in California. We have a junior college enrollment exceeding 30,000 students in our county. Our county has a long history of both coordination and collaboration between the various institutions, including the California State University located in Sonoma County.

We encourage and have active representation, including myself, on the Sonoma County Workforce Investment Board. We have a local youth council. We are actively represented on the Sonoma County Business Education Round Table and, of course, the School-to-Careers Advisory Board. We are also members of the Sonoma

County Economic Development Board, and I sit on the California State Youth Council.

Employer advisory councils are also convened on an annual basis to validate our high school career pathways which incorporate vocational and technical preparation, along with college preparation coursework and work-based learning experiences. These include job shadow opportunities, both paid and nonpaid internships.

Sonoma County's proximity to Silicon Valley and the Bay Area and our local telecommunications industry has resulted in significant transformation of the vocational funds provided by Perkins in more of a nontraditional manner. Even prior to the No Child Left Behind Act, our local governing boards, school districts, and superintendents were already embracing the notion that English proficiency and strong academics needed to be a priority. Furthermore, we are beginning year 7 of Statewide academic standards which include advanced college preparatory mathematics and science courses which are available on all of our comprehensive campuses.

We no longer differentiate between a student's path through high school as characterized by either college bound or work bound. Our prevailing philosophy and practice is the integration of workforce and academic skills so that education is essentially career, technical, and vocational education.

Our Perkins-funded course work, along with our regional occupational programs and community college tech-prep classes, are calibrated to reflect current business and industry standards. We work collaboratively with our local unions and nonunions to develop career pathways that reflect the global workforce of the 21st century.

Academic rigor and workplace relevancy are interconnected. The Perkins Act funding serves to leverage and link a student's comprehensive high school experience to support the notion that academics applied is indeed academics learned.

I commend the Subcommittee holding these hearings to receive input directly from the field. As a former teacher, guidance counselor, high school principal and district superintendent, I can assure you that Perkins funding is invaluable in supporting the integration of vocational and technical skills and academics. As a county superintendent, I clearly understand the spirit and intent of the legislation and take the necessary professional responsibility and prudent application of the funds.

I thank you for this opportunity to provide testimony on this important matter.

Mr. CASTLE. Thank you, Dr. Wong. We appreciate your testimony, too.

[The prepared statement of Dr. Wong follows:]

Statement of Carl Wong, Superintendent of Schools, Sonoma County Office of Education, Santa Rosa, California

Honorable Members of the Subcommittee on Education Reform, my name is Carl Wong, current Sonoma County Superintendent of Schools. On behalf of our county's 40 school districts and 73,000 k-12 students, I express my appreciation for this opportunity to address the Subcommittee on *"Examining Success in Vocational Education"*.

I began my education career 33 years ago as a high school industrial arts teacher in San Diego. Upon graduation from high school, I served a four-year apprenticeship at the Mare Island Naval Shipyard in Vallejo and have certification as a journeyman machinist. With that background, my testimony today is from both a personal as well as a professional perspective. I will focus upon how the schools in Sonoma County are integrating vocational and technical education programs with the rigorous academic standards adopted by the State of California and to prepare all students for post-secondary options.

There are 15 comprehensive high schools in Sonoma County serving over 23,000 students in grades 9-12. All high school districts and high school sites receive, on an annual basis, a proportionate amount of funding from the Perkins Basic State Grant. This Perkins funding is complemented by the state general funds, the state Regional Occupational Program (ROP) resources, and the Tech-Prep programs which are alignment with our local community college. The Santa Rosa Junior College District is one of the largest in California with an enrollment exceeding 30,000 students. Our county has a long history of coordination and collaboration with both the community college and the state university in providing students with career development and workforce preparation opportunities responsive to local and regional labor market demands.

I am an active participant on the County Workforce Investment Board (WIB), the local Youth Council, our Business Education Round Table (BERT), the School-to-Career Advisory Board, the Sonoma County Economic Development Board and the State Youth Council. Employer advisory councils are annually convened to validate individual high school career pathways, which incorporate vocational and technical preparation with college preparation coursework and work-based learning experiences. These include job shadow opportunities and paid/non-paid internships. Sonoma County's proximity to the Silicon Valley in the Bay Area and our local telecommunications industry have resulted in our utilization of the Perkins Vocational Education funds in a non-traditional manner.

Prior to the No Child Left Behind Act, our local governing boards, school districts and superintendents were already embracing timely English proficiency as a priority. Furthermore, as we are beginning year seven of statewide academic standards, advanced college-preparatory mathematics and science courses are readily available at all comprehensive high school sites.

We no longer differentiate a student's path through high school characterized by "college-bound" vs. "work-bound". Our prevailing philosophy and practice is the integration of workforce and academic skills so that all education is essentially career/technical/vocational education. Our Perkins-funded coursework, Regional Occupational Programs, and community college Tech-Prep classes are calibrated to reflect current business and industry standards. We work collaboratively with local trade unions and non-union entities to ensure student awareness of career pathways as reflected by the global workforce of the Twenty-First Century. Academic rigor and workplace relevancy are interconnected. The Carl D. Perkins funding serves to leverage and to link a student's comprehensive high school experience to support the notion that "academics applied is academics learned".

I commend the Subcommittee on Education Reform on holding this hearing opportunity to receive input directly at the state, county, school district and school site levels. As a former teacher, guidance counselor, high school principal, and district superintendent, I can assure you that the Perkins funding is invaluable in supporting the integration of technical vocational skills and academic concepts necessary for global workforce competition.

As the County Superintendent, I clearly understand the spirit and intent of the legislation and take the professional responsibility to be prudent in the application of funds and to maximize educational benefits for students. I truly believe that the Perkins Basic State Grant funding contributes to the success of all students, which is in the national interest of our democracy and economy.

I sincerely thank you for this opportunity to provide testimony on this matter.

Mr. CASTLE. Dr. Barton.

STATEMENT OF DR. THOMAS E. BARTON, JR., PRESIDENT, GREENVILLE TECHNICAL AND COMMUNITY COLLEGE, GREENVILLE, SOUTH CAROLINA

Dr. BARTON. First of all, I want to tell you how I feel about being here. I think it is certainly an opportunity for us to say some things to such a group of people that represent so many other people that it is a real honor to be here.

Ms. Woolsey, I happened to hear in your presentation about WEIE, and we totally support what you said. We just used WEIE in a special project of what we call "Quick Jobs" in the upstate of South Carolina, and out of 5,100 people that did not have jobs—they were at the 8th grade level; all the textile industry is gone,

and these people were the remnants left over there—4,200 of them got jobs. That fits the WEIE concept that you said there. I wanted to say that.

Mr. Chairman, I met you many years ago with Jack Owens, if you remember the name, and I know you do. We had the honor to help you and Jack Owens and the fine people in Georgetown to build a university center on one of your community college campuses. That was an honor for us.

The system that we represent in South Carolina, by the way, has had tremendous support, and one of them is in this room, Congressman DeMint. I am personally honored by his complimentary remarks about me. I work with a lot of great people, and I am just one of them. We make a very good team. Our mission is very important for our State.

We come from a poor State. Forty, 50 years ago, all we had was textiles in the upstate and agriculture in the low state. The textiles are gone. The low state is still in agriculture, most of it, not all of it.

It is growing in the upstate in the high tech area tremendously fast. The corridor between Raleigh-Durham and Atlanta is in one of the 20 top growth corridors in the world. It is growing with foreign industries—German industries, British industry, Canadian industry, Japanese industry—the list goes on ad infinitum. We are in the middle of all of that, and we are trying to use these community colleges and technical colleges to train the masses of our people that are not going into these universities, to train these people and give them the necessary skills; and it has been said by some of these fine people here, we are giving them the skills now to go into an industry that requires more brain power than it does brawn.

And that is happening, and you know that, Mr. Chairman; you mentioned that, as far as the technology and how it is driving all of this. It is influencing and affecting our economy tremendously.

We started out with a simple concept. We were going to go out in the world and find this industry and bring them to South Carolina. That is what we were trying to do. We have done quite well with that—"we," meaning the State Department of Commerce and many, many others, people that are involved with industry and industrial development.

We work closely with them, but when we see these industries face to face, we say, whatever your needs are to get you in business and make you successful in South Carolina, we are going to do it. That is our bottom line, and it is working beautifully and we have not failed. We get the support of the legislature. We get the support of Congress and people like Congressman DeMint. It is working better than I think a lot of people realize.

I am going to take this time to invite any of these Members, if you ever want to come to our part of the State and talk to our industrial leaders and get inside the big, sophisticated plants, you are going to be more than welcome to come and see us. We open up partnerships every day. We open up partnerships in our school systems, in our hospital systems, in our industries, in our governments, all of these things we are interfacing with constantly. But the one I am to report on today is the education side.

I look at education as a seamless system that starts at the kindergarten level and runs all of the way through the 16 years. We are all in the same boat. It is an upward mobility throughout the system. I think it is something that we have got to accept that there is no separation. We are all working toward the same thing and working toward educating the masses of those young people, to get them ready for a university or a fine technical job in some of these sophisticated industries.

I am going to give you a few very important projects. I mentioned one quickly, a university center that now serves approximately 5,000 people in the Greenville area that started out because we did not have a major university in that city. We now have seven State universities in that city. We bought a 600,000-square-foot mall to put them in, and that has been an outstanding project and that leads back to these young kids that are coming through our system in the end.

In conclusion, we are saying, yes, you need Perkins money; yes, you need new industries; yes, you need jobs; yes, we need all of these things. And, yes, we need Congress' support and the support of State legislators, local governments, local industries, we need all of that to make this work. I plead with you to continue doing those things. It helps education, our schools, our community colleges, our career centers, our vocational high schools and so on.

I am honored to be here. Thank you.

[The prepared statement of Dr. Barton follows:]

Statement of Thomas E. Barton, Jr., President, Greenville Technical and Community College, Greenville, South Carolina

Mr. Chairman, Ranking Member Woolsey, members of the subcommittee, my name is Dr. Tom Barton and I am President of Greenville Technical College located in Greenville, South Carolina. I am pleased to be here today to testify on behalf of my institution and the American Association of Community Colleges (AACC). I am especially pleased to testify before our own member of Congress, Rep. Jim DeMint.

Today's hearing marks the formal beginning of this subcommittee's consideration of the reauthorization of the Carl D. Perkins Vocational and Technical Education Act. For reasons detailed below, the Perkins Act is exceedingly important to Greenville Tech and community colleges across the country. We look forward to working with the subcommittee through reauthorization to strengthen the Perkins Act's support for career and technical education.

Greenville Tech is the largest public comprehensive community college in South Carolina. As of April 2004, the college has grown to include five campuses (Barton, Brashier, Donaldson, Greer, Northwest), encompass nearly 600 acres of land, 40 buildings, and 1.6 million square feet of facilities under roof. The college employs more than 1,200 full- and part-time faculty and staff, operates with an annual budget of more than $62 million, and provide services to at least 20,000 credit and 45,000 continuing education students annually. Presently the institution receives approximately 39% of its revenue from the state of South Carolina based on its Fall semester full time equivalency (FTE) enrollment and training hours it provides through its continuing education division during the fiscal year. Tuition and fee revenue paid by students is retained locally and comprises nearly 42% of the college's revenue. Other sources of revenue include local government support at 10% and auxiliary services at 9%.

Perkins Act funding is vitally important to our institution and students. Our allocation this coming funding year will be approximately $580,000. At Greenville Tech, Perkins funds support program improvement by funding faculty professional development and allowing the purchase of new equipment. We also use Perkins funds to serve the needs of special student populations and help them complete their programs. Perkins funds help us purchase special needs adaptive equipment, fund travel and child care for single mothers, and operate English as a second language programs. Finally, we use Perkins funds to help internationalize our programs, a vital need in an increasingly global economy.

I. Mission and Purpose of the SC Technical Education System

The South Carolina Technical Education System is the principal tool for the economic and industrial development that helps move our state into the 21st century. South Carolina's technical colleges have been instrumental in training the state's workers with the skills they need to meet the needs of the tremendous influx of new businesses in our state. This influx of new businesses, in turn, would not have occurred without the educational and training infrastructure provided by our colleges. Importantly, the State governance system allows local control of each college, giving us an added degree of responsiveness to the needs of local businesses and connectedness to our local communities, each of which I will discuss in more detail below.

The system allows for students to either strengthen their Basic Skills in math, reading, or communication, or gain training in these skills to further their educational goals. The college serves approximately 2,700 students per semester in Basic Skills instruction. The college strives to meet the needs of its students and make this education as accessible as possible by offering this instruction at convenient times and in different formats, including online and video courses, evening and weekend courses, and modular offerings which allow for multiple entry points to fit a particular student's background and abilities. This mission to meet the needs of the students is reflected in the very terminology we use, as we refer to students as our "customers."

II. Partnerships That Make A Difference

Partnerships are crucial to serving the mission of Greenville Tech. Our college is the focus of a number of different community-based linkages that help the entire educational system equip our citizens with the tools they need to succeed. Linkages with other educational systems, particularly local high schools, are important to creating a cohesive system that moves students from the schools into our college, and beyond to four-year institutions. We also work very closely with our local businesses, communicating with them about their needs and constantly revising our offerings or creating new ones to keep up with the rapid pace of technological change.

A. Partnerships with Other Educational Institutions

Greenville Tech is involved in some important and unique partnerships with the local school systems. We have a Charter High School/Middle College on the college campus that maximizes the use of equipment and faculty for instruction and hands on training. Charter schools offer choice, competition, and accountability. This Dual Track system offers both technical and college prep/academic programs, preparing students for the highly technical jobs of the new knowledge-based economy. Middle colleges such as the one at Greenville Tech receive modest, though significant, support from the Tech Prep demonstration program. I strongly urge the committee to continue this program in a reauthorized Perkins Act.

Dual enrollment for high school students allows them to enroll in college classes and provides them with faculty, textbooks, and advisement. Middle colleges, dual enrollment, and similar partnerships between community colleges and high schools help improve the high drop-out rates that plague many areas by giving students an early exposure to college and a glimpse of the opportunities that further education opens for them.

Partnerships with other higher education institutions are also important. The University Center, located just a short distance from our main campus, is a consortium of seven state universities offering the junior and senior level college curriculum where students may complete a Bachelor's, Masters/or Doctoral degree. The easy access to these programs that this center affords makes it possible for many of our students to continue their education beyond the associate degree level. Articulation and transfer agreements with other four-year institutions make it possible to gain an Associate's degree as part of work toward a Bachelor's degree.

Greenville Tech and our sister institutions also work directly with the State government. The Center for Accelerated Technology Training, or CATT, is a state economic development partnership between the South Carolina State Technical College system and the South Carolina Department of Commerce offering training for new and existing industries.

B. Partnerships With Business

One of the distinguishing characteristics of community colleges is our close working relationship with business. These relationships take many forms, even within the same college. Industry advisors communicate the skills that their businesses need, and we incorporate them into existing programs or create new ones to impart those skills to our students. At Greenville Tech, the Business & Industry Advisory Committee system advises the academic programs on the development, operation, and evaluation of the curriculum, faculty, facility and equipment. This is accomplished on a yearly basis. There are 56 program Advisory Committees with over 700 business and industry representatives volunteering to serve and be actively involved in keeping our academic programs current to industry needs and standards. We have also created a private foundation which offers businesses and industries opportunities to fund student scholarships, donate high-tech equipment, and sponsor student learning programs.

Community colleges often contract directly with businesses to offer anything ranging from customized training in a particular skill to entire degree programs at the worksite. Community colleges pride themselves on the entrepreneurial spirit we bring to serving businesses and how we rapidly evolve to meet their needs. Below are just a few of the examples of how Greenville Tech works with our local business partners.

One of the biggest stories in our area of South Carolina in recent years has been the growth of the automobile industry. Greenville Tech works closely with the automobile manufacturers and their suppliers, including these partnerships:

- Designing and delivering training as a Tier I school for Nissan North America.
- Training and job placement for 20 years with General Motors.
- Michelin North America has built a training center on the Barton Campus to train mechanical technicians for the Michelin plants. GTC also has access for training from this facility.
- Training technical engineers in CAD and Print Design for BMW.

Community colleges collectively train the majority of registered nurses and allied health professionals. Greenville Tech is heavily involved in this area, including a nursing training partnership with the two largest healthcare providers in Greenville County. They have provided a $600,000 grant to increase our nursing program capacity, purchase equipment, renovate facilities, and hire and train faculty.

Other examples of partnerships between Greenville Tech and local businesses include:

- Training airframe and power plant technicians for Lockheed Martin.
- Regional training of HVAC technicians for Johnson Control.
- Working with Greenville County to design, develop and house a DNA Laboratory/County Crime Lab including the Vehicle Forensics lab.

III. The Perkins Act Is Important To Community Colleges, and Vice Versa

The importance of the Perkins Act to community colleges cannot be underestimated. Perkins is the largest source of direct Federal support for our institutions, and is even more crucial in a time of declining state support for postsecondary education. Approximately 39% of the state funds go to postsecondary institutions, the majority of which are community colleges. Because funds are distributed by a formula, Perkins is especially important for smaller, rural institutions that often lack the resources to compete effectively in competitive grant programs.

At bottom, Perkins funds are about helping our colleges deliver a better product. The grants support an array of services, activities, and equipment that otherwise would not get funded. Community colleges often use Perkins funds for support services such as tutoring and counseling for special populations in need of a helping hand. These funds are also crucial to faculty development, allowing them to keep pace with the skills and knowledge that students need and businesses expect. For the same reason, the ability to purchase cutting edge equipment with the support of Perkins funds is extremely important.

AACC believes that community colleges are just as important to achieving the Act's goals as the Act is to them Study after study and statistic after statistic indicate that America's workers must have some postsecondary education and/or training to achieve a middle-class lifestyle. The spread in wages between those with a college education and those with only a high school diploma continues to grow. Community colleges appreciate the recent attention that the Bush Administration and others have paid to their essential role in the training and retraining of America's workforce, most recently in the President's speech yesterday at the AACC Annual Convention. Just last month, in testimony before the full Education and the Workforce Committee, Alan Greenspan stated that lifelong education of the workforce is essential to continuing the nation's economic competitiveness and maintaining the current standard of living. We could not agree more.

For this reason, many of AACC's specific policy recommendations fall under a general theme: a reauthorized Perkins Act should better reflect and support the role of postsecondary programs in the CTE system. By strengthening support for postsecondary programs, the Perkins Act would better serve the vocational education system as a whole. Much of the discussion about the Perkins Act reauthorization has centered on the need to reform our high schools. This sustained emphasis concerns community colleges. The Perkins Act cannot and must not be transformed into a program that attempts to address the substantial and deep-seeded problems facing our high schools. The law is simply not large enough to achieve that. Rather, the Perkins Act should stay focused on improving quality CTE programs at both secondary and postsecondary levels. AACC categorically

rejects any proposal to divert Perkins Act funds to Elementary and Secondary Education Act programs, as the Administration proposed last year.

More fundamentally, however, the importance of postsecondary CTE programs has not been adequately stressed in the Perkins Act reauthorization process. Although secondary school vocational school programs remain extremely important as pathways into postsecondary education, more and more they are simply not adequate in and of themselves to provide those who complete them with a livable wage. Community colleges therefore agree in principal with the Administration that the focus of federal funding for secondary CTE programs should be on programs that give their students the necessary tools to continue onto postsecondary education or training, if they wish. As discussed above, this is becoming increasingly vital.

A. Support Innovative Linkages and Retain the Tech Prep and Tech Prep Demonstration Programs

AACC's member institutions also feel that there is a need for improved linkages between community colleges and high schools. We have forwarded a proposal in this area. Community colleges serve as the natural linchpins of linkages between high schools, businesses, universities, and other community organizations. Innovative approaches to strengthening these various connections should be funded under the Perkins Act. The most promising innovations would then be replicable by other institutions using their formula funds.

In addition, the Perkins Act currently contains two key programs that improve connections between community colleges and their local school systems: Tech Prep and the Tech Prep demonstration program. While there is room for improvement, the Tech Prep program has proven valuable in establishing pathways for CTE students to make a smooth transition from high school to college. AACC recommends maintaining the Tech Prep program, with a modification to require that contracts between consortium partners be renewed every 2 or 3 years, governing the details of the program and the expenditure of program funds, helping to avoid the miscommunication that has plagued some consortia.

The Tech Prep Demonstration program has emerged as a small but important source of support for community colleges seeking to establish or improve middle colleges on their campuses. Middle colleges are generating a tremendous amount of interest as a means of smoothing and encouraging the transition from high school to college, often targeted to students who would otherwise be less likely to make that leap. In each year of funding for the Tech Prep demonstration program, proposals have far outnumbered available grants, demonstrating the level of interest in establishing "middle colleges" amongst AACC members. This program should also be maintained in the reauthorized Perkins Act.

B. Perkins Must Support Adult Students

The revised Perkins Act must also reflect the fact that community colleges serve a wide range of students through Perkins-supported programs. These students are diverse in terms of age – 50% of the students in postsecondary CTE programs are over the age of 24; the average age of a community college student is 29. These students are diverse in terms of goals – some are seeking a degree or a certificate, while others are looking to upgrade or acquire a specific skill set to obtain new employment or advance in their current career. Insufficient attention has been paid to the importance of the Perkins Act in serving all of these students – not just those coming to our institutions directly from high school. While stronger partnerships between community colleges and high schools are important, they should not be the entire focus of the reauthorized Perkins Act, as the Administration has proposed. To do so would imperil community colleges' ability to serve over half the students in their CTE programs. The current Act has generally given community colleges the latitude to serve these diverse students. Reauthorization is an opportunity to strengthen the federal support for this mission.

The addition of separate postsecondary performance indicators would help realize this opportunity. The current indicators reflect the Act's overall orientation towards secondary CTE programs by focusing primarily on program completion. While a focus on completion may be appropriate for high school students, postsecondary performance indicators should reflect the diverse goals of community college students. In addition to degree and certificate attainment, industry-defined skill acquisition, transfer, and employment should be counted as program successes, because these are the goals students come to our colleges to achieve. In addition to core outcome indicators, postsecondary performance indicators should contain a degree of flexibility, allowing institutions to select those measures most relevant to their specific uses of Perkins funds.

C. A "Single Definition" of Institution of Higher Education Would Undermine Perkins Act Support for Community Colleges

Community colleges feel strongly that postsecondary Perkins Basic State Grants support should remain limited to non-profit institutions. This committee is now considering Higher Education Act (HEA) legislation that would place all institutions of higher education, including proprietary institutions, under a "single definition" of institution of higher education. The effect of this change would be to make scores of for-profit institutions immediately eligible for formula funding under the Basic State Grants program. In turn, it would drastically reduce funding for community colleges, which would be a grievous blow to them. AACC urges the committee to reject the single definition of higher education. The Association finds it hard to imagine that Congress intends for these extremely limited funds to be channeled to large corporate interests.

I thank you for the opportunity to testify before this subcommittee today, and I would be pleased to answer any questions that you might have.

Mr. CASTLE. Thank you, Dr. Barton. Thank you for bringing up the memory of our mutual friend, Jack Owens, who was a master of getting whatever he wanted out of our legislature. I was Governor when he kept getting a higher percentage than he should have gotten.

I imagine you do the same thing, and I congratulate you. It helps our young people.

Ms. Zwickert.

STATEMENT OF MARIE ZWICKERT, AREA ACADEMY MANAGER FOR NE AND OH VALLEY, CISCO SYSTEMS, COLUMBIA, MARYLAND

Ms. ZWICKERT. Mr. Chairman and Members of the Committee, I am pleased to appear before you today to share our company's perspective on the role and importance of career and technical education in America.

I represent CISCO Systems, the worldwide leader in Internet technologies. CISCO hardware, software and service offerings are used to create Internet solutions that allow individuals, companies and countries to increase productivity, improve customer satisfaction, and strengthen competitive advantage. We have over 34,000 employees worldwide. During fiscal year 2003, our revenue totaled $18 billion.

Over the years, CISCO's name has become synonymous with the Internet, since we are involved with every type of application. We would like to say CISCO is changing the way people work, live, play and learn.

CISCO's success is not ultimately the result of a product. We are a knowledge-based company. We are only as successful as our people are knowledgeable and skilled. For this reason, we have always had partnerships with education.

Concerned about the long-term capabilities of our workforce and that of our business partners and customers, CISCO launched the CISCO Networking Academy program in 1997, a comprehensive E-learning program which is designed to teach students Internet technology skills. It has been developed and delivered by educators and industry professionals, and the program provides a combination of Web-based curriculum, instructor-led learning, online assessments, student performance tracking, hands-on labs, instructor training and support, and preparation for industry standard certification. As a result, students can apply classroom learning to actual technology challenges which ultimately prepare tomorrow's workforce for lifelong learning opportunities and motivate them to continue their learning.

Now in its sixth year, the Networking Academy has more than 10,000 academies in 152 countries with over 400,000 participating students. In the United States, we have over 4,000 academies with over 100,000 participating students. As you can tell, CISCO is by no means a marginal partner in this endeavor.

Based upon our 6 years of experience with the program, I would like to share with you five key elements for programmatic success. One is academic rigor and technical know-how. There is no way around high academic skills when working in our industry. Without a strong foundation in math, science and reading, a student

cannot pursue the most basic career path. All our curricula are founded upon high academic rigor. Students apply this academic foundation to technical concepts and knowledge. By applying academic basics to networks and other technology skills, the Academy program further develops students' math, science, writing, and problem-solving abilities.

Our curriculum also provides academic and technical competencies. To promote a well-rounded educational experience, the Academy curriculum is aligned with U.S. national and State math, science and language arts standards, as well as workforce competencies. We have invested in a sophisticated online data base that crosswalks State academic standards with learning targets of our respective courses. In other words, we answer the age-old question: Why do I have to learn this?

Our second important element is assessment designed to support learning. We use Internet technologies that help support assessment. The assessment is designed to provide immediate and ongoing feedback to our students and teachers regarding proficiencies in specified knowledge and skills. The feedback allows teachers to modify and adjust their institutional approach, and the assessment strategy is designed to inform or improve learning as well as hold students and teachers accountable for results.

The third element that is important is alignment to industry standards and certification. Our curriculum prepares students for industry standards, hence enriching the skill set required to succeed in a global economy. All academic curriculums are matched to major certification in the IT industry, both vendor and nonvendor.

Fourth is seamless, lifelong learning. The Academy program has been adopted by and integrated into a full spectrum of learning. It is offered by high schools, community colleges, universities and community-based organizations. There is a natural connection between secondary, postsecondary and corporate learning. This connection allows for students to launch careers in the industry which can include transition to work and to postsecondary.

The fifth one is fostering digital opportunities. We understand that the digital divide can be bridged through education and the Internet, two great equalizers in this century. Diversifying our workforce is crucial to creating and maintaining skilled workers that our country will come to depend upon.

More must be done to ensure that all members of our Nation's workforce have equal access to employment opportunities within the IT sector. Realizing this challenge, we have been working to achieve digital equity in underserved areas that benefit low-income individuals, certain ethnic groups, people in disadvantaged communities, and people with disabilities.

CISCO has established a gender equity project to address the gender divide that seeks ways to increase women's access to IT training and career opportunities. We partner with educational institutions around the world to collect and disseminate best practices on recruitment and retention strategies. Based upon the research that we do on an ongoing basis, we are developing tools and resources such as a gender module for teachers of our programs, marketing materials, gender Web sites, media presentations and

role models designed to attract and retain more women in the IT field.

In conclusion, CISCO Systems, with other business and industry, is committed to working in partnership with career and technical education to help provide the highest quality of information technology programs available to our students and this country. We strongly encourage you to consider the importance of the Federal role in supporting career and technical education programs.

As an industry that is concerned about its workforce's future, we support high quality career and technical education programs at the secondary and postsecondary level that integrate academic and technical skill attainment, encourage women to pursue nontraditional careers, support students of diverse backgrounds and partner with business and industry to provide youth and adults of this country the opportunity to be successful in our workplace.

[The prepared statement of Ms. Zwickert follows:]

Statement of Marie Zwickert, Area Academy Manager for NE and OH Valley, CISCO Systems, Columbia, Maryland

Mr. Chairman and Members of the Committee:

I am pleased to appear before you today to share a company's perspective on the role and importance of Career and Technical Education to America.

I represent Cisco Systems, Inc., the worldwide leader in Internet technologies. Cisco hardware, software, and service offerings are used to create Internet solutions that allow individuals, companies, and countries to increase productivity, improve customer satisfaction and strengthen competitive advantage. We have over 34,000 employees in the United States, Caribbean, Central and South America, Europe, Asia, the Middle East, Africa and Australia. During Fiscal year 2003, our revenue totaled $18.9 billion. Over the years, the Cisco name has become synonymous with the Internet, since we are involved with every type of application. We like to say that Cisco is changing the ways in which people work, live, play and learn!

Cisco's success is not ultimately the result of a product. We are a "knowledge-based" company. We are only as successful as our people are knowledgeable and skilled. For this reason we have always had partnerships with education. Concerned about the long-term capabilities of our workforce, and that of our business partners and customers, Cisco Systems, Inc launched the Cisco Networking Academy Program in 1997 - comprehensive e-learning program, which is designed to teach students Internet technology skills.

Developed and delivered by educators and industry professionals, the Networking Academy program provides a combination of web-based curriculum, instructor led learning, on-line assessments, student performance tracking, hands on labs, instructor training and support, and preparation for industry standard certification. As a result, students can apply classroom learning's to actual technology challenges, which ultimately prepares tomorrow's workforce for life-long learning opportunities, and motivates them to continue their education and learning.

Now in its sixth year, the Cisco Networking Academy program has more than 10,000 academies in 152 countries with over 400,000 participating students. In the United States we have over 4,000 academies with 134, 682 participating students.

As you can tell, Cisco is by no means a "marginal" partner in this important education and workforce endeavor. Based upon our six years of experience with the implementation of the Cisco Networking Academy Program, we now recognize 5 key elements for programmatic success.

1) Academic Rigor and Technical Know-How

There is no way around high academic skills when working in our industry. Without a strong knowledge of mathematics, fundamental scientific concepts, and reading a students cannot pursue the most basic career path. All our curricula are founded upon high academic rigor. Students are required to apply this academic foundation to technical concepts and knowledge. By applying academic basics to networking and other technology skills, the Academy program further develops students' math, science, writing, and problem-solving abilities. Our curricula provides students with both academic and technical competencies. To promote a well-rounded educational experience, the Academy CCNA curriculum is aligned with U.S. national and state math, science, and language arts standards as well as workforce competencies. We have invested in a sophisticated database which crosswalks state Academic standards with the learning targets of our courses. In other words, we are able to answer the age-old question, "why do I have to learn this?"

2) Assessment Designed to Support Learning

Using Internet technologies, the Cisco program relies upon Instructional supportive assessment. The assessment is designed to provide immediate and on-going feedback to students and teachers regarding their proficiencies in specified knowledge and skills. This feedback allows teacher to modify and adjust their instructional approach. Our assessment strategy is designed to inform or improve learning, as well as hold student and teachers accountable for results.

3) Alignment to Industry Standards and Certification

Networking Academy curriculum prepares students for industry standard, , hence enriching the skill set required to succeed in a changing global economy. All academy curriculums are mapped to major certification in the IT industry – both vendor and non-vendor.

4) Seamless Life-long Learning

The Cisco Networking Academy program has been adopted by and integrated into the full spectrum of learning institutions. The program is offered by high schools, colleges, universities, and community-based organization. There is a natural connection between secondary, postsecondary, and corporate learning. This connection allows students to launch careers in the industry which can include transition to work and/or to postsecondary education.

5) Fostering Digital Opportunities

Cisco understands that the digital divide can be bridged through education and the Internet.—two great equalizers of this century. Diversifying our workforce is crucial to creating and maintaining the skilled workforce that our country will come to depend upon. More must be done to ensure that all members of our nation's workforce have equal access to the employment opportunities within the IT sector.

In response to this challenge, the Cisco Networking Academy Program is working to achieve digital equity in underserved areas that benefit low-income individuals, certain ethnic groups, people in disadvantaged communities and those with disabilities. A key strategy to developing the pipeline of workers with technology skills is maintaining long-term relationships with ethnic, student and professional organizations. For example, Cisco provides financial support to the United Negro College Fund, the Hispanic Scholarship Fund Program, and the National Action Council for Minority Engineers to conduct research and promote access to education in science and engineering.

Cisco has also established The Gender Initiative to address the gender digital divide that seeks ways to increase women's access to IT training and career opportunities. We partner with educational institutions worldwide to collect and disseminate information on best practices in recruitment and retention strategies. Based on research findings, we are developing tools and

resources, such as a gender module for teachers of our programs, marketing materials, gender websites, media presentations and role models designed to attract and retain more women to the field of IT.

A key strategy of The Gender Initiative is the Gender Equal Access in Technology Project, designed to increase awareness, recruitment and improve retention of girls in Cisco Networking Academy programs. Central to the project is the reality that women comprise 50% of the U.S. workforce, but hold only 20% of the jobs in information technology. In 2003, Cisco partnered with eleven high schools in eight locations across the United States. These high schools are challenged to increase female participation in the Cisco Networking Academy.

In the United States we have established over 183 academies in 30 United States Empowerment Zones. In addition, we are also working with the US Department of Education's designated minority serving institutions to bring the Academy program to African American's, Hispanic, Native American's and other minorities.

Conclusion:

Cisco Systems, Inc., with other business and industry, is committed to working in partnership with career and technical education to help provide the highest quality Information Technology programs. We strongly encourage you to consider the importance of the federal role in supporting career and technical education programs across this country. As an industry concerned about its workforce's future we support high quality career and technical education programs at the secondary and postsecondary level that integrate academic and technical skill attainment, encourage women to pursue nontraditional career fields, support students of diverse backgrounds and partner with business and industry to provide the youth and adults of this country the opportunity to be successful in the workplace.

Mr. CASTLE. Thank you.

You have been a wonderful panel. You make a very strong case for the Perkins Act legislation and funding. We get that message loud and clear.

I yield myself 5 minutes to start the questioning. I would like to address my first question and maybe my second question, too, to Ms. Walls-Culotta and Dr. White and maybe Dr. Wong.

Moving off No Child Left Behind, I am worried about children left behind. This is sort of counterintuitive for me because I am always talking about the need for academics. Now I am concerned maybe we have overdone it.

For example, in the case of Sussex Vo-Tech, you are turning down 300 kids. You are all talking about the academics and that kind of thing.

I have a friend who is a master carpenter and a great fisherman. Looking at a pond, he can tell you things about that pond that I would not see in a million years. And I am sure—I don't know this for a fact, but I believe that he is not that well educated, but probably had a great deal of interest in the vocational end of it.

My concern is, what kind of education would have been open for him? Are we overstressing the academic side of this? I want to make sure we are not leaving some kids behind that may not be able to handle these things.

Make me feel better about the balance of all of this.

Ms. WALLS-CULOTTA. At Sussex Tech, we accept all students. They have to be passing in one marking period all of their courses, and that is with a 70. We do not ask for A's and B's. We want a very diverse group of students.

In our curriculum, we make sure that it is not all academic based, and it is really geared to their technical programs. We have auto students that when I go out and work with them in the shop areas, they really could care less what is happening in English, but when you can tie it to a car magazine or technical journal and have them write about it, they do not think they are doing English, they think they are doing automotive.

We would like to take all 600 students, but we are up to seven trailers, and we just had an addition 3 years ago. We can only take so many.

Mr. CASTLE. Dr. White.

Dr. WHITE. As we look at our individual academic plan, we sit down and have a conversation with every student as they come to Great Oaks. By doing that, we can determine where that student has deficiencies and what that student needs. We have a motto that "one size does not fit all," so we are very careful to make sure that we meet their academic needs through a variety of ways.

As Ms. Walls-Culotta stated, our students do learn their academics better, more comprehensively, when they are engaged in something that they care about. We also look for other ways to meet their needs.

Virtual academics is a way that we often meet students' needs at Great Oaks. They may relate better to a computer program rather than a classroom and individual teacher. We look for any way to help individual students, any way we can.

Mr. CASTLE. Dr. Wong.

Dr. WONG. It has been said that quality education is in the national interest. However, it is a State responsibility.

One of the issues you have raised in terms of who monitors and who advocates so no child gets left behind really is looking at a State structure. In California, we have over 6 million students in our K-12 public schools. So 6 million students, residing in over 1,000 school districts, the structure in California that helps ensure that there is an advocacy and a degree of universal attention given to those students is through a county delivery model. There are 58 counties in California, and within those 58 counties, there are 58 county offices of education and 58 county superintendents.

So for Congresswoman Woolsey to calibrate what is happening in her two counties, she has to contact two county superintendents. That level of accountability and that level of oversight and leadership really ensures that when we look at those scales, 6.5 million students that those 58 counties are monitoring, working with those individual districts, looking at a specific county, district-by-district, school-by-school performance data to ensure that students are being given access and equity to both academics and workforce preparation.

Mr. CASTLE. Thank you very much. My time is running out, but let me ask about No Child Left Behind.

I am cognizant of the fact that it primarily applies to children before they get to vo-tech high schools, although as I recall, we have 1 year after 8th grade that has to be tested. The President is talking about testing in 12th grade. I would be interested in how you are handling that issue in your schools. Any problems on that, complications, or has it a relatively minor impact at the vocational-technical level?

Ms. WALLS-CULOTTA. No Child Left Behind has made us look at how we deliver our math programming because we found that is where our students were having the most difficulty. As a separate school district in Delaware, we are basically the only school besides the adult ed division, so we do receive Title 1 funds, and we have

now changed from reading to mathematics because of our students' needs.

We have had to add additional time to the day to expand our periods so we can double-dose our math because students coming in to us that were below standard, we did not want to take away from the technical programs that they were in because we felt that made a better connection for them, but we had to figure out another way to provide more math instruction.

Under the accountability system, even though we continue to improve our scores, our students are going on to postsecondary programs. They are earning tech-prep credits. My school will be under school improvement this year because one of our special ed cells cannot make the requirements. This will be 2 years in a row, even though we have done a lot of great things for 1,180 students; we have the 40 who are doing the best in the State, but we can't take credit for that.

Mr. CASTLE. It is No Child Left Behind. I appreciate what you are doing.

Dr. Barton.

Dr. BARTON. Let me add one comment. We have a large number of people that come out of our high schools. A lot of them drop out before they finish high school, and they come on to the community college. We test all of those people to decide what achievement level they have reached. A large number do not reach the requirements to move into programs like nursing and electronics and many of the more sophisticated programs.

We have a large division of remediation or developmental studies that we channel these people through. They can come any hour of the day, night or weekends.

A lot is self-paced technology that we are using. Somewhere like 3,000 a month go through this system. Every week we put out at least 100 of them that go into the program of their choice and have reached that level to leave the remediation program and go into the program of their choice.

They can do and are doing it. The technology is in place to get it done; that is one major thing. We are in a salvaging process, if you want to use that term, but that is what we are doing.

Mr. CASTLE. I hope to do it sooner. My time has run out, but Dr. White and Dr. Wong, any comments?

Dr. WHITE. Relative to No Child Left Behind and increased testing, it certainly has focused us in the area of professional development. It is no longer what we used to call "feel good" professional development. Now we look at how students scored on the assessment, and we determine how to redirect our teaching so we can meet the needs of those students.

Mr. CASTLE. Dr. Wong, your mission is a little wider.

Dr. WONG. We do recognize that the reauthorization of 1998 did compel all school districts to look at the integration of relevancy as well as academic rigor. I believe all school districts in California have taken that to heart. We no longer see relevance and rigor to be exclusive of each other.

Mr. CASTLE. Thank you.

Ms. Woolsey.

Ms. WOOLSEY. Thank you very much. I want to say something to Ms. Zwickert first. CISCO is in my district, and I am sure they participate on Dr. Wong's Education Round Table. They are an outstanding employer in the telecom industry for us, and we thank you. I am pretty sure they are part of the one economic effort that is going on to bring underprivileged women into the digital age, and I congratulate you for that also.

My question is for Dr. Wong and Dr. Barton. You all mentioned how you are working with industry, but I would like to ask both of you to talk about how your process works in determining which educational programs are the most beneficial to your students. And at the same time, do you look into—like, Dr. Wong represents a very, very high income, high-cost-of-living area. Do you look at how a person can earn a living that they can actually raise a family on when you are deciding which programs to train?

Dr. WONG. Well, I agree, when you are looking at a complex issue like workforce preparation, you have to look at regions of a given State. I think part of the delivery model in terms of the Perkins funding is to look at maybe specific counties, work very closely with the local Chamber, the local economic development board. Each and every county in California has a Workforce Investment Board, and most county superintendents actually have a seat appointed by the Board of Supervisors on that Workforce Investment Board. That is an example of a regional approach that is sensitive to labor market demands in a State as complex as California.

Dr. BARTON. I will say that the one thing that you need to hear that we are doing, that might be beneficial: in order to run something as large as this institution with some 70 different programs, and all of them rather complex and tied into the heart of industry and some of the biggest industries in the country, you have to have some real technical support to do this.

What we did many, many years ago was to design a system of advisory boards made up of these people from hospital systems, industries, cut across the entire community, and we now have some 60-plus boards and these people are really volunteers for us. They are not paid, of course, and they are very committed to what they are doing.

A lot comes down from the management level in these factories and hospitals, doctors and dentists and lawyers and police. These people keep us abreast of the technology, the kind of equipment that we have to have, the modifications of curriculums, curriculums that do not need to be there any more, that are outdated, the jobs are not plentiful. All of this comes under these boards and all of this is fed right into our system, along with augmenting it with many other things, as just pointed out.

When we get all of this kind of information, it is relatively easy to keep up with the job market and what they are doing.

Ms. WOOLSEY. And stay in front of it and not behind it because you can get people trained, and the jobs are not there any more.

Dr. White.

Dr. WHITE. I agree with Dr. Barton. Having close industry involvement is key, as well as looking at market labor information. If you have a program that is no longer meeting the needs of the

community and serving the public, you need to divest out of that program.

Ms. WOOLSEY. I want to ask how these programs are working for young women. I have legislation called Go Girl, trying to encourage young girls from 4th grade on to stay in the math, science and technology fields because they lose interest. That is half of our workforce.

Somewhere in your testimony, Ms. Zwickert, you said 50 percent of the workforce is female, only 20 percent are in these technical jobs. Is there anything in your programs that is encouraging young women?

Ms. ZWICKERT. We have a strategy called The Gender Initiative, and we are trying to promote awareness at the high school level for young women so they realize what opportunities are available. So, for example, we have—in the Boston public schools, we work specifically with the community college, and on a yearly basis we provide a Technology Forum where we bring in female systems engineers to work with these middle school and high school girls to educate them accordingly.

Quite honestly, the guidance counselors also need to be educated because many of the guidance counselors are not familiar with what is available. One of our strategies has been to develop a Web site with a tool kit so we can share it with guidance counselors and teachers accordingly.

Mr. CASTLE. Mr. Osborne, you are recognized for 5 minutes.

Mr. OSBORNE. Thank you, Mr. Chairman. I have a very brief question. I don't know if anybody can answer it.

I represent primarily a rural district. There has been a lot of emphasis on academic rigor and what you are doing to get people up to speed in terms of today's economy.

You know, a combine costs about $200,000. If you know how to fix it yourself, it makes a lot of difference as opposed to sitting out in the field. A new tractor is $100,000, and if you know how to weld, fix a center pivot, it is a huge thing in rural areas. I don't know if any of you have any experience in that type of arena or if you have any observations.

It may be a very short question because that is what I am interested in.

We really need to have Perkins grants out in the rural areas. I know there is a push right now to make things more sophisticated, more academically respectable.

But the reality of rural America is these things have got to get fixed, and if we do away with the Perkins grant or some of the things that are currently in it, we have got a problem. So if anybody has a comment, I would appreciate it.

Dr. BARTON. I will take a shot at it. I think I was trying to place our institution in your district, and we have a basic philosophy that if there is a need in that community, we are going to find a way to meet that need, and that is exactly what we would do with what you have described here. You may have to go back to the manufacturer, or you may have to put something together that you could operate a training program, and it wouldn't be that expensive. There are numerous ways to find a way to get those people into a training program, even if we have to carry it out to them, and

we do a lot of that, carry it to them. They don't have to come to the college. We will go to them, and we will find a way to identify exactly what they don't know and do whatever it takes to get them to know what they are after so they can make their own repairs and save a lot of money there. So we do a lot of that, but we don't do it on farming equipment. We do the same thing on a lot of other type of equipment.

Dr. WONG. In California, specifically northern California, Sonoma County and Napa County, of course, are in competition to be the true purveyors of fine wine. However, the wine industry is also supplemented by the dairy industry, and there are strong ag mechanic programs. And many of our high schools contained in the ag mechanic programs are components and metal fabrication, welding mig, tig, as well as gas welding. There is machining components. We work very closely with the machinist union, sheet metal workers, and ironworkers in many of our schools to make sure that those types of skills are responsive to the needs of our particular region. So I want to assure you that that is a good use of Perkins funds that are responsive to regional labor demands.

Dr. WHITE. I can only echo that we have agriculture mechanic programs as well as a number of ag ed programs at Great Oak, and again, we see it as our responsibility to the economic development of our communities, and if the community needs it, we are going to provide it both at the secondary level and also part-time adult ed programs as needed.

Mr. OSBORNE. Thank you.

I won't belabor the point, but, Mr. Chairman, in areas like I represent, I think that the main fear right now is that somehow Perkins is going away, and if so, it will really impact our high schools, our community colleges, our vocational/technical schools. And so we will do whatever we can to preserve it. I am glad to hear that you have some interest also. Thank you. I yield back.

Chairman CASTLE. Thank you, Mr. Osborne.

Mrs. Davis is recognized for 5 minutes.

Mrs. DAVIS OF CALIFORNIA. Thank you, Mr. Chairman.

I wanted to follow up on Ms. Woolsey's question for a second, Ms. Zwickert. Do you have statistics of the number of young women who, in fact, are becoming excited, those who otherwise would not have been, by math and science, for example, and I guess what kind of an outcome would you feel is successful versus kind of lukewarm in terms of the program and how it is working?

Ms. ZWICKERT. Yes. We do have data, and we collect that from the schools, and we use the Internet to maintain that data, and it is information that can be shared. I do not have it here today, but I can obviously get that to you.

What we are actually doing is working with eight different schools around the country to increase female participation in the academy program, and we are measuring those statistics.

Relative to outcomes, what we are trying to do is make young women aware of the various careers that are available. And we recently created a video called "I Am a Female Engineer." and I have a daughter myself who is 15, and quite honestly she is not aware of what engineers do in an everyday job, and I think it is our goal and mission to make young women aware of what summer jobs are

available. So the schools themselves are working collaboratively with the community colleges as well as industry to make these young women aware of the kind of positions that are available.

Mrs. DAVIS OF CALIFORNIA. Thank you. And I know I have seen some of those in my home area of San Diego as well, and part of the question often is what are we seeing in terms of those individuals that are making choices other than what they had perhaps—

Ms. ZWICKERT. I have a really wonderful success story to share with you. We have from Ohio, from Columbus High School. A young woman went through our academy program because she was invited by some of her peers to join the program, and she really had a propensity to succeed in IT. She graduated as a valedictorian from Briggs High School. She went on to Xavier University with a scholarship, and now she is studying business administration with a minor in computer science. And I have many other stories much like that to share.

So it really goes back to the instructor as well to help motivate the young women to learn about careers in IT, and in many instances what we are trying to do is record the best practices and then share them with educational institutions throughout the country.

Mrs. DAVIS OF CALIFORNIA. Thank you. I appreciate that.

Ms. ZWICKERT. Sure.

Mrs. DAVIS OF CALIFORNIA. I think that earlier in the testimony, and I am sorry I wasn't able to be here for that, you talked about remediation and the need to bring students, particularly in literacy and, I am assuming, in mathematics as well, up to a level so they can really take advantage of the programs that you have to offer. How are you working with the teachers and the overall programs in order to do that? Is there particular emphasis on students who you know are going to be taking some of the courses particularly and having some of the partnerships in the community that need those skills, they need the remediation? How are they getting it, and how are you isolating some of those issues?

Dr. WONG. The county office of education in Sonoma County, we are promoting a concept called a graduate guarantee or a warranty. Every single student who goes through our high school system, if any employer feels that they need any kind of additional skills related to their high school coursework, we have a commitment to provide that free of charge. We will provide—we will buy books for them to go back through the adult school programs. We will actually bring training to the employer's site. We are actually on the work sites of several of our large businesses in terms of those employees who have not yet completed their high school diploma. We are on those work sites for GED prep. We are on these work sites for English proficiency, and we are actually at one work site providing coursework necessary for citizenship completion.

Mrs. DAVIS OF CALIFORNIA. And what source of funding are you using for that?

Dr. WONG. We are using funding that flows through the county office of education, which again serves as that umbrella for the 1,000 independent school districts in California.

Mrs. DAVIS OF CALIFORNIA. And not necessarily Perkins money then for that?

Dr. WONG. We want to maintain the integrity of the Perkins money in terms of making sure that it stays localized to the secondary school system.

Mrs. DAVIS OF CALIFORNIA. Great. Thank you.

Thank you, Mr. Chairman.

Thank you all for being here.

I actually served on a school board in San Diego a number of years ago, and we struggled with this all the time, and there was a point at which—there were a number of, I guess I would call it, vocational programs that were phased out because students were not necessarily doing that well. And then they came back in a different form, and there are some, I think, wonderful model schools.

But generally speaking, I still run into many, many students and faculty, parents who feel that we continue to put greater emphasis on students who are going to college, and I am sure that you have all addressed this issue. But is there anything as you work with this that you feel we are perhaps setting up some obstacles in the programs in order to be quite successful in getting out the message that not only are the programs there, the training is there for the instructors, the premium is there to support them as they move forward? Where are the real problems that you see and that we need to be very cognizant of, I guess, as we move forward with this reauthorization?

Dr. BARTON. I think you are going to have to start and go back and take a serious look at the dropout rate in our public schools across the entire country. The number is going up, folks, not down, and we are dealing with that every day. And we are dealing with hundreds of them that drop out, but we are also dealing with hundreds of them that have high school diplomas in their hand, but they test out at around the eighth or ninth grade level, and yet they want to be a nurse or whatever they may want to be. We can't put them in those programs unless we elevate that achievement level.

And that is exactly what we are doing, and I think he gave you a very good answer there. And we do basically the same thing. We have a full-time person that does nothing but work with the leadership in the school district to try to pinpoint these people in advance. And you have touched on the edge of that, to try to find them out who they are, and help them, and get the word to them, and get them into our remediation system in our developmental studies.

So it is a big problem, but it is not going away easily. It is a huge dropout problem, and on the other side of this these people cannot get decent jobs in industry. They just can't do it. They have got to have the skills. The jobs are there, but the skills aren't there, and you can't give them the skills if they are not capable of going into those training programs and acquiring those skills.

So it is a tough situation. We are doing all we can, I can tell you that.

Dr. WONG. Mrs. Davis, in response to your question about teacher certification and teacher training, in the State of California, as you know, certification and training is the function of two major institutions, the California Commission on Teacher Credentialing and the local county office of education, that validate the creden-

tials of those teachers within their counties. So, for instance, San Diego County, Rudy Castruita, superintendent of the San Diego County Office of Education, he has a large team that does nothing but focus upon making sure adequate training is available. The beginning teacher program and support is there, and, of course, the county superintendents work very closely with the commission to make sure that we all have the strategies in place to ensure that highly qualified teachers are standing in front of all of our students.

Dr. BARTON. Could I add one more thing? In order to solve the problem that you are talking about here, in the future you are going to have to go back into the universities, and you are going to have to put some kind of training into those administrators of the future; that they are going to have to deal with this problem and not let this happen to this country that they would go back and allow the philosophy to perpetuate itself that we want all these kids going into a major university when they don't go to a major university. And I think that is where you are going to have to start, right where the origin is.

Mrs. DAVIS OF CALIFORNIA. Thank you.

Dr. White.

Dr. WHITE. I just wanted to respond that we recognize that most parents want their children to go to college, but what we are trying to help parents understand is success comes in all different sizes. There is not one way to win; that success has many different forms. We all know college graduates who are unemployed or underemployed, and yet we want to make sure that our students are successful. So we work individually with each one, with their families, to determine what that looks like and then help them reach their goals.

Ms. WALLS-CULOTTA. In addition to what Dr. White said, we also work very closely with the parents and the students from the time they enter. We do eighth grade visitations, and we talk then about your student is going to have options when he completes our schooling here. He will be able to go into a career or into the military or into college. It doesn't mean that your child has to go on to a 4-year college to be successful. And we try to bring in a lot of guest speakers and take students out to workplaces to really see that you don't always have to have that 4-year college.

Mrs. DAVIS OF CALIFORNIA. Thank you, Mr. Chairman. Thank you.

Chairman CASTLE. Thank you, Mrs. Davis. We appreciate your questioning.

Mr. DeMint is yielded to for his questioning.

Mr. DEMINT. Thank you, Mr. Chairman.

I would like to ask kind of a philosophical question that may be a little broader than just vocational/technical education, if you will allow me just a moment. And, Dr. Barton, I will focus on some of the things you said that I think one out of every four American students graduate high school is a statistic I have heard. And with all the talk back home, around the country, of the lack of jobs and jobs going overseas, it is always almost stunning to me as I tour manufacturing plants in South Carolina that almost inevitably they tell me their biggest challenge is finding skilled workers.

I was in a Tyco plant in Greenwood, South Carolina, last week. They are adding 250 people in a community that has high unemployment. Their biggest problem was the lack of high school preparedness. Even a local teacher who was frustrated with public school came in and applied for a job and didn't pass the basic skills test.

There is some kind of disconnect, and the reason I am asking this question to this group is I know when you are involved with continuous quality improvement, you don't look at the way things have always been done, but you try to discover successes around the edges. And where I think the successes are occurring have been in vocational/technical education not because it is vocational/technical, but it begins to teach academics in a context that has some relevant application to students, and suddenly those who never got academics before get it.

And I see in the high school students—I don't want to be critical of high schools or teachers because they are angels, they work harder than anybody I know, but there is something about the way we are teaching and I think there is something about what you are doing that we need to take back to the rest of our education system, because folks who graduate high school now, even those who succeed, have few marketable skills, and many of them have very little knowledge of what careers are out there. So they have no idea how to apply what they have been learning.

And what we do here and what we do back in the education community is we have got K through 12, everybody is going to learn academics. We are going to pass on information, and those that don't get it we will maybe send them to votech, or if they drop out, we will try to get them to come back later. And it seems to me that what we need to start thinking about is what a lot of you have already been doing in high school, and hopefully middle school, is to recognize that most students don't learn academics well in the abstract, and that teaching academics in the context of careers and skills, not just votech, but banking and marketing and everything else, so that in middle school these kids start to see that this makes sense in their life, and they are not asking, why do I have to learn this, because they start to learn why they have to learn it while they are learning it.

And I am just very discouraged about our education system and that we spend more on it than we do defense and we lose ground to industrial nations every year. And it seems to me as I see, Dr. Barton, what you have done with the charter high school, what we are hearing about today, that you can take kids who are not succeeding in the traditional academic environment and find out that they are very smart, and they may ultimately get a Ph.D., but we have to engage them some way, and I think the way we engage them is the way you are engaging them.

My hope is—I know I am preaching more than I am asking here—if you have seen and you have discovered in your charter high school and these other applications that we can take students who we otherwise didn't think were smart and discover that they really are if we begin to teach them in a way that has a context and relevance to their life.

So, Tom, I know I am not leaving you much to say, but I would just like a philosophical answer related to all of education, not just a little part of it that we are talking about today.

Dr. BARTON. I would say amen to everything you said. That certainly is appropriate. But I think we are doing a lot of what you said, as you know. Most of our programs have clinical training, hands-on learning, applied technology. All of those things we are involved with. I don't think they have that opportunity.

We do cross over, I will say this, with our school district and their career centers and so forth. We share labs with them, sophisticated labs, labs that are very expensive. We are doing some of that, and it is beginning to pay off, but it is slow. It is a slow process. We bus them to our campuses and put them in those labs, and we work with them to get the dual credits while they are simultaneously in high school, and that is called middle college, I believe, now is the new term for it, and that is an appropriate name, of course.

We are doing some of that, but we are not doing enough of it, and Congressman DeMint is exactly right. It is a change—the change must take place down below the college level. It has got to. It has got to take place below there. And we are trying our best to help them get this done by supplying equipment for them, cross-utilizing faculty, cross-utilizing libraries. Our charter school is a perfect example. They are involved not only with high-school-level training, but they are involved with collegiate-level training simultaneously here. So it is beginning to happen, but probably not fast enough—

Mr. DEMINT. I saw a few smiles I liked over here. So just a couple of quick comments. I know I am about out of time, too.

Ms. WALLS-CULOTTA. I didn't realize how much disconnect there was between our academic and technical teachers until one of my math teachers and one of our automotive instructors were participating in a research project for the National Dissemination Centers, and they finally realized math is sterile, and because the automotive instructor was saying, I teach these same concepts, but these are the words I used. So the students are learning the concepts. They don't realize they are learning it. So that is one of the reasons why we try to provide the staff development for our academic teachers to see what really is going on in those technical areas and see how they can make the connection, because the students then realize that an algebraic equation or Ohm's law isn't just something I have got to learn because it is math; if I don't learn Ohm's law, if I put a new speaker in my car, I am going to blow the alternator. So it is really practicality, and it gets the kids to realize, you know, I really do need to know this.

Mr. DEMINT. Thank you, Mr. Chairman.

Chairman CASTLE. Thank you, Mr. DeMint.

We have reached the time of the end of the hearing. I don't know if any Member has a pressing question they didn't get a chance to ask. If not, let me thank all of you very, very much.

The process of all of this is we take all of your testimony as well as what you said today. Staff will review all this, peruse it, and ultimately it will lead to the preparation of legislation. So your contribution is very important to all of us, and your upbeat attitude

about many of the things that are happening in education is appreciated as well. It is not always as upbeat as that. So we appreciate that.

With that we stand adjourned.

[Whereupon, at 2:30 p.m., the Subcommittee was adjourned.]

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