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STRENGTHENING VOCATIONAL AND TECHNICAL 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

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STRENGTHENING VOCATIONAL AND TECHNICAL EDUCATION

Tuesday, May 4, 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 2:10 p.m., in room 2175, Rayburn House Office Building, Hon. Mike Castle [Chairman of the Subcommittee] Presiding.

Present: Representatives Castle, Biggert, Davis of California, Kind, and Van Hollen.

Staff Present: Stephanie Milburn, Professional Staff Member; Krisann Pearce, Deputy Director of Education and Human Resources Policy; Alanna Porter, Legislative Assistant; Deborah Samantar, Committee Clerk/Intern Coordinator; Jo-Marie St. Martin, General Counsel; Dennis Forte, Minority Legislative Associate/Education; Joe Novotny, Minority Legislative Assistant/Education; and Lynda Theil, Legislative Associate/Education.

Chairman CASTLE. Good afternoon, ladies and gentleman. 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 on strengthening vocational education. Under Committee rule 12(B), opening statements are limited to the Chairman and the ranking minority member of the Subcommittee. Therefore, 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 member statements and other extraneous material referenced during the hearing to be submitted to 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 all—I mean, everybody here for joining us today to hear testimony on State and national efforts to implement Federal vocational and technical education programs under the Carl D. Perkins Vocational and Technical Education Act. Today's hearing will provide the opportunity to examine the implementation of the re-

forms from the 1998 reauthorization and will also provide insight on how these programs could be improved to better serve students. This is our second and final hearing on vocational and technical education as we look toward reauthorization of the Perkins Act.

The Perkins program aims to prepare youth and adults for the future by building their academic and technical skills and ensuring they are equipped to proceed with postsecondary education or pursue other postsecondary opportunities. This program represents one of the largest Federal investments in our Nation's high schools and is a key component of our secondary and postsecondary education systems. According to the National Center for Education Statistics, 66 percent of all public secondary schools have one or more vocational or technical education programs with approximately 96 percent of high school students taking at least one vocational and technical course during their secondary studies.

Vocational and technical education is an important postsecondary option as well. Over 2,600 postsecondary sub-baccalaureate institutions, such as community colleges, technical institutes, skill centers and other public and private colleges also offer vocational and technical education. Reforms made to the Perkins Act in 1998 increase the focus on ensuring that participating students at both the secondary and postsecondary levels acquire academic and technical skills as well as complete their respective programs and transition into further education and successful employment.

Some progress has been made in States that have created an initial performance accountability system, and the focus on academic performance among students participating in vocational and technical education courses has been strengthened. However, technology and economic competition are combining in ways that are changing the nature of work and are redefining the American workplace. The need for higher literacy, numeracy, communication and interpersonal skills in the workplace has grown over the past decade and will continue to be an important factor in the workplace in the future.

The skills needed to be successful in postsecondary education are similar to the skills that are required by employers. The need for a strong academic and technical background makes it imperative that the current vocational and technical education system adapt in order to provide the knowledge and skills needed to succeed.

Today, we will hear from individuals who play a role in strengthening vocational and technical education. We will get an overview of the current environment surrounding vocational and technical education. Additionally, two State directors will inform us how State leadership efforts can ensure quality, relevant and rigorous vocational and technical education. In addition, we will hear from a community college to learn how these institutions serve as a vital link between secondary schools and 4-year postsecondary institutions to improve technical education and training. And finally we will hear from a business representative to learn more about what is required to succeed in today's workplace.

During the upcoming Perkins reauthorization, our challenge is to examine the current program to ensure that all vocational and technical education students have access to programs that are sufficiently rigorous in both their academic and technical content as

well as provide clear connections with the education and training beyond high school that most Americans need for continued workplace success. We hope to learn from our panel of witnesses the recommendations regarding suggested changes to further improve Perkins; and we thank them and all of you for joining us.

And I will yield to Congressman Kind for any opening statement he may have.

[The prepared statement of Chairman Castle follows:]

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

Good afternoon. Thank you for joining us today to hear testimony on State and national efforts to implement federal vocational and technical education programs under the Carl D. Perkins Vocational and Technical Education Act. Today's hearing will provide the opportunity to examine the implementation of the reforms from the 1998 reauthorization and will also provide insight on how these programs can be improved to better serve students. This is our second and final hearing on vocational and technical education as we look toward reauthorization of the Perkins Act.

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Reforms made to the Perkins Act in 1998 increased the focus on ensuring that participating students at both the secondary and postsecondary levels acquired academic and technical skills, as well as completed their respective programs and transitioned into further education and successful employment. Some progress has been made as States have created an initial performance accountability system and the focus on academic performance among students participating in vocational and technical education courses has been strengthened.

However, technology and economic competition are combining in ways that are changing the nature of work and are redefining the American workplace. The need for higher literacy, numeracy, communication, and interpersonal skills in the workplace has grown over the past decade and will continue to be an important factor in the workplace in the future. The skills needed to be successful in postsecondary education are similar to the skills that are required by employers. The need for a strong academic and technical background makes it imperative that the current vocational and technical education system adapt in order to provide the knowledge and skills needed to succeed.

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I will now yield to Congressman Kind for any opening statement he may have.

STATEMENT OF HON. RON KIND, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WISCONSIN

Mr. KIND. Thank you, Mr. Chairman. And I do commend you for your leadership on this issue.

I thank the panelists for your presence and anticipated testimony today on the very important goal of reauthorizing the Carl Perkins Vocational and Technical Education Act in this session of Congress. It has been kind of a heavy agenda for this committee, trying to reauthorize the higher education bill generally as well as the Workforce Investment Act, but I think vocational education is one of the more important investments that we have to make in the country to deal with the workforce development issues that we are facing.

And I welcome all the panelists. I am especially pleased to have one of my own, the President of Chippewa Valley Technical College, Dr. Ihlenfeldt, joining us here today.

This is a very important piece of legislation, especially when you take a look at the trends happening on a global scale. Other countries are getting it. There are major country infrastructure investments taking place right in China, India and many other parts of the world. And there are studies coming out, reports being submitted, that unless we are careful, we are going to start losing our ranking as one of the most innovative and creative countries when it comes to science degrees, engineering degrees, workforce development issues generally.

In fact, I don't know how many of you noticed the New York Times article that was published in yesterday's paper, entitled U.S. Is Losing Its Dominance in the Sciences. And we are seeing more and more of that occurring.

Mr. Chairman, without objection, I would like to submit this article for the record at this time.

Chairman CASTLE. Without objection.

[The information referred to follows:]

U.S. Is Losing Its Dominance In the Sciences

By William J. Broad

May 3, 2004

The United States has started to lose its worldwide dominance in critical areas of science and innovation, according to federal and private experts who point to strong evidence like prizes awarded to Americans and the number of papers in major professional journals.

Foreign advances in basic science now often rival or even exceed America's, apparently with little public awareness of the trend or its implications for jobs, industry, national security or the vigor of the nation's intellectual and cultural life.

"The rest of the world is catching up," said John E. Jankowski, a senior analyst at the National Science Foundation, the federal agency that tracks science trends. "Science excellence is no longer the domain of just the U.S."

Even analysts worried by the trend concede that an expansion of the world's brain trust, with new approaches, could invigorate the fight against disease, develop new sources of energy and wrestle with knotty environmental problems. But profits from the breakthroughs are likely to stay overseas, and this country will face competition for things like hiring scientific talent and getting space to showcase its work in top journals.

One area of international competition involves patents. Americans still win large numbers of them, but the percentage is falling as foreigners, especially Asians, have become more active and in some fields have seized the innovation lead. The United States' share of its own industrial patents has fallen steadily over the decades and now stands at 52 percent.

A more concrete decline can be seen in published research. Physical Review, a series of top physics journals, recently tracked a reversal in which American papers, in two decades, fell from the most to a minority. Last year the total was just 29 percent, down from 61 percent in 1983.

China, said Martin Blume, the journals' editor, has surged ahead by submitting more than 1,000 papers a year. "Other scientific publishers are seeing the same kind of thing," he added.

Another downturn centers on the Nobel Prizes, an icon of scientific excellence. Traditionally, the United States, powered by heavy federal investments in basic research, the kind that pursues fundamental questions of nature, dominated the awards.

But the American share, after peaking from the 1960's through the 1990's, has fallen in the 2000's to about half, 51 percent. The rest went to Britain, Japan, Russia, Germany, Sweden, Switzerland and New Zealand.

"We are in a new world, and it's increasingly going to be dominated by countries other than the United States," Denis Simon, dean of management and technology

at the Rensselaer Polytechnic Institute, recently said at a scientific meeting in Washington.

Europe and Asia are ascendant, analysts say, even if their achievements go unnoticed in the United States. In March, for example, European scientists announced that one of their planetary probes had detected methane in the atmosphere of Mars—a possible sign that alien microbes live beneath the planet's surface. The finding made headlines from Paris to Melbourne. But most Americans, bombarded with images from America's own rovers successfully exploring the red planet, missed the foreign news.

More aggressively, Europe is seeking to dominate particle physics by building the world's most powerful atom smasher, set for its debut in 2007. Its circular tunnel is 17 miles around.

Science analysts say Asia's push for excellence promises to be even more challenging.

"It's unbelievable," Diana Hicks, chairwoman of the school of public policy at the Georgia Institute of Technology, said of Asia's growth in science and technical innovation. "It's amazing to see these output numbers of papers and patents going up so fast."

Analysts say comparative American declines are an inevitable result of rising standards of living around the globe.

"It's all in the ebb and flow of globalization," said Jack Fritz, a senior officer at the National Academy of Engineering, an advisory body to the federal government. He called the declines "the next big thing we will have to adjust to."

The rapidly changing American status has not gone unnoticed by politicians, with Democrats on the attack and the White House on the defensive.

"We stand at a pivotal moment," Tom Daschle, the Senate Democratic leader, recently said at a policy forum in Washington at the American Association for the Advancement of Science, the nation's top general science group. "For all our past successes, there are disturbing signs that America's dominant position in the scientific world is being shaken."

Mr. Daschle accused the Bush administration of weakening the nation's science base by failing to provide enough money for cutting-edge research.

The president's science adviser, John H. Marburger III, who attended the forum, strongly denied that charge, saying in an interview that overall research budgets during the Bush administration have soared to record highs and that the science establishment is strong.

"The sky is not falling on science," Dr. Marburger said. "Maybe there are some clouds—no, things that need attention." Any problems, he added, are within the power of the United States to deal with in a way that maintains the vitality of the research enterprise.

Analysts say Mr. Daschle and Dr. Marburger can both supply data that supports their positions.

A major question, they add, is whether big spending automatically translates into big rewards, as it did in the past. During the cold war, the government pumped more than $1 trillion into research, with a wealth of benefits including lasers, longer life expectancies, men on the Moon and the prestige of many Nobel Prizes.

Today, federal research budgets are still at record highs; this year more than $126 billion has been allocated to research. Moreover, American industry makes extensive use of federal research in producing its innovations and adds its own vast sums of money, the combination dwarfing that of any other nation or bloc.

But the edifice is less formidable than it seems, in part because of the nation's costly and unique military role. This year, financing for military research hit $66 billion, higher in fixed dollars than in the cold war and far higher than in any other country.

For all the spending, the United States began to experience a number of scientific declines in the 1990's, boom years for the nation's overall economy.

For instance, scientific papers by Americans peaked in 1992 and then fell roughly 10 percent, the National Science Foundation reports. Why? Many analysts point to rising foreign competition, as does the European Commission, which also monitors global science trends. In a study last year, the commission said Europe surpassed the United States in the mid–1990's as the world's largest producer of scientific literature.

Dr. Hicks of Georgia Tech said that American scientists, when top journals reject their papers, usually have no idea that rising foreign competition may be to blame.

On another front, the numbers of new doctorates in the sciences peaked in 1998 and then fell 5 percent the next year, a loss of more than 1,300 new scientists, according to the foundation.

A minor exodus also hit one of the hidden strengths of American science: vast ranks of bright foreigners. In a significant shift of demographics, they began to leave in what experts call a reverse brain drain. After peaking in the mid–1990's, the number of doctoral students from China, India and Taiwan with plans to stay in the United States began to fall by the hundreds, according to the foundation.

These declines are important, analysts say, because new scientific knowledge is an engine of the American economy and technical innovation, its influence evident in everything from potent drugs to fast computer chips.

Patents are a main way that companies and inventors reap commercial rewards from their ideas and stay competitive in the marketplace while improving the lives of millions.

Foreigners outside the United States are playing an increasingly important role in these expressions of industrial creativity. In a recent study, CHI Research, a consulting firm in Haddon Heights, N.J., found that researchers in Japan, Taiwan and South Korea now account for more than a quarter of all United States industrial patents awarded each year, generating revenue for their own countries and limiting it in the United States.

Moreover, their growth rates are rapid. Between 1980 and 2003, South Korea went from 0 to 2 percent of the total, Taiwan from 0 to 3 percent and Japan from 12 to 21 percent.

"It's not just lots of patents," Francis Narin, CHI's president, said of the Asian rise. "It's lots of good patents that have a high impact," as measured by how often subsequent patents cite them.

Recently, Dr. Narin added, both Taiwan and Singapore surged ahead of the United States in the overall number of citations. Singapore's patents include ones in chemicals, semiconductors, electronics and industrial tools.

China represents the next wave, experts agree, its scientific rise still too fresh to show up in most statistics but already apparent. Dr. Simon of Rensselaer said that about 400 foreign companies had recently set up research centers in China, with General Electric, for instance, doing important work there on medical scanners, which means fewer skilled jobs in America.

Ross Armbrecht, president of the Industrial Research Institute, a nonprofit group in Washington that represents large American companies, said businesses were going to China not just because of low costs but to take advantage of China's growing scientific excellence.

"It's frightening," Dr. Armbrecht said. "But you've got to go where the horses are." An eventual danger, he added, is the slow loss of intellectual property as local professionals start their own businesses with what they have learned from American companies.

For the United States, future trends look challenging, many analysts say.

In a report last month, the American Association for the Advancement of Science said the Bush administration, to live up to its pledge to halve the nation's budget deficit in the next five years, would cut research financing at 21 of 24 federal agencies—all those that do or finance science except those involved in space and national and domestic security.

More troubling to some experts is the likelihood of an accelerating loss of quality scientists. Applications from foreign graduate students to research universities are down by a quarter, experts say, partly because of the federal government's tightening of visas after the 2001 terrorist attacks.

Shirley Ann Jackson, president of the American Association for the Advancement of Science, told the recent forum audience that the drop in foreign students, the apparently declining interest of young Americans in science careers and the aging of the technical work force were, taken together, a perilous combination of developments.

"Who," she asked, "will do the science of this millennium?"

Several private groups, including the Council on Competitiveness, an organization in Washington that seeks policies to promote industrial vigor, have begun to agitate for wide debate and action.

"Many other countries have realized that science and technology are key to economic growth and prosperity," said Jennifer Bond, the council's vice president for international affairs. "They're catching up to us," she said, warning Americans not to "rest on our laurels."

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Mr. KIND. That is why I think today's hearing is important: to talk about where we are going with vocational education, the fund-

ing; what changes need to be occurring within the program dealing with the challenges of the 21st century; a global marketplace and where our students and workers are going to be able to find their roles and the jobs in which to compete on a global basis.

There are many aspects of the act we have to delve into: the accountability provisions; finding out whether it has become too cumbersome, whether there are opportunities of streamlining that; the gender equity issues again; addressing the aging population and the fact that we have close to 80 million baby boomers rapidly approaching retirement, and what this is going to mean to the workforce of this country; and how the community and technical colleges throughout the Nation are going to be playing a crucial role, I believe, in dealing with all of that. Some big issues.

I am glad to see we have a distinguished panel to speak on those issues; and just to indulge me, a couple of remarks about Dr. Ihlenfeldt.

He has been the President of CVTC since 1994, and he has been doing incredible things to bring the technical school in Eau Claire, Wisconsin, the heart of my congressional district, as well as the technical school system in Wisconsin into position for the challenges of the 21st century. A lot of innovative programs: the Health Academy partnering with high schools and students, trying to deal with the shortage of health care providers in the Chippewa Valley area; a recent announcement on moving forward on a nanotechnology; very involved in a host of economic development issues. I have been very impressed with his willingness to try form these public-private partnerships and what we need to do, working together, to deal with the challenges that all of us are facing in creating jobs and keeping good-paying jobs in our own community. And I am looking forward to working with him on a host of other issues as we proceed.

In fact, most recently, unfortunately, the Chippewa Valley area had back-to-back-to-back announcements of companies closing up shop, affecting close to 600 workers and jobs. It was Dr. Ihlenfeldt, along with a host of other local community leaders, that formed a rapid response team in order to deal with the needs of those workers and their families; and a lot of it is going to be reintegrating education and job training programs in order to find them a place to land in a very turbulent and difficult economic environment.

Thank you, Mr. Chairman, for hosting this hearing. I thank the witnesses and look forward to their testimony and yield back my time.

Chairman CASTLE. Thank you, Mr. Kind. We appreciate your statement and look forward to going through some questions and answers with the witnesses.

Let me try to explain to everybody in the room what we are doing. We are talking about a reauthorization process. About every 5 or 6 years, generally, for most pieces of legislation, we review them and go through what is called a reauthorization process in which we update them. It is our hope that we can work it out in a bipartisan way. Sometimes we can't; sometimes there are small issues that prevent that. But I think we are relatively close on vocational education, and it is hopefully something we can do in the

next month or so and take it to the floor of the House of Representatives. That remains to be seen.

We had, as I indicated, one other panel—last week, I believe—and this panel today. The testimony of the witnesses is vitally important, the written testimony, because all of the various staff will look at that and analyze it in terms of adding to what we are doing.

The testimony today is important. The witnesses will have 5 minutes, after which I start banging on the gavel. And we have thrown the gavel here—no, just kidding about that. Hopefully, you can keep your testimony to 5 minutes, and then we will have some Q&A. It may seem short to you, but believe me, we do parse pretty carefully the testimony you have submitted, so you don't have to read it into the record. And we have tried, and I think we have in this case gotten—obtained a balanced panel that represents different components and interests of vocational education outcomes, all the way from the education system to the community college system to the employment base. So that is the thrust of what we are doing.

The methodology we will follow is, I am going to read introductions of several of you. Mrs. Biggert will introduce a witness and Mr. Kind has already spoken about Dr. Ihlenfeldt and may again for a moment or so; and then you will have 5 minutes to make your presentation. And we will go from Ms. Brand to Ms. Quinn, and then we will each take 5 minutes for questions and answers. So that is basically how we will proceed with the rest of the day.

With that, I will go through some of the introductions, and we will start with Ms. Betsy Brand, who has been the Co-Director of the American Youth Policy Forum since 1998. In this capacity, Ms. Brand organizes a portion of the speaker forums, field trips and special meetings to bring policymakers together on issues that affect youth. Previously, she served as a Minority Legislative Associate for the House Committee on Education and Labor, and subsequently served with Senator Dan Quayle as a professional staff member on the Senate Labor and Human Resources Committee.

In 1989, Ms. Brand was appointed Assistant Secretary For Vocational and Adult Education at the U.S. Department of Education. From 1993 to 1998, Ms. Brand operated a consulting firm, Workforce Futures, Inc., focusing on policy and best practices affecting education and workforce preparation.

Our second witness will be Mrs. Jean Stevens, who currently serves as the Assistant Commissioner of Curriculum and Instructional Support for the New York State Education Department. Her responsibilities include leadership and oversight of all curriculum areas, summer institutes, technology policy and math and science partnerships. Mrs. Stevens is also responsible for policy and program development for adult education, adult and secondary career and technical education, Tech Prep and High Schools That Work. She serves on the department's School Leadership Implementation Group and is on the agency steering committee for the implementation of the No Child Left Behind legislation.

And I call on Mrs. Biggert, who will now introduce.

Mrs. BIGGERT. Thank you very much, Mr. Chairman.

I always say my colleagues can learn from what we are doing back in Illinois. I say it so often that they really get tired, I think, but it is true.

I am very proud today to introduce a fellow Illinoian, Sandy Dunkel. Ms. Dunkel is the Division Administrator of Career Development for the Illinois State Board of Education where she serves as the State Director of Career and Technical Education. In this position, she oversees all State and Federal programs designed to prepare students for the challenges of higher education and the workplace.

She currently serves on the board of the National Association of State Directors of Career and Technical Education and many other State and Federal committees.

Ms. Dunkel has been with ISBC for 24 years. In her time there, she has served in a number of positions working with such programs as gender equity, workforce preparation, Tech Prep, Perkins and the Jobs For Illinois Graduates program. Prior to joining the State agency, she taught junior high home economics for 4 years in Illinois and Florida.

She holds a Bachelor's degree in Home Economics Education from Eastern and a Master's degree in Vocational Education Administration from the University of Illinois at Urbana-Champaign. So she has a wealth of experience.

Thank you very much for joining us. I look forward to your testimony, as do the rest of my colleagues.

Chairman CASTLE. Thank you, Mrs. Biggert, and we welcome you, too.

And let me turn to Mr. Kind to see if there is anything further he wants to say about Dr. Ihlenfeldt.

Mr. KIND. I think I embarrassed him good enough today.

Chairman CASTLE. And finally—our final witness will be Ms. Brenda Quinn. She has 20 years of senior level managerial experience with high technology, engineering and manufacturing companies. She provides hands-on leadership and direction for corporate and business development, marketing sales, human resources, financial management and strategic development.

During her career at Intelitek, she has focused on aggressive scheduling and financial objectives to support international operations that are effective in managing multiple sites and staffs that are culturally and functionally diverse.

And I have already given the other instructions, so we are ready to go. Ms. Brand, we will turn to you for your lead-off testimony.

STATEMENT OF BETSY BRAND, CO-DIRECTOR, AMERICAN YOUTH POLICY FORUM

Ms. BRAND. Thank you, Chairman Castle, Congressman Kind and members of the Subcommittee; thank you very much for the opportunity to testify on the subject of strengthening vocational education.

As you said, Chairman Castle, the need for higher literacy, numeracy, communication and interpersonal skills in the workplace has grown over the past decade and will continue to grow. New evidence demonstrates that the English and math skills that high school graduates must master for success in postsecondary

education are the same as those needed in high-performance careers. Also, more jobs require postsecondary education and the labor market rewards those who take four or more occupational courses in high school.

There are many high schools not preparing our youth well for their careers and livelihoods. Problems at the secondary school level have been chronicled in a number of reports that focus on dropout rates in large urban high schools as high as 60 percent; poor student performance in math, science and English; the structure and culture of many high schools that allows too many students to fall through the cracks or get by with low-level courses; unmotivated students because they fail to see the relevance of what they are learning; and the lack of clear pathways to postsecondary education and careers.

Current high school reform efforts to improve student outcomes share several common themes and these are themes that Federal investment strategy and career and technical education can easily support and contribute to. These strategies include smaller, personalized student-focused learning, rigorous integrated curriculum linked to standards, finding ways to connect youths with adults in a meaningful, supportive manner; supports for students, including college and career exploration and counseling; making learning relevant by linking it to careers; using the community for learning; and helping students advance more smoothly from secondary to postsecondary education.

As a strategy to help improve positive CTE, in Rigor and Relevance, which I believe was distributed to many of your offices recently, I recommend a strategy for Federal funding, that funding be used to develop and build the capacity of States, school districts and schools to offer and support high-quality CTE programs of study.

A program of study is defined as a multiyear, grades 9-through-14 or 9-through-16 sequence of courses that integrates core academic knowledge with technical and occupational knowledge leading to an industry certificate or an Associate's or Bachelor's degree. In grades 9 and 10, courses would focus primarily on academic foundations, using the context of careers to make core curriculum relevant and meaningful. In grades 11 and 12, students would continue to take core required curriculum as well as technical electives and integrated course work in their chosen career field.

The pathways between high school and postsecondary education with options for dual enrollment would exist; internships in the work-based learning would be provided; early and ongoing college and career counseling and exploration would be available; and students in schools would be held to the high standards consistent with No Child Left Behind, as well as measuring labor market outcomes.

The main difference between this concept of a program of study and what is currently authorized under the Perkins Act is that a program of study is a comprehensive, well-thought-out, rigorous and articulated program that begins in the 9th grade, and it ends with the attainment of certification or degrees.

The bulk of the funds in a program-of-study approach would be used to support rigorous and integrated teaching and learning and

for professional development for both academic and CTE teachers at the secondary and postsecondary levels.

Let me provide a few more specific recommendations for reauthorization. First, it is clear that high school students need more than pure academic preparation, and preparation for careers is an important goal. The Perkins Act has a critical role to play in preparing our youth for a changing economy, which means both academic and occupational skills. Also, it is very important for students to understand how their studies are relevant and linked to their future, and CTE can help make this connection. We need continued support for career and technical education.

Second, I would suggest eliminating the statutory restriction that funding can only be used for CTE programs that lead to less than a baccalaureate degree. This current law provision creates an artificial barrier between 2- and 4-year colleges and limits learning for students. Perhaps at one point, this barrier made sense, but in today's economy, we should encourage students to pursue the highest degree possible.

Third, create and support academically rigorous programs of study that are comprehensive and span grades 9 through 14 or 16, as I just described. Federal funds should be used to support these programs that allow freedom of design at the State and local level. As you do that, I believe you can build on Tech Prep, career academies, Career Clusters and early college-high school models that are in the development of programs of study. These models already possess many of the elements of a program of study and they can be made more comprehensive and rigorous.

Lastly, I would suggest changing from entitlement funding to a competitive grant at the local level. In my experience of visiting hundreds of high schools and CTE programs over many years, one thing has consistently troubled me. It is that many schools look at the Perkins Act as an entitlement which they will receive regardless of their efforts in helping students and whether those students learn and succeed.

I believe that by changing the grant from an entitlement to a competitive one, schools will be forced to reexamine their programs in much greater detail and will be forced to improve much more quickly.

Thank you for the opportunity to testify, and I would be happy to respond to questions.

Chairman CASTLE. Thank you, Ms. Brand.

[The prepared statement of Ms. Brand follows:]

Statement of Betsy Brand, Co-Director, American Youth Policy Forum, Washington, DC

Chairman Castle, Ranking Member Woolsey, and Members of the Committee, thank you very much for the opportunity to testify before you today on the issue of "Strengthening Vocational Education."

The Carl D. Perkins Vocational and Technical Education Act (Perkins Act) is a far-reaching federal law that touches many young people in high schools and community colleges around the nation and helps to prepare them for meaningful and well-paying careers. But, as our economy changes, the skills needed to effectively meet the challenges of our workforce are evolving and increasing. In turn, this calls for a significantly different kind of education and workforce preparation, the topic of today's hearing.

In my testimony today, I will be speaking as someone who has worked on and closely followed the evolution of the Perkins Act over the past 25 years. My experience includes serving as a Congressional staffer with responsibility for the reauthorization of the Perkins Act, serving as the Assistant Secretary for Vocational and Adult Education in the Administration of President George H.W. Bush to implement the law and promote reforms, and at the American Youth Policy Forum acting as a promoter of education policies and programs that help young people succeed.

The American Youth Policy Forum (AYPF) is a non-profit, non-partisan professional development organization based in Washington, DC. AYPF provides learning opportunities for individuals working on policy issues affecting youth at the national, state, and local levels. Participants in our learning activities include Congressional staff, Executive Branch aides, officers of professional and national associations, Washington-based state office staff, researchers, and education and public affairs media. (For further information on AYPF, see Appendix A.)

As part of our work at AYPF, we also organize discussion groups with a wide range of education policymakers, practitioners, and researchers. From December 2001 to April 2003, we hosted a series of discussions with over 60 representatives from schools, federal, state, and local education agencies, national organizations, and business to consider what career and technical education should look like in the 21st Century economy and what the federal role in career and technical education should be. The discussion from this expert group led to the report, *Rigor and Relevance: A New Vision for Career and Technical Education, A White Paper*, which I believe was sent to your offices last year. The purpose of the report is to encourage a new look at career and technical education (CTE), given today's education and economic realities.

Throughout my testimony I will refer to CTE, which can be considered synonymous with vocational education, but is a more current term. Also, my comments today will focus on students who are in high school and preparing for college and careers, not on older workers.

The Current Environment

The need for higher literacy, numeracy, communication, and interpersonal skills in the workplace has grown over the past decade and will continue to grow. The skills needed to be successful in college are increasingly the same skills that are required by employers. New evidence demonstrates that the English and mathematics content skills that high school graduates must master for success in postsecondary education are the same as those needed for a high-performance career.[1] This finding and other labor market trends make it imperative that the current CTE system adapt to our changing economy.

- The changing nature of work requires higher literacy, numeracy, and technical skill levels. Nearly half (46%) of all employers reported difficulty in hiring qualified workers in the past year and close to a third (29%) believe they will experience difficulty in hiring in the year ahead.[2]
- More jobs now require some postsecondary education, but not necessarily a 4-year degree.[3]
- The labor market rewards those who take four or more occupational courses in high school.[4]
- While approximately 33 percent of adults receive a bachelor's degree,[5] the remainder needs other avenues and choices to gain the technical and occupational skills and further education to be successful in the workforce.

In addition to considering economic and labor market needs and trends, the Committee must consider that state of secondary school education and the poor performance of many American high schools. Problems at the secondary school level have been chronicled in a number of reports by AYPF, the National Commission on the High School Senior Year, and the National Association of Secondary School Principals, to name a few.[6] Other important reports provide an analysis of the difficulties high school students have in entering and persisting in postsecondary education, due to poor academic preparation and poorly articulated pathways.[7] Findings include:

- Dropout rates in large urban high schools can be as high as 60%, with students leaving as early as the ninth grade.
- Student performance on math, science, and English has shown almost no improvement over two decades and is mediocre compared to other developed countries.[8]
- The achievement gap is well documented.
- The structure and culture of many high schools inhibit personalized learning and allows too many students to "fall through the cracks" or get by with a smorgasbord of low-level courses.
- Many students do not see the connection between school and careers and their future and are not motivated to learn.[9]

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[1] *Ready or Not: Creating a High School Diploma That Counts*. 2004. Washington, DC: The American Diploma Project, a Partnership of Achieve, Inc, The Education Trust, and the Thomas B. Fordham Foundation.

[2] Dixon, K.A., Duke Storen, and Carle E. Van Horn. 2002. *American's Attitudes About Work, Employers and Government*. New Brunswick, NJ: John J. Heldrich Center for Workforce Development, Rutgers University.

[3] U.S. Department of Commerce, U.S. Department of Education, U.S. Department of Labor, National Institute of Literacy, and the Small Business Administration. 1999. *21st Century Skills for 21st Century Jobs*. Washington, DC: U.S. Department of Commerce, etc.

[4] Bishop, John and Ferran Mane. 2003. Unpublished research. Ithaca, NY: Cornell University, New York State School of Industrial and Labor Relations, and Mane, Ferran. 1998. *Trends in the Payoff to Academic and Occupation-Specific Skills: The Short and Medium Run Returns to Academic and Vocational High School Courses for Non-College Bound Youth*. Ithaca, NY: Cornell University, New York State School of Industrial and Labor Relations and Kemple, James. 2004. *Career Academies: Impacts on Post-secondary Education and Employment*. New York City: MDRC.

[5] National Center on Educational Statistics. 2001. *Digest of Education Statistics*. Washington, DC: U.S. Department of Education.

[6] Reports include *High Schools of the Millennium* by AYPF, *Raising our Sights: No High School Senior Left Behind* by the National Commission on the High School Senior Year, and *Breaking Ranks: Changing an American Institution* by the National Association of Secondary School Principals.

[7] *Answers in the Toolbox* by Cliff Adelman, U.S. Department of Education and *Betraying the College Dream: How Disconnected K-12 and Postsecondary Education Systems Undermine Student Aspirations* by Andrea Venezia, Sanford University.

[8] National Center on Educational Statistics. 2000. *National Assessment of Educational Progress*. Washington, DC: U.S. Department of Education and National Center on Education Statistics. 1999. *Trends in International Mathematics and Science Study*. Washington, DC: U.S. Department of Education.

[9] National Research Council Institute of Medicine. 2003. *Engaging Schools: Fostering High School Student's Motivation to Learn*. Washington, DC: The National Academies Press.

- Students, particularly at-risk and low-income students, often do not receive information and guidance about prerequisites and requirements for postsecondary education until too late, and they lack clear pathways to postsecondary education and careers.[10]

Partly in response to these problems, the No Child Left Behind Act (NCLB), which sets high standards for all schools and students, was enacted. The intense focus on closing the achievement gap puts new pressure on programs, like CTE, to demonstrate increased student performance. NCLB has also raised awareness that many teachers, including CTE teachers, lack high level content knowledge, including technical content, in their field or are being asked to teach out of their field entirely. These are other issues to be considered as the Perkins Act is reauthorized.

In summary, the increased skill requirements of the labor market and the failure of many high schools to adequately educate their students demand a review of current CTE policies and appropriate change.

High School Reform Efforts

Given the enormity of the problems at the high school level, I'm happy to say that many communities, supported by funds from several major foundations (The Bill and Melinda Gates Foundation and the Carnegie Corporation of New York, for example) are taking on the huge task of restructuring their secondary schools to improve student outcomes. Even before this latest round of high school reform, CTE programs were, in many parts of the country, leading the way in designing high school programs that are more rigorous, relevant, and connected to students' future college or career plans.

Programs like High Schools That Work, Tech Prep, and career academies, which have all emerged from the CTE field, include a focus on smaller, career-themed programs, in which students take more rigorous coursework that is more clearly related to their future career and college plans. Some of these programs, especially Tech Prep, are specifically designed to allow students to more easily transition from secondary to postsecondary education through articulated pathways and dual enrollment. And, many CTE programs support students in a more personal way, by providing mentors and role models from business and industry. The innovations that have emerged from CTE programs have helped lay the foundation for many of the more current high school reform initiatives.

Current high school reform efforts share several common themes – themes that a federal investment strategy in CTE can easily support and contribute to. While no one expects the federal investment in CTE through the Perkins Act to solve all of the challenges of high schools, it can certainly support many of the major reform strategies designed to improve students' outcomes that are increasingly common. These include:[11]

- smaller, personalized and student-focused learning opportunities,
- rigorous, integrated curriculum,
- connecting youth with adults in a meaningful, supportive manner,
- supports for all students, including guidance and college and career exploration,
- making learning relevant by linking it to careers or other themes (like the arts),
- providing various learning methodologies to meet multiple learning styles,
- providing choices and options for teens based on their interests and future plans,
- using the community (employers) for learning, and
- helping students plan for and advance from secondary to postsecondary education in a more thoughtful and planned manner.

Career and Technical Education Programs of Study

Every student leaving high school should possess interdisciplinary knowledge – consisting of academic, technical, occupational, employability, civic, and social skills – that enable him or her to pursue and advance in postsecondary education or a career and participate meaningfully in the workplace, society, and as a family member. To help bring this about, in *Rigor and Relevance* I recommend that federal funding be used to develop and build the capacity of states, school districts, and schools to offer and support high quality CTE *programs of study*.

A CTE program of study is defined as a multi-year (grades 9-14 or 16) sequence of courses that integrate core academic knowledge with technical and occupational knowledge leading to higher levels of skill attainment over time with a unifying theme around which to organize the curriculum. A program of study by design provides students with a pathway to postsecondary education and a career by detailing academic and occupational competencies needed for advancement. (For a complete description of CTE programs of study, see Appendix B):

Some of the key elements of a CTE program of study include:

- Comprehensive curriculum plan for grades 9-14 or 16 that includes a rigorous core academic program integrated with technical or occupational courses and leading to an industry certification or associate's or bachelor's degree.
- In grades 9-10, courses would focus primarily on academic foundations using the context of careers to help make the core curriculum relevant and meaningful and to show how academic concepts can be applied in work situations.
- In grades 11-12, students would continue to take the required core curriculum, but academic and CTE teachers would collaborate so the material would include applications to various career-areas, such as health, marketing/business, or manufacturing technology.
- CTE curriculum would be integrated, helping students earn certain required math, science, history, or English credits through specially-designed technical or occupational courses.
- Articulation between the high school and postsecondary institution to help students move as efficiently as possible along a college/career pathway would exist. Programs are designed to allow students to take advanced courses or courses for college credit while in high school. High school curriculum and exit exams are aligned with college entrance requirements.
- Smaller learning environments are autonomous and provide a more personalized learning experience for students, a well as providing a sense of identify and connection to other students and adults.
- Internships or work-based learning opportunities with employers or other organizations in the community allow students to explore careers. Employers provide input and guidance on curriculum and ensure that it meets industry standards.
- Early and ongoing college and career awareness and exploration to help guide career and college choices are available.
- Programs are open to students of all abilities. Students would not be tracked or assigned to a CTE program of study based on previous history, grades, or other arbitrary selection processes. They would select a program of study based on their interests.
- Students and schools are help to high standards consistent with NCLB requirements.

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[10] Ven..., Andrea, Michael W. Kirst and Anthony L. Antonio. 2003. *Betraying the llege Dream: How Disconnected K-12 and Postsecondary Education Systems Undermine Student Aspirations*. Stanford, CA: Stanford University.

[11] Various groups, including the American Youth Policy Forum, Jobs for the Future, the National Association of Secondary School Principals, and several foundations, including the Carnegie Corporation of New York and the Bill and Melinda Gates Foundation, have very similar approaches to the essential elements of a successful high school experience.

Creating programs of study will, in many cases, require that curriculum be newly created or adapted from an existing program. The state can play an important role in helping to identify career pathways based on labor market needs, provide curricular frameworks, and develop integrated standards and assessments to support them.

At the local level, teachers at both secondary and postsecondary education levels need to work together to develop integrated curriculum to meet local needs. Teachers and college faculty also need planning time together to develop integrated, interdisciplinary curriculum, melding theory and practice. Some CTE teachers would need to enhance their content knowledge; some teachers of academic disciplines would need to understand how knowledge is applied and used in the workplace in order to develop this integrated curriculum within the program of study. Both academic and technical teachers will most likely need professional development to better understand how contextual teaching and learning can be used as a tool for dealing with students with multiple learning styles.

Activities that would be funded would include the:

- Development and support of comprehensive (grades 9-16), coherent, and focused programs of study organized around a career theme;
- Professional development and planning time for teachers and faculty who will develop rigorous, interdisciplinary, integrated, applied curriculum and assessments, linked to standards;
- Career and college guidance and counseling;
- Building stronger partnerships with employers and opportunities for learning in the community;
- Development of sequenced, articulated pathways from high school to postsecondary education, including options for concurrent or dual enrollment; and
- Support of models such as Tech Prep, career academies, early college high schools with a career theme, or career clusters.

The main difference between this concept of a program of study and what is currently authorized under the Perkins Act is that a program of study is a comprehensive, rigorous, and articulated program that begins in the ninth grade and ends with the attainment of an industry certification or college degree. Currently, schools can use Perkins funding to support one or several discrete vocational education programs, that are not linked to an overall curriculum plan or that lack academic rigor. The program of study notion would strongly lend itself to supporting small high schools or small schools within a school, with a distinct career-themed identity.

Examples of schools that use a program of study approach do exist. Sussex Tech High School in Georgetown, Delaware is a wonderful example of a school that completely updated its old vocational education into a rigorous, standards-based program. All students are required to take four English, three math, science and history credits, and 10 technical credits in a program of study for graduation. Students select from courses in the Health and Human Services, Automotive Technology, Communications and Information Technologies, or Industrial/Engineering Technologies cluster. Sussex Tech has been recognized as a National School of Excellence and as one of the original New American High Schools by the U.S. Department of Education.

Brighton High School in Brighton, Massachusetts is another high school that revamped its curriculum to increase academic rigor in response to the Massachusetts Comprehensive Assessment System (MCAS). Using a career cluster approach, students entering in ninth grade are placed in a Freshman Academy to improve their basic skills and to expose them to the four career clusters they can attend in the 10th – 12th grades. The clusters include Law, Government and Public Service (which includes TeachBoston), Business and Technology, School of Health Professions, and Media, Arts and Communication. Students in the pathway take a full load of traditional academic classes which are reinforced and complemented by classes and experiences focused on these fields. With a student body drawn from the nearby immigrant communities, Brighton has been successful in engaging their students and raising student performance on the MCAS.

Recommendations for Reauthorization

While we wish it were true, not all CTE programs are as rigorous, relevant, or comprehensive as the ideal and the two examples I just described. This is where the reauthorization of the Perkins Act can play a vital role. While CTE cannot solve all of the problems that high schools or adolescents face, the Perkins Act can be amended so that CTE programs at the high school level result in improved academic and labor market outcomes and more engaged students.

First, high school students need more than pure academic preparation; preparation for careers is an important goal. NCLB has been successful in bringing about wide scale education reform and focusing on closing the achievement gap, but measuring adolescents solely by their scores on standardized tests ignores many of the other goals we have for them: to be civically and socially engaged, to be a supportive family member, and to be a contributing member of the workforce. The Perkins Act has a critical role to play in preparing our youth for the changing economy, which means both academic and occupational preparation. Also, students need to understand how their studies are relevant and linked to their future, and CTE can help make this connection.

Eliminate the statutory restriction that funding can only be used for programs that lead to less than a baccalaureate degree. This provision creates artificial barriers between two- and four-year institutions and limits learning for students. Perhaps at one point, this barrier made sense, but in today's economy, we should encourage students to pursue the highest degree possible. Over half of the baccalaureate degrees awarded are in career and technical fields already (i.e. health, business, and engineering). Policy should support stronger articulation between the K-16 education systems and make transitions from one stage easier and more transparent.

Create and support academically rigorous Programs of Study that are comprehensively developed and span grades 9-14 or 16. Programs of study must focus on providing relevant, rigorous, integrated, and contextualized curriculum in a career area; professional development that helps teachers understand and use integrated curriculum, aligned with standards; clear, articulated pathways to postsecondary education; partnerships with employers and industry to provide internships and work-based learning; ongoing guidance and counseling; and alignment of accountability systems with NCLB as well as labor market outcomes. Federal funds should be used to support programs that include these main elements, allowing freedom of design at the state and local level.

Build on Tech Prep, career academies, career clusters, and early college high school models in the development of Programs of Study. Tech Prep, career academies, and career clusters already possess many of the design elements of a program of study, but they can be made more comprehensive and rigorous.

Change from entitlement funding to a competitive grant at the local level. In my experience of visiting hundreds of high schools and CTE programs over many years, one thing has consistently troubled me. It is that many schools look at Perkins Act funding as an entitlement, which they will receive regardless of their efforts in helping students learn or succeed. I believe that by changing the grant from an entitlement to a competitive one, schools will have to reexamine their programs in much greater detail and will be forced to improve much more quickly.

Closing

While examples of excellent CTE programs abound throughout the U.S., the majority of programs still need improvement particularly as we move to a higher level of expectation for all students. By creating a tone and culture of continuous improvement, focusing on more rigorous academics, keeping youth engaged, and using disaggregated outcome data as envisioned by NCLB, the Perkins Act can contribute to improved student outcomes that are measured not only by performance on standardized tests, but also by their actual performance in the workforce and by the soundness of our economy.

Appendix A
American Youth Policy Forum

The goal of the American Youth Policy Forum (AYPF) is to enable policymakers and their aides to be more effective in their professional duties and of greater service to Congress, the Administration, state legislatures, governors, and national organizations in the development, enactment, and implementation of sound policies affecting our nation's young people. We believe that knowing more about youth issues, both intellectually and experientially, will help them formulate better policies and do their jobs more effectively. AYPF does not lobby or take positions on pending legislation. Rather, we endeavor to develop better communication, greater understanding and enhanced trust among these professionals and to create a climate that will result in constructive action.

Each year, AYPF hosts 35 to 45 learning events and develops policy reports disseminated nationally. In forums and discussion groups, participants interact with national-renowned thinkers, researchers, and practitioners. They learn about national and local strategies for formal and information education, career preparation, and the development of youth as resources through service and skill development activities. Participants have opportunities to dialogue with young people and youth service professionals, to learn about, compare, and contrast interventions for youth, and to share and augment their own base of knowledge. On study tours, participants have opportunities to visit schools undergoing comprehensive reforms, after-school and community learning sites, and youth employment and training centers. Such opportunities enable participants to learn experientially from the young people and adults working with them.

AYPF also provides easy-to-read publications on issues affecting youth development in all of its dimensions. Findings from our publications form the basis of conference presentations and workshops. They have been cited by Congress and are used in university courses and staff development training. Our recent publications serve as handy guides for policymakers and youth practitioners in issues of testing and assessment, indicators of success in public education, best practices and research-based strategies in youth programming, and the status of youth in America.

(For more information about these activities and publications, please visit www.aypf.org.)

Appendix B
Programs of Study[12]

A CTE program of study is defined as a multi-year sequence of courses that integrate core academic knowledge with technical and occupational knowledge leading to higher levels of skill attainment over time with a unifying theme around which to organize the curriculum. A program of study by design provides students with a pathway to postsecondary education and a career by detailing academic and occupational competencies needed for advancement.

Programs of study can take several forms and resemble career clusters, career academies, tech prep programs, small learning communities, or small schools. A technical high school that offers various career-themed programs is an example of how programs of study can be provided. Another example would be one or more free-standing career academies located within a comprehensive high school. Free-standing small schools with a career theme are another possibility. Comprehensively designed programs of study begin in high school in ninth grade and have seamless transitions to a minimum of two years of postsecondary study resulting in a recognized industry certificate and/or a degree. The career field or area serves as a unifying theme in developing programs of study between secondary and postsecondary education. Career-themed programs of study would include opportunities for students to experience their career field first hand, through work with employers or other organizations in the community. A program of study would include early and ongoing college and career awareness and exploration to help guide career and college choices. The program of study model could also easily be adapted for non-career themes, such as the performing arts or math/science magnet.

A CTE program of study would allow a high school to organize itself into smaller, more autonomous units that would also have the benefit of providing a more personalized learning experience for students and provide a sense of identity and connection to other students and adults, very much along the lines of the small schools movement.

Secondary students in CTE programs of study would take a core academic curriculum (strong in literacy development, numeracy, science and social sciences), along with a concentration of electives in a broad career area. Programs of study would allow students to not only gain the core skills needed to meet high standards, but also explore various careers, develop employability and occupational skills, and learn in context. In the lower high school grades (9-10), a program of study would focus primarily on academic foundations using the context of careers to help make the core curriculum relevant and meaningful and to show how academic concepts can be applied in work situations. Students in the early high school years would be adequately exposed to both career and college awareness and exploration so that they make informed decisions and know what courses to take in high school to prepare for college. Pathways would be clearly described and understood by students, parents, teachers, and counselors. CTE students would be required to take any high school exit exams (common at the end of tenth grade) that are part of the state accountability system.

In the upper high school grades (11-12), students would continue to take the required core curriculum, but academic and CTE teachers would collaborate so the material would include applications to the various career areas in the program of study, such as

[12] Material taken from *Rigor and Relevance: A New Vision for Career and Technical Education; A White Paper,* by Betsy Brand, 2003, Washington, DC: American Youth Policy Forum.

health, marketing/business, or manufacturing technology, to engage students and provide relevancy to their future plans. CTE curriculum would be integrated, helping students to earn certain required math, science, history, or English credits through specially-designed technical or occupational courses. Upper-level courses would be developed with input from postsecondary educators to ensure that curriculum is sequenced, non-duplicative and that end-of-course standards match college entrance requirements. Students with the desire or ability could take advanced courses or courses for college credit while in high school, allowing them to complete their postsecondary education degree or certificate in a shorter period of time. Upper level high school students would also have opportunities to learn more about careers and the working world, as well as options for internships, apprenticeships, work experiences, or service-learning. Employers would validate and endorse the program of study as well as serve as mentors and provide internship experiences.

While a four-year sequence in high school is the baseline for a program of study, flexibility needs to be incorporated. If appropriately prepared, students could progress at faster rates by participating in dual enrollment or early or middle college high schools that allow students to obtain a high school diploma and an associate's degree in four years or take a longer time to complete a program, such as students at Aviation High School in New York City need five years to complete the FAA certifications and earn college credits. Five year high school programs may be needed to accommodate learners that may need extra assistance or that come to high school behind grade level. In addition, flexibility needs to be built in that allows students to change their choice of career area. But as long as all students in the early high school grades take a program based on core academic skills, this should allow such transfers to be routine.

Creating programs of study will, in many cases, require that curriculum be newly created or adapted from an existing program. The state has an important role to play in helping to identify broad career pathways, provide curricular frameworks, and develop integrated standards to support them, based on interest in the career area or labor market needs. At the local level, teachers at both secondary and postsecondary education levels need to work together to develop integrated curriculum that would meet local needs. Teachers also need planning time together to develop integrated, interdisciplinary curriculum, melding theory and practice. Some CTE teachers would need to enhance their content knowledge; some teachers of academic disciplines would need to understand how knowledge is applied and used in the workplace in order to develop this integrated curriculum within the program of study. Both academic and technical teachers may need professional development to better understand how contextual teaching and learning can be used as a tool for dealing with students with multiple learning styles. Changes to CTE as an enterprise will demand changes and new approaches both in teacher preparation and professional development programs. Closer alignment with the programs in the Higher Education Act would be needed to ensure that teachers have the skills to carry out this curriculum redesign effort and to teach effectively.

Career-themed programs of study must provide comprehensive career exploration and guidance and counseling. Students need access to information about careers throughout their elementary and middle school years, but obviously much more so in the high school years. Students and parents will need more guidance and advice to understand the choices as communities and high schools offer more options such as small schools or programs developed around career or other themes. School counselors that are knowledgeable both about careers and college access are needed. Counselors and teachers should also help students consider non-traditional careers as part of early career awareness. Efforts to improve guidance and counseling need to recognize that most school guidance counselors have unreasonably large student caseloads and that career counseling often takes a back seat to social and emotional issues and the paper work of getting large numbers of students into college. The system as a whole needs dramatic improvement and a recognition of the key role of guidance and counseling for all students.

Programs of study should encourage students to pursue an associate's or bachelor's degree, but also recognize that some students will both work and go to college on a part-time basis for financial reasons. Partnerships with employers and the community are needed to help provide information about careers and the workplace to students and their parents, and to serve as mentors or advisors and to help relieve the burden on school counselors. Counselors and teachers also should participate in externships with employers to learn more about the workplace, emerging careers, and the application of knowledge to workplace problems.

Employers would play a key role in CTE programs of study as a means of strengthening and ensuring the quality of programs. Employers, as partners, can provide opportunities for internships and work-based learning experiences for students and teachers, serve as mentors, provide input and guidance on curriculum and ensure that it meets industry standards, provide information on emerging technology and careers, and donate equipment and other material to high schools. Employer involvement needs to be continued as students move through the program of study to postsecondary education, where industry input into curriculum and standards becomes much more relevant.

A strong focus of the program of study would be articulation between the high school and postsecondary curriculum and helping students move as efficiently as possible along a college/career pathway. This connection between high school and postsecondary education must become a basic element of all CTE programs and a requirement of receipt of federal funds. Every high school program of study must clearly define the sequence of courses needed to move from high school to postsecondary education and help students know what is needed and when it is needed to advance and when. Curriculum should be designed that spans grades nine through fourteen or sixteen. The emphasis of these efforts is to increase the number of students who graduate from high school and enter postsecondary education without needing remediation. Programs that link with middle schools and four-year institutions of higher education are desired.

This time-intensive process of developing articulated programs requires support to bring secondary and postsecondary communities to the table. It requires a significant investment by the state to develop the infrastructure of the college/career pathways, such as alignment of high school exit exams with college entrance requirements and development of end of course exams for CTE programs of study. And it will require planning and development with instructors from the various grade levels and from academic and occupational disciplines.

Attention and work also need to be focused on developing or implementing models that allow dual enrollment, concurrent enrollment, dual credit or articulation agreements, or other strategies that help students advance more quickly through postsecondary education. Funding should be flexible enough to allow the creation or support of these arrangements that blend learning environments. Models, like Tech Prep, early or middle college high schools with a career theme, or online learning or virtual schools, should all be supported.

Seen as a desirable option in the high school or in the community, CTE programs of study would be open to students of all abilities. Students would not be tracked or assigned to a CTE program of study based on previous history, grades, or other arbitrary selection processes, but rather select a program of study based on their interests. Should students experience difficulty in completing the work required by a CTE program of study, or be performing below grade level when they entered, high school officials would

have to provide the extra support to allow the student to succeed. Students who may need extra assistance in math, science, or literacy in the ninth and tenth grades should be identified early and given help, but they should be allowed to participate in as much of the career-themed program as possible. Curriculum should ensure the reinforcement of academic standards at the high school level.

Because the curriculum in ninth and tenth grades would be based on a standard core, students could transfer from one CTE program of study to another or other options, based on their interests or their need to access courses in another program of study. With rigorous academic coursework, CTE programs can successfully attract a range of students, including high performing students, who learn better through an applied, contextualized curriculum or who have a strong interest in a particular career area. A more hands-on curriculum makes the material more relevant to students, which will likely increase student engagement and decrease dropouts.

The program of study model described above can be seen as a first step in moving a comprehensive high school to smaller learning communities with a career focus. Doing so requires significant change, primarily focused on teaching and learning. Support and professional development need to be provided to academic and occupational instructors, staff, administrators, and counselors at high schools and postsecondary institutions. Parents, business, and industry, and the community as a whole also need to be engaged as part of the comprehensive restructuring and overhaul and revision of the programming.

In summary, funds would be used for the development and support of coherent and focused programs of study organized around a career theme; to support professional development and planning time for teachers and faculty who will develop rigorous, interdisciplinary, integrated, applied curriculum; for career and college guidance and counseling; for building stronger partnerships with employers and opportunities for learning in the community; and to develop sequenced, articulated programs of study leading to postsecondary education and careers, including options for concurrent or dual enrollment.

Appendix C
Additional Recommendations

Change the name of vocational education to career and technical education. The words "vocational education" still carry a negative connotation for most people. The general public equates vocational education with high school "shop," and most of us, rightly or wrongly, associate shop with low-achieving students and lack of academics. It's time to change this image and bring the Perkins Act into the 21st Century.

Ensure teacher competency, but encourage use of experts from business and industry and adjunct faculty by partnering with postsecondary institutions. While NCLB requires teachers to be certified in their content area, many CTE teachers must work to ensure certification in both an academic as well as technical area. Clearly the academic content certification is critical to ensuring positive student learning, but the pressure to maintain one or more technical certifications can be difficult. Programs should be funded that allow experts from business and industry to teach in a supportive role, without having to be certified in a content area. Schools should be encouraged to partner with postsecondary education institutions so that faculty can serve as adjunct teachers at the high school.

Align Perkins Act accountability measures to NCLB, but also keep an emphasis on labor market outcomes. Other measures, such as reduced dropout rates, entry into postsecondary education, and attainment of technical and occupational competencies should be measured.

Chairman CASTLE. Mrs. Stevens.

STATEMENT OF JEAN STEVENS, ASSISTANT COMMISSIONER, OFFICE OF CURRICULUM AND INSTRUCTIONAL SUPPORT, NEW YORK STATE EDUCATION DEPARTMENT

Ms. STEVENS. Mr. Chairman, Congressman Kind and members of the Subcommittee, thank you for the opportunity to appear before you to share the successes in New York State's current technical education system, as well as to offer recommendations on how to improve and expand the Federal investment through Perkins.

As the Assistant Commissioner in the Office of Curriculum and Instructional Support at the New York State Education Department, I am responsible for current educational—adult education in all curriculum areas. I also serve on the board of directors of the National Association of State Directors and Career Technical Education Consortium.

As Assistant Commissioner, I coordinate both secondary and postsecondary career technical educational programs. We serve over 272,000 secondary students, 129,000 postsecondary students and 16,000 adult learners. Thirty-two percent of New York's secondary students are enrolled in career technical educational courses; and 259,000 students participate in work-based learning

experiences orchestrated in cooperation with 36,000 New York State employers.

Our students are doing well. Ninety-six percent of career technical education concentrators receive a high school diploma, and almost 94 percent of our secondary career concentrators are employed in the military or pursuing postsecondary education shortly after graduation.

There are many successes I would like to share, but my remarks today will highlight the critical role of effective State leadership as it has in ensuring quality in career technical education by leading innovation and ensuring accountability.

New York State leadership efforts focus on ensuring quality, relevant and rigorous career technical education. Most recently, we established an approval process that directly impacts the academic and technical performance of our students. To participate, each local educational agency or our regional career tech centers must develop a cohesive program of courses with a direct path to college or the beginning of a career. Each approved program must meet all requirements of program quality, including, but not limited to, appropriate certification of all program teachers, sequential curriculum that addresses our Career Development and Occupational Studies Learning Standards, core academic learning standards at the commencement of high school level, current business/industry skills standards, postsecondary articulation, and the availability of work-based learning experiences. Also, each approved program must have a technical assessment based on industry standards, if available, and increased availability for college credit through articulated courses.

The program approval process has done much to improve the transition between secondary and postsecondary education by ensuring student competencies, skills and knowledge through meaningful integration of academic and technical education. A key component of our program approval process is the alignment to industry standards and certifications.

Unfortunately, not all programs or career areas have standards, certifications or assessments. This is one of our biggest challenges in measuring technical competency. I believe Congress should establish an assessment fund that could support the creation of technical assessments by the 16 Career Clusters.

Career Clusters are a response by the career technical education community to establish common expectations in language between education, both secondary and postsecondary, and the workforce. It is for these reasons I believe specific support for Career Clusters and related technical assessments would assist States and locals in better meeting labor market needs in achieving the goals and improve integration and transition.

Accountability is another important State leadership responsibility critical to ensuring quality. In New York, we have made progress, but we must continue to work to make data real, connecting what happens in the classroom every single day. Data cannot solely consist of filling out a report; it must be a connected learning and performance management tool. Strengthened provisions in Perkins can improve the connection between the uses of funds and accountability requirements. Using accountability data

in a responsible and meaningful way will result in the identification of strengths and weaknesses in specific programs and in career technical education as a whole.

In New York, we work with our schools that are struggling to meet performance goals by working on improvement programs which include additional technical assistance and professional development. In order to use Perkins accountability to drive change, States need additional legislative authority to be able to redirect or withhold funds from local programs that do not meet performance expectations where, despite intervention, improvement does not occur.

My final recommendation is that the new law require a single, comprehensive State career technical education plan. This will help align the current separate investments supported under the Perkins Act—the Basic State Grant, Tech Prep and Section 118—to better meet the needs of our students. A single plan will reduce administrative costs, ensure nonduplication of efforts and, most importantly, align and enhance the complementary nature of these sections. Integration of funding streams through a single, comprehensive State plan does not mean a dilution of focus or support, but instead an alignment of effective programs and practices to a common vision.

New York State's accomplishments are the result of strong State administration and leadership. State leadership is about leading change, facilitating partnerships, ensuring economy of scale, leveraging multiple resources and accountability, all of which support quality career technical education.

My colleagues around the country and I strongly encourage Congress to support State's rights by continuing Perkins provisions that allow States to select their sole State agency and determine the appropriate split of funds between secondary and postsecondary. Further, we recommend the level of funding reserved to the State level be maintained so innovation such as those I outlined today can continue.

Thank you for the opportunity to share these successes and recommendations. I look forward to working with you as you develop new legislation that builds on and expands on our current successes and promotes innovation in our Nation's career technical education system.

Chairman Castle. Thank you, Ms. Stevens.

[The prepared statement of Mrs. Stevens follows:]

Statement of Jean C. Stevens, Assistant Commissioner, Office of Curriculum & Instructional Support, New York State Education Department, Albany, New York

Mr. Chairman, Congresswoman Woolsey, and members of the subcommittee, thank you for the opportunity to share with you successes in New York State's career technical education system, as well as to make recommendations to improve and expand the federal investment in career technical education (CTE) through the Carl D. Perkins Vocational and Technical Education Act of 1998 (Perkins). As the Assistant Commissioner in the Office of Curriculum and Instructional Support at the New York State Education Department, I am responsible for career technical education, adult education, and all academic curriculum areas. I also serve on the Board of Directors of the National Association of State Directors of Career Technical Education Consortium. Established in 1920, the National Association of State Directors of Career Technical Education Consortium serves as the professional society of state and territory agency heads responsible for public career technical education at the secondary, postsecondary and adult levels in all fifty states, eight U.S. Territories, and the District of Columbia. I request that the association's recommendations for Perkins reauthorization be included in the record.

Career technical education is an essential component of the U.S. educational system and is critical to our country's ability to compete in the global economy. Career technical education reaches into almost every community across the country. Over 11,000 secondary schools and 2,600 sub-baccalaureate, postsecondary institutions — such as community and technical colleges, technical institutes, skill centers, area vocational schools, etc. — currently offer career technical education courses. Nationally, over 14 million individuals at the secondary, postsecondary, and adult education levels are enrolled in career technical education. Nearly all secondary students take at least one career technical education course, and close to 45% of them concentrate in career technical education by taking three or more courses. Approximately one third of college students are involved in career technical education as a major part of their studies. (U.S. Department of Education, Office of the Under Secretary, Planning and Evaluation Service, *National Assessment of Vocational Education: Interim Report to Congress: Executive Summary*, Washington, D.C., 2002.)

In New York, over 400,000 students across the state are enrolled in CTE programs in school districts, Boards of Cooperative Educational Services (BOCES) and post secondary institutions. As Assistant Commissioner, I coordinate both the secondary and postsecondary CTE programs. We serve over 272,000 secondary students, 129,000 postsecondary students, and over 16,000 adult learners. Thirty-two percent of New York's secondary students are enrolled in career technical education courses; and over 259,000 of our students participate in work-based learning experiences, orchestrated in cooperation with over 36,000 New York State employers. Although progress remains to be made, I am proud of our success. Ninety-six percent of CTE concentrators in New York receive a high school diploma or better; and almost ninety-four percent of our secondary CTE concentrators are employed, in the military, or pursuing postsecondary education after graduation.

While there are many successes I would like to share, my remarks today will highlight the critical role that effective state leadership has in ensuring quality career technical education through leading innovation and ensuring accountability.

When Perkins III was enacted into law, it included several new requirements that have had a profound impact on our nation's career technical education system: a focus on academics, a meaningful accountability system, and a sustained and refined focus on integration and articulation. State Directors across the country agreed that these new requirements gave us the opportunity to thoughtfully re-examine the value, purpose, and goals of career technical education. Although consensus was elusive at first, we came to consensus on a set of guiding principles that define a vision of career technical education, namely that career technical education:

1. Draws its curricula, standards, and organizing principles from the workplace;
2. Is a critical and integral component of the total educational system, offering career-oriented benefits for all students;
3. Is a critical and integral component of the workforce development system, providing the essential foundation for a thriving economy;
4. Maintains high levels of excellence supported through identification of academic and workforce standards, measurement of performance (accountability), and high expectations for participant success; and
5. Is robust and flexible enough to respond to the needs of the multiple educational environments, customers, and levels of specialization.

In New York, the application of these principles is achieved through effective state leadership. Our state leadership efforts focus on ensuring quality, relevant and rigorous career technical education. In fact, our mission is to provide quality career technical education programs in schools, BOCES, and postsecondary institutions as a first-choice option for students to achieve state performance standards.

Most recently, we spearheaded a state–led effort to establish an approval process that directly impacts the academic and technical performance of students. To participate, each local education agency (LEA) and BOCES must develop a cohesive program of courses with a direct path to college and the beginning of a career. Each approved program must meet all requirements of program quality, including, but not limited to: appropriate certification of all program teachers, sequential curriculum that addresses the Career Development and Occupational Studies Learning Standards (CDOS), core academic learning standards at the commencement level, current business/industry skills standards, postsecondary articulation, and availability of work-based learning experiences. Also, each approved program must have a technical assessment based on industry standards (if available) and increased availability for college credit for articulated courses. As of April 15, 2004, 585 of the 738 applications received from 38 BOCES and 20 LEAs have been approved. This program approval process has done much to improve the transition between secondary and postsecondary education by ensuring student competency of skills and knowledge through meaningful integration of academic and technical education.

A key component of our program approval process is the alignment to industry standards and certifications. Unfortunately, not all program or career areas have standards, certifications, or assessments. This is one of the biggest challenges in career technical education — measuring technical competency. The panoply of careers makes it difficult to synthesize the critical knowledge of all professions into a single test, as we do in academics. I believe Congress should establish an assessment fund that could support the creation of technical assessments by the 16 Career Clusters. The 16 Career Clusters are an organizing framework for all of the careers in our economy. State Directors across the country have worked with employers and secondary and postsecondary educators to identify what people need to know and be able to do to be successful in a broad career area. These competencies have been nationally validated, and schools and states are now using them to benchmark and update their curriculum, enhance career guidance and counseling strategies, more effectively integrate academic, technical and employability skills and promote better transitions between education and the workforce. Assessments are the missing component. The development of 16 technical assessments, one for each career cluster, would do much to ensure that there is a consistent way to measure and assure technical competency across the United States. The assessments will also provide better support for the more mobile and global workforce and economy.

Recommendation: Support the development of technical assessments by the sixteen Career Clusters.

Recommendation: Include stronger provisions to connect the authorized uses of funds with the accountability measures.

Using accountability data in a responsible and meaningful way will result in the identification of strengths and weaknesses in specific programs and the career technical education system in general. In New York, we work with schools that are struggling to meet performance goals by collaborating in the development of improvement plans that include additional technical assistance and professional development. In addition, we are part of the High Schools That Work network that strives to improve both academic and CTE instruction by effectively using performance data to drive change. When a school is challenged by low performance, our state does all it can to keep the resources in place and provide the support necessary so that school can improve. This is our preferred approach. Unfortunately, there are some instances where, despite intervention, improvement does not occur. In these instances, states need additional legislated authority to be able to re-direct or withhold funds from local programs that do not meet performance expectations. Effective use of accountability data should drive improvement and change. To accomplish this goal, additional provisions in Perkins are required.

Recommendation: Provide states with additional authority to encourage performance and/or re-direct or withhold funds from schools that are not meeting performance expectations.

Historically, Perkins, representing between five and seven percent of our nation's investment in career technical education, has driven innovation and improvement by adapting to meet the needs of the country and its economy and students. The impact of these federal dollars is multiplied when they are administered at the state level in a comprehensive, systemic manner. Effective state leadership ensures that this can happen. As the Committee considers new legislation, I offer several recommendations for structural and programmatic changes to lead career technical education into this new millennium.

Requiring a single, comprehensive state career technical education plan can help align the current separate investments supported through the Perkins Act — the basic state grant, tech prep, and section 118 — to better meet the needs of our students. A single, comprehensive state plan will reduce administrative costs by eliminating the requirement for three separate plans, ensure non-duplication of efforts, and, most importantly, align and enhance the complementary nature of each of these sections of Perkins. Integration of funding streams through a single, comprehensive state plan does not mean a dilution of focus or support, but instead an alignment of effective programs and practices to a common vision.

The successful features of the Basic State Grant and Tech Prep programs should be integrated to create a more efficient, streamlined structure for the career technical education system. Tech Prep funding was initially established as seed money to spark reform change. The change Tech Prep sought is being realized in public schools across the state of New York. For example, our medical technology program has been extremely successful. Flexible, current, academically integrated, and gender neutral, this Tech Prep model program has increased attendance and retention rates, and academic performance, while providing a successful transition to postsecondary education. In particular, Tech Prep students in the medical technology program have slightly better scores in English and math and significantly better science scores compared to their non-Tech Prep counterparts. Tech Prep students also earn higher GPAs than non-Tech Prep students. We now need to take Tech Prep to scale and incorporate its successful principles into all career technical education programs.

In order to responsibly prepare students for careers in our current economy, I also recommend that the state plan identify, with demonstrated input from relevant sectors of business/industry/education, programs of study within the state (or region, if applicable) that would contribute to current and future labor market needs and workforce shortages. This will ensure that students are prepared for careers that exist today, and provide them with the skills and knowledge necessary for the changing workforce of the future.

Recommendation: Require a single, comprehensive state plan that is responsive to labor market needs.

One way to assure this alignment to the current economy is to support the continued development and implementation of Career Clusters. Career Clusters are an organizing framework for all of the careers in our economy. They support a seamless transition from secondary to postsecondary education, connecting education programs to workforce and economic development and successfully integrating academic and career technical studies. Career Clusters can help realize the purpose of the Perkins Act by broadening career awareness and skill attainment beyond specific job preparation to career preparation. Furthermore, Career Clusters embrace the entire world of work, not just the jobs traditionally aligned with career technical education.

Career Clusters are a response by the career technical education system to establish common expectations and language between education (both secondary and postsecondary) and the workforce. Career Clusters can easily be incorporated into Perkins by requiring that local programs use funding to support programs of study that align instruction to a Career Cluster. A Career Cluster program of study: links secondary and postsecondary-level coursework; integrates academic, technical and employability skills; and aligns to industry standards, certifications and assessments. Incorporating support for Career Clusters in the new law would assist states and locals in better meeting labor market needs and achieving the goals of better integration and improved transition.

Recommendation: Support Career Clusters

As state leaders, we have many roles - innovators, administrators, instructional leaders, standards enforcers, data collectors, and most importantly, partners and leaders in ensuring student success. This last responsibility — ensuring student success — is why state leadership is so important. Others agree:

"The centrality of the state's role in closing the gap between educational reform and state educational capacity cannot be understated. It begins with leadership and the creation and promulgation of a state vision for education that will guide policy and decision making at every level."
— Institute for Educational Leadership, 2001a, p.1

"States represent the most promising way to achieve vocational education reform on the scale necessary to have an impact on workforce quality. (page 3) States hold the key to achieving vocational education reform at a pace and scale sufficient to affect national workforce quality (page 6). [S]tate leadership is the best bet to give context, shape, and direction to the diverse local reform activities already under way, and more broadly, convert them to coherent career preparations programs."
— National Assessment of Vocational Education, 1994

"We see State Directors as key to the implementation of our business and education partnerships . . . Every successful business and organization has a key individual that takes a leadership role. We see the State Directors as playing this vitally important role."
— Don Gray, former President of Automotive Youth Educational Systems (AYES)

"Only state leadership at the state level can bridge the gap between national policymakers/administrators and local practioners to energize change and drive needed reform."
— Dan Hull, President and CEO, CORD

According to the Institute for Educational Leadership, state leadership plays a vital role in the state's education system, by:

- Providing a vision and mission for educators
- Providing the connection between the U.S. Department of Education and their states
- Influencing national policymakers
- Serving as advocates at the national level
- Creating important partnerships with other key players

New York's accomplishments are the result of strong state administration and leadership with adequate resources. State leadership is about leading change, facilitating partnerships, ensuring economy of scale, leveraging multiple resources, and accountability — all of which support quality career technical education. My colleagues around the country and I strongly encourage the Congress to support states' rights by continuing Perkins provisions that allow states to select their sole state agency and determine the appropriate split of funds between secondary and postsecondary education. Further, we recommend that the level of funding reserved at the state level be maintained so innovations, such as those outlined today, can continue.

Thank you for the opportunity to share these successes and recommendations. I look forward to working with you to develop new legislation that builds on and expands our current successes and promotes innovation in our nation's career technical education system.

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Chairman CASTLE. Ms. Dunkel.

STATEMENT OF SANDRA DUNKEL, DIVISION ADMINISTRATOR, CAREER DEVELOPMENT DIVISION, ILLINOIS STATE BOARD OF EDUCATION

Ms. DUNKEL. Chairman Castle, Congressman Kind and other Subcommittee members, I just have to tell you, this is my first time ever presenting testimony and it is an awesome experience. I have two teenage boys at home, so that is exactly what they would say.

While preparing my testimony, there were many issues in the Federal legislation that came to mind that I would like to address, if only I had more time. For example, the continuing need for State leadership, the importance of integrating academic and technical

skills, the transition of students from secondary to postsecondary education, the important role that career and technical ed plays in economic development in preparing a skilled workforce, and the successes and challenges we have faced in developing an effective accountability system.

While all of these issues are important to us in Illinois, I am going to focus my comments on the issue of engaging and enabling every student to identify a career path and to give them the tools to follow that path.

Career technical education plays a key role in ensuring that no child is left behind in our system. Throughout the Nation, the implementation of Career Clusters is helping schools expand their vision for career and technical ed by aligning the needs of the economy. This broadened focus ensures that students have the opportunity to learn about an array of careers rather than just specific jobs.

Career Clusters help to align and integrate academic, technical and employability skills and serve an important role in career guidance and counseling. Clusters can also be a valuable tool in breaking down gender stereotypes, because students are exposed to numerous professions in that career area, not just one.

The reauthorization of Perkins in 1998 eliminated the $1 million set aside for gender equity and programs for single parents and displaced homemakers, the requirement for a State equity coordinator and the emphasis on services for special populations. These provisions were replaced with an accountability measure for participation and completion of students pursuing nontraditional careers, and the State leadership set aside between $60- and $150,000.

A national study of the results of this policy shift after only 1 year of implementation of Perkins III resulted in over 50 percent of programs reporting a decrease in funding and over 70 percent reporting services to students significantly decreased. In Illinois, prior to 1998, 50 programs assisted over 78,000 single parents and displaced homemakers and individuals pursuing nontraditional employment to enable them to become economically self-sufficient. In addition, 30 gender equity projects were working to eliminate sex bias and sexual stereotyping and to increase nontraditional enrollments.

Illinois no longer has a full-time equity coordinator and, at the State level, most of the programs and services have not continued.

While it may seem I am painting a fairly grim picture here, we have some glowing numbers perking in Illinois. The accountability measure for nontraditional participation and completion of students in career and tech ed programs has given the motivation to continue to focus on this issue in new and different ways. We continue to use State leadership funds to provide technical assistance and professional development to schools and colleges and to help improve the performance of special population students.

As we build a history of accountability in nontraditional programs, we have the opportunity to provide State leadership to encourage schools and community colleges to implement strategies to improve their performance. For example, in the Joliet area, females aged 14 through 18 can attend the High Tech Summer Camp

where they are able to experience high-skill, high-wage occupations firsthand.

Kenwood High School in Chicago will implement Project Lead the Way this fall, a pre-engineering curriculum with a goal to increase the number of students prepared to enter engineering-related occupations, particularly for minorities and females.

Illinois is committed to continuing to ensure that no child or adult is left behind in career and technical education, and encourages you to consider the following recommendations to improve the ability of States and locals to fulfill this goal.

No. 1, support State leadership to assist locals in eliminating any and all barriers faced by students in pursuing a career of their choice;

Two, continue to support the Perkins accountability system to measure the success of every student, including special populations and students pursuing nontraditional careers;

Next, create a direct connection between accountability and how local funds are being used in order to drive program improvement; and

Finally, support continued expansion and implementation of Career Clusters at the State and local levels.

I want to thank you for this opportunity.

Chairman CASTLE. Thank you, Ms. Dunkel. You did very well on your first try here.

[The prepared statement of Ms. Dunkel follows:]

Statement of Sandy Dunkel, Division Administrator, Career Development Division, Illinois State Board of Education, Springfield, Illinois

Good Afternoon Chairman Castle, Congresswoman Woolsey and other members of the House Subcommittee on Education Reform. I would like to thank you for this opportunity to testify regarding the reauthorization of the Perkins Vocational and Technical Education Act of 1998.

The Career Development & Preparation Division of the Illinois State Board of Education provides leadership and support to schools to implement programs that infuse comprehensive career development into the K-12 school curriculum by integrating with and complementing the Illinois Learning Standards. The division also coordinates partnerships with regional workforce development entities and higher education to promote transition programs that smooth students' pathways from high school to advanced education and training. Illinois is a very diverse state ranging from the densely populated urban area of Chicago to the isolated rural towns in the southern and western portions of the state—and everything in between. The state's 891 regular public school districts serve over 2 million students K-12. Approximately 3 out of 5 high school students enroll in some career & technical education annually. Actually, Illinois students taking one or more advanced courses in career & technical education boast a 95% graduation rate—almost 10% higher than the state rate of 86%.

While preparing my testimony there were many issues in the federal legislation that came to mind that I would like to address... if I had all day! For example: 1)The continuing need for state leadership to build local capacity, share best practices, provide technical assistance and professional development to improve the quality of career technical education that is responsive to the needs of students, parents and the business community; 2) the importance of the integration of academic and technical skill development, to help students see the relevance of their coursework and prepare them for postsecondary education and careers; 3) the creation of seamless systems that promote transition for students from secondary to postsecondary education; 4) the important role that career technical education plays in state-based economic development and preparing a skilled workforce; or 5) the successes and challenges we have faced in developing an accountability system that helps us chart our progress as a state while ultimately assisting locals to identify the root causes for their successes and failures that leads to strategies for program improvement.

While all of these issues are important to us in Illinois I am going to focus my comments and recommendations to you today on the issue of engaging and enabling every student to identify a career path and give them the tools to follow that path. Career technical education and career development in a broader sense, play a key role in ensuring that no child gets left behind in our educational system.

The implementation of Career Clusters is helping schools expand their vision for career and technical education by aligning with the current needs of the economy. Representing professions in all industry sectors, such as education, law, public safety and health, Career Clusters extend beyond the traditional program areas associated with career technical education. This broadened focus ensures that students have the opportunity to learn about an array of careers rather than just specific jobs.

Career Clusters also ensure alignment and integration of academic, technical, and employability skills, and serve an important role in career guidance and counseling. Students in Career Cluster programs are provided with the broad set of knowledge and skills necessary to succeed in that career area — this set of skills is the foundation for all professions in that cluster. Students are also exposed to numerous professions in the career area, not just one as has been the case in traditional career technical education.

Career Clusters can also be a valuable tool in breaking down gender stereotypes for certain careers. For example, in a traditional career technical education, a student might enroll in a licensed practical nurse program. Generally speaking, this is profession dominated by females, and thus the related education programs tend to be dominated by women too. Few males enroll in nursing programs. However, a student who enrolls in the health occupations program of study will be exposed to all careers in the health field, including nurses, physicians, surgeons, surgical technicians, radiologists, medical lab technologist, etc. All students enrolled in a health career cluster program are exposed to all careers, thus supporting enrollment and completion in non-traditional programs of study. This enlarged focus and expanded skill attainment helps students become aware of the many pathways and options available in their chosen career area.

You may recall that the reauthorization of the Perkins Act in 1998 eliminated the $1 million set-aside for gender equity and programs for single parents/displaced homemakers, the requirement for a state equity coordinator and the emphasis on services for special populations. These provisions were replaced with an accountability measure for participation and completion of students pursuing nontraditional careers, a state leadership set-aside of $60,000-$150,000, and permissible language for local uses of funds. A national study[1] of the results of this policy shift, after only one year of implementation of Perkins III, resulted in over 50% of programs reporting a decrease in funding and 71% reporting services to students significantly decreased.

In Illinois, prior to 1998, fifty programs each year assisted an average of 5,627 students for a total of over 78,768 single parents/displaced homemakers and individuals pursuing nontraditional employment to access the preparatory services, career and technical education programs and support services needed to enable them to become economically self-sufficient. In addition, thirty Gender Equity Projects were working to eliminate sex bias and stereotyping in secondary and postsecondary career and technical education, to increase nontraditional enrollments, and to provide preparatory services and training. Although the current provisions in Perkins III do not prohibit states or local educational agencies from continuing the work they were doing prior to 1998, Illinois no longer has a full time equity coordinator at the state level and most of the local programs and services have not continued.

While it may seem I am painting a picture of gloom and doom, there are actually some glowing embers beginning to spark in our state. The accountability measure for participation and completion of students in nontraditional CTE programs has given us the motivation and direction to continue to focus on this issue in new and different ways with schools. We continue to use state leadership funds for the Illinois Center for Specialized Professional Support to provide technical assistance and professional development to schools and community colleges to assist them in improving the performance of special population students. The NTO Look Project works with secondary and postsecondary partnerships as they study their programs and design strategies to support students pursuing nontraditional careers. Projects were developed to recruit men in healthcare and women in information technology careers, recognizing the high-skill, high-wage careers that drive our economy in Illinois.

As we build a history of accountability on the participation and completion of students in nontraditional CTE programs, we have the opportunity at the state level to provide significant leadership through the local planning process to encourage schools and community colleges to conduct appropriate strategies to improve their performance. For example, in the Joliet/Will County area, females aged 14-18 can attend the "High Tech Summer Camp" where they are able to experience high-skill, high-wage occupations firsthand. Kenwood High School in Chicago will implement Project Lead The Way this Fall which is a 9-12 pre-engineering curriculum proven to increase the math and science achievement of students. A major goal of Project Lead The Way is to increase the number of students prepared to enter engineering-related training and occupations, particularly for minorities and females. Illinois recently became the 30th state to join the High Schools That Work initiative, a whole-school reform effort effective in closing the achievement gap in mathematics, science and communications between students pursuing a career and technical focus and those completing a traditional college preparatory program of study. Schools implementing this model must set high expectations for all students by offering a challenging program of study to include an upgraded academic core as well as rigorous and relevant technical instruction.

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[1] Invisible Again: The Impact of Changes in Federal Funding on Vocational Programs for Women and Girls, National Coalition for Women and Girls in Education, 2001 www.ncwge.org.

Illinois is committed to continuing to ensure that no child or adult is left behind in career and technical education and encourages you to consider the following recommendations to improve the ability of states and locals to fulfill this goal:

1. Support state leadership to provide technical assistance and professional development to assist locals in eliminating any and all barriers faced by students in accessing educational opportunities and pursuing a career of their choice.
2. Continue to support the development of the state's accountability system capacity while building on the existing measures to ensure the success of every student including special populations and students pursuing nontraditional careers.
3. Create a direct connection between accountability and local uses of funds to drive program improvement. Locals must be required to spend funds on activities to improve their performance.
4. Support continued expansion and implementation of career clusters at the state and local levels.

Again, thank you for the opportunity to share some of the challenges and successes we have had in implementing Perkins in Illinois. I look forward to working with you as we reauthorize legislation that can effectively prepare our students for their future role in our dynamic workforce.

Chairman CASTLE. Dr. Ihlenfeldt.

STATEMENT OF WILLIAM A. IHLENFELDT, PRESIDENT, CHIPPEWA VALLEY TECHNICAL COLLEGE DISTRICT, EAU CLAIRE, WISCONSIN

Dr. IHLENFELDT. Good afternoon, Mr. Chairman and members of the Subcommittee. It is an honor for me to testify before you today as one representative of the Nation's technical and community colleges. I am also pleased to testify before our Member of Congress, Representative Ron Kind.

CVTC is one of 16 technical colleges of the Wisconsin Technical College System. Our vision is to be a dynamic community partner dedicated to adding value through learning and student success. The college operates on a business model, emphasizing career-centered, public-private sector partnerships. That model stimulates innovation and allows rapid response to the businesses and industries and communities we serve.

The most recent example is a partnership between the University of Wisconsin, Marquette University and CVTC to provide team-based medical training for family practice residents, dental residents and students in our 14 allied health and nursing programs at the college. This rapid-response model is addressing the medical practitioner shortage in the region.

Community colleges provide the gateway to this Nation's workforce by serving as the vital linkage between the secondary schools and the senior postsecondary institutions to expedite technical education and training. Chippewa Valley Technical College, for example, serves over 850 high school students annually who receive dual credit in Associate degree programs. Perhaps the best illustration that I can give of this partnership is CVTC's Health Academy that prepares high school youth to become registered nurses, graduating from high school after having completed 1 year of their postsecondary technical education. This unique program, by the way, is funded through the Perkins Tech Prep demonstration program.

At the same time, the college has articulated agreements with all major universities in the State that allow hundreds of students and graduates to transfer each year. It has been demonstrated that community college graduates are better prepared to meet the rigors of this country's universities when their careers necessitate that advanced degree. Unique pathways like inverted degrees fill that career objective without repeating competencies already in place for the job market.

This Nation depends on community college graduates to fill about 80 percent of the jobs, ranking from health care to the automation of our industries, to the security and protection we need in these very, very difficult times. Employers today, to be successful, need a continuous and rapid flow of graduates and continuous training. In the majority of the Nation's high schools, the technical training necessary to prepare students for this type of rigor is not and will not be possible. Many, especially in our district, are too small, lacking in budgets and sophisticated technical equipment to educate students for the advanced technology of today. This is where creative partnerships with local community colleges can fill the needs and do it cost effectively.

Many community college students are place or situation bound. They look to the local community college as their only hope for the future. If they are to move into a career and become productive members of our communities, then community colleges like CVTC have to provide them with the opportunities, and the support many times, to make that a reality.

Services at our community colleges are designed for a wide variety of students, a wide range of students. They include those who have not succeeded in high school, those who have been out of school for a long period of time and need a career change, and those who are interested in new high-technology careers like nanotechnology. Imagine the support systems that are necessary for that range of preparation. That is why Perkins funding is critical at the community college level. No, it is critical for the future of the economy of the United States to keep that funding available for the students at our Nation's community colleges.

Last year, the Wisconsin Technical College System enrolled 128,000 special population students. The State grant provided direct services for many of them, including career guidance, academic support, remediation and internships. That is putting our dollars to work, that is putting America to work, and it is doing it in a cost-effective manner. No other system in this country can provide that direct impact on our workforce and do it as rapidly as the community college system. Your community colleges are the glue between the systems that get people into the workforce.

Perkins is the only continuing Federal commitment to technical education. The elimination or reduction of this program would be disastrous at a time when our economy needs extensive revitalization.

Your community colleges are making the United States work, and with your help through Perkins we will succeed. We will be the liaison that brings the three systems of education together to confirm our status as the economic power of this globe.

Thank you for your time and commitment to the future of the community colleges of this Nation. We will not let you down.

Chairman CASTLE. Thank you, Dr. Ihlenfeldt. Almost sounded like a political campaign.

[The prepared statement of Dr. Ihlenfeldt follows:]

Statement of Dr. Bill A. Ihlenfeldt, President, Chippewa Valley Technical College, Eau Claire, Wisconsin

Good afternoon, I am Bill Ihlenfeldt, President of Chippewa Valley Technical College (CVTC). It is an honor for me to testify before you today as one representative of the nation's technical and community colleges.

Chippewa Valley is one of sixteen technical colleges of the Wisconsin Technical College System with a service area that covers 11 counties in West Central Wisconsin. CVTC's vision is to be a dynamic community partner dedicated to adding value through learning and student success. The college operates on a business model utilizing a career-centered, public/private sector partnership model. That model stimulates innovation and allows rapid response to the industries and communities we serve. The most recent example is a partnership between the University of Wisconsin Family Medicine Center, Marquette University, and CVTC to provide team-based medical training for family practice residents, dental residents and students, and students in 14 allied health and nursing programs at CVTC. This rapid response model is solving the medical practitioner shortage in the region.

I would also note that CVTC is the 15th fastest growing mid-sized, two-year college in the country according to the Department of Education. Since technical and community colleges are synonymous organizations, I will refer to them as community colleges for purposes of this testimony.

Community colleges provide the gateway to this nation's workforce by serving as the vital linkage between secondary schools and senior post-secondary institutions to expedite technical education and training.

Chippewa Valley Technical College, for example, serves over 850 11th and 12th grade students annually who receive dual credit in associate degree programs ranging from registered nursing to electrical engineering technology. Perhaps the best example of this partnership is CVTC's Health Academy that prepares high school youth to become registered nurses and diagnostic medical sonographers, graduating from high school having completed one year of their post-secondary technical education. This unique program is funded through the Perkins Tech Prep Demonstration Program.

At the same time, the college has articulated agreements with all major universities in the state that allow hundreds of graduates to transfer each year with junior status. The college's partnership with the University of Wisconsin-Eau Claire and University of Wisconsin-Stout is second to none in this nation in working to develop a qualified workforce.

Similarly, it has been demonstrated that community college graduates are better prepared to meet the rigors of this country's universities when their careers necessitate the advanced degree. Unique pathways like inverted degrees and Bachelor of Applied Science degrees fill that career objective without repeating competencies already in place for the job market.

This nation depends on community college graduates for everything from health care to the automation of our industries to the security and protection we need in these difficult times.

The business community looks to CVTC and other community colleges for graduates to fill 80 percent of the jobs in this country. CVTC graduates over 1,000 students annually in 53 occupational areas ranging from nanoscience technology to diagnostic medical sonography.

Employers today need a continuous and rapid flow of graduates and continuous training to meet the dynamic needs of today's economy. In the majority of the nation's high schools the technical training necessary to prepare students for this type of rigor is not and will not be possible. CVTC for example, serves 41 high school districts and most are too small or lacking in budgets and sophisticated technical equipment to educate students for the advanced technology of today. That is where creative partnerships with local community colleges can fill the needs and do it cost effectively.

Many community college students are place or situation bound. They look to the local community college as their only hope for their future. If they are to move into a career and become productive members of their communities, then community colleges like CVTC have to provide them with the opportunities and support to make that a reality.

Services at community colleges are designed for a wide range of students. They include those who have not succeeded in high school, those who have been out of school for many years and need a career change, and those who are interested in new high technology careers like nanotechnology. Imagine the support systems that are necessary for that range of preparation.

That, ladies and gentlemen, is the reason why Perkins funding is critical at the community college level. No, it is critical to the future of the economy of the United States to keep that funding available to the students at our nation's community colleges.

Last year the Wisconsin Technical College System enrolled 128,455 special population students. The Perkins Basic State grant funded direct services to 21,210 students including counseling, career guidance, academic support, and remediation. That, ladies and gentlemen, is putting our dollars to work. It is putting America to work, and it is doing it in a cost effective manner.

No other system in this country can provide that direct impact on our workforce and do it as rapidly as the community college system. This does not deny the impact of the other two systems, but your community colleges are the "glue" between the systems that gets people into the workforce.

Perkins is critical to CVTC and other community colleges. It is the only continuing, permanent federal commitment to technical education. Wisconsin receives about $27 million annually and that is split 55 percent to the Wisconsin Technical College System and 45 percent to the K-12 System. The elimination of this program, or even a reduction, would be disastrous at a time when our economy needs extensive revitalization.

Your community colleges are making the United States work and with your help through Perkins we will succeed. We will be the liaison that brings the three systems of education together to confirm our status as the economic power of this globe.

Thank you for your time and commitment to the future of the community colleges of this nation. We will not let you down.

Chairman CASTLE. Ms. Quinn.

STATEMENT OF BRENDA QUINN, PRESIDENT AND CEO, INTELITEK

Ms. QUINN. I would like to thank you, Chairman Castle and Representative Kind and members of the Education Reform Subcommittee for inviting me to appear before you today. I will be discussing the personnel needs of high tech companies and the role of career and technology education.

When Congress passed the Smith-Hughes Act in 1917, one of its intentions was to move the U.S. from an agrarian to a manufacturing community. To make that transition, Smith-Hughes estab-

lished Federal support in the education and training of citizens. Its focus was on people.

To be successful as an economy, CTE was established as a way of keeping people up to date. In my opinion, that is still CTE's mission today. Perkins is still in the business of keeping students up to date, but to update to serve a highly technical economy in order to satisfy the mission.

Intelitek is part of the new high tech economy. We look for employees with new and broader knowledge and skills than the economy of the past. Intelitek produces Computer Numerically Controlled bench-top machines, Computer Integrated Manufacturing Systems and CAD/CAM software. Our customers, in greater than 100 Fortune 500 companies, as well as 5,000 domestic and worldwide corporations, are using our machines in high-volume production, graphic electrode machining, mold making, rapid prototyping and high-precision machining.

We are also a leading developer, producer and supplier of comprehensive solutions for training and engineering, automated production and manufacturing. We design and produce automated workcells for training anywhere from small-scale, flexible manufacturing systems to complete Computer Integrated Manufacturing Systems. These training systems have been installed in over 20,000 businesses, colleges, universities and schools, both domestic and worldwide.

I am sure that all sounds very high tech, and indeed it is. It would have sounded even more high tech if I had used the acronyms that I usually would use such as CAD, CAM, CIM and CNC.

The people who work in my industry have titles such as robotic technicians, CAD designers, industrial and automation engineers. Each of these people requires education and training beyond high school. The technology they employ is central to American advances in productivity. But in the end, it isn't the technology that is important; it is the people. Our people have the knowledge and ability to stay up to date, and that is the mission of career technical education.

Intelitek employs just under 50 employees; 27, which is greater than 50 percent, come from career technical education backgrounds and moved through the 2-year community college system and/or the 4-year engineering degrees, and those are very powerful numbers.

There are at least three things I look for in an employee. One is a solid grounding in academics. At Intelitek, we expect our employees and the people who design, build, service and maintain our machines and software to have a working knowledge of math, that is, from basic math, algebra, trigonometry, science and language skills.

Second, I am looking for technical skills. Our employees must have above-average computer skills, understand the principles of hydraulics, pneumatic, programmable logic controls, sensors, process control, mechanisms, electronics, vision and mechanical measurement systems, quality control systems, robotics, CAD/CAM, CNC and automation; the technology of how all of these things work together.

Too often, however, people believe that academic achievement is a replacement for technical skills. It isn't. Successful employees must be able to apply their knowledge consistently for my company to succeed, and those technical skills are learned from hands-on application, not through theory alone.

To me, that is the genius behind CTE. It teaches academics through application. It teaches the theoretical and the application. Both are essential. That is one reason why Intelitek is signatory to the National Association of State Directors of CTE Consortium in support of career technical education.

Third, I look for what people call "soft skills" and some others call "employability skills." These are the goal-setting, resource management and communication skills. One of the most important skills in the high tech industry is teamwork. It is not academics, but real people skills. High tech industries don't have individuals manufacturing parts. We have teams managing processes. Every team member has to do his or her part for the team to be successful. These skills are taught in CTE by student organizations, such as SkillsUSA, an association that Intelitek has supported for many years.

I have worked for 12 years with SkillsUSA, one of the student organizations authorized for funding under Perkins. I serve on the board of SkillsUSA Youth Development Foundation and on the contest technical committees for Automated Manufacturing Technology and Robotics and Automation Technology. All 77 of the SkillsUSA Championships contests are run using industry standards for entry-level employment, and they are updated regularly to keep the competitions current with industry needs and practices. Both of the contests Intelitek supports are team contests to parallel practice in industry.

I am going to close with three recommendations to the Committee regarding the Perkins Act. I look forward to amplifying these points during this hearing.

First, stay the course. As Congress intended, the Perkins Act has already had an impact on the academic achievement of students and articulation between high schools and postsecondary instruction. Both were needed and both need to continue.

Second, increase funding for CTE. I ask our government to continue to invest with me. Small employers have historically counted upon CTE as a source of training for their new hires more than any other source. Some smaller States, such as New Hampshire, rely heavily on Federal support to maintain their CTE programs.

Furthermore, the instructional facilities are used by industry to update training for their employees. I have invested in employee training to ensure my organization's survival. As an employee benefit, I offer tuition reimbursement as well as internal corporate training programs. I do this to remain competitive in a global industrial market. I need the competitive advantage that career technical education provides my organization, because now I must do it quicker, smarter and at less cost than ever before.

Third, integrate industry standards and certification such as NIMS, the National Institute of Metalworking Skills into CTE high school and postsecondary instructional programs. These are industry led and defined to ensure that education and industry commu-

nicate with one another to provide the most proficient technical skills required for success and full employment in the workforce.

In conclusion, Chairman Castle and members of this committee, I wish to thank you once again for asking me to appear before you today, along with this distinguished panel. I would like to conclude by commending you, the members of the House Committee on Education and the Workforce, for your continuing and farsighted work to keep today's students and tomorrow's future workforce up to date and prepared to support America's industry.

[The prepared statement of Ms. Quinn follows:]

Statement of Brenda Quinn, Chief Executive Officer, Intelitek, Inc., Manchester, New Hampshire

I would like to thank you, Chairman Castle, and the members of the Education Reform subcommittee, for inviting me to appear before you today. I will be discussing the personnel needs of high-tech companies and the role of career and technical education.

When Congress passed the Smith-Hughes Act in 1917, one of its intentions was to move the U.S. from an agrarian to a manufacturing economy. To make that transition, Smith-Hughes established federal support for the education *and* training of citizens. Its focus was on people. To be successful as an economy, CTE was established as a way of keeping people up-to-date. In my opinion, that is still CTE's mission today. Perkins is still in the business of keeping students up-to-date but to-up-date to serve a highly technical economy in order to satisfy the mission.

Intelitek introduced

Intelitek is part of the new high-tech economy. We look for employees with new and broader knowledge and skills than the economy of the past. Intelitek produces Computer Numerically Controlled bench-top machines, Computer Integrated Manufacturing Systems and CAD/CAM software. Our customers in greater than 100 Fortune 500 companies as well as over 5000 domestic and worldwide corporations are using our machines in high-volume production; graphite electrode machining; mold making; rapid prototyping; and high-precision machining.

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The high tech worker

I'm sure all of that sounds very high tech. . and it is. (It would have sounded even more high tech if I'd used the acronyms I usually would like.... CAD, CAM, CIM and CNC.) The people who work in my industry have titles such as Robotic Technicians, CAD/CAM Designer and Industrial Engineer. Each of these people requires education *and* training beyond high school. The technology they employ is central to American advances in productivity but, in the end, it isn't the technology that is important. It's the people. Our people have the knowledge and ability to stay up-to-date . . .and that's the mission of career and technical education.

There are at least three things that I look for in an employee. One is a solid grounding in academics. At Intelitek, we expect that our employees—and the people who design, build, service and maintain our machines and software— have a working knowledge of math, science and language skills.

Second, I'm looking for technical skills. Our employees must have above average computer skills, understand the principles of hydraulics, pneumatics, programmable logic controls, sensors, process control, mechanisms, electronics, vision and mechanical measurement and quality control systems, robotics, CAD/CAM/CNC and: automation.... how these technologies all work together. Too often, however, people believe that academic achievement is a replacement for technical skills. It isn't. Successful employees must be able to apply their knowledge, consistently, for my company to succeed . . . and those technical skills are learned through hands-on application, not through theory. To me, that's the genius behind CTE. It teaches academics through application . . .it teaches the theoretical and the application. Both are essential. That's one reason why Intelitek is a signatory to the National Association of State Directors of CTE consortium in support of career and technical education.

Third, I look for what some people call "soft skills" and others call "employability skills." These are the goal-setting, resource management and communications skills. One of the most important skills in high tech industries is teamwork. That's not academics: that's real people skills. High tech industries don't have individuals manufacturing parts; we have teams managing processes. Every team member has to do his or her part for the team to be successful. These skills are taught in CTE by student organizations such as SkillsUSA, an association Intelitek has supported for many years.

I have worked for 12 years with SkillsUSA, one of the student organizations authorized for funding under Perkins. I serve on the board of SkillsUSA's Youth Development Foundation and on the contest technical committees for Automated Manufacturing Technology and Robotics and Automation Technology. All 77 of the SkillsUSA Championships contests are run using industry standards for entry-level employment and they are updated regularly to keep the competitions current with industry needs and practices. Both of the contests Intelitek supports are team contests to parallel practice in industry.

In my opinion, the Career and Technical Student Organizations (CTSOs) are one of the most important features of career and technical education. They should receive stronger support in the legislation for at least three reasons:

First, CTSOs are applied methods of instruction for teaching what industry considers essential: employability skills. The student organizations help students learn and practice their employability, technical and academic skills. They also help students to develop positive attitudes and ethics. There is a CTSO for every occupational area in CTE. Organization activities, such as community service projects, allow students to put their skills into practice and into context. Furthermore, CTSOs provide some of the best public promotion in career and technical.

Second, CTSOs connect students to their instructors, to their communities and to each other. When people talk about the value of mentoring—particularly when it's said that teachers should serve as mentors to their students—the model is already there in the student organizations.

Third, the CTSOs are partnerships with business and industry. SkillsUSA has over 1,000 corporations, trade associations, businesses and unions working as association partners at the national level alone. I know the other CTSOs also have business partners. The CTSOs are a place where we in business can become directly involved at local, state and national levels with training programs, instructors and students.

I recommend that more be done to build this important resource in CTE, particularly by supporting state departments of education to lead CTSOs and to support their activities. The student organizations are good for students, good for instructional programs and instructors, good for promoting CTE and the careers CTE serves, and they are certainly good for business.

Recommendations to the committee

I'm going to close with three recommendations to the committee regarding the Perkins Act. I look forward to amplifying these points during this hearing.

First, stay the course. As Congress intended, the Perkins Act has already had an impact on the academic achievement of students and articulation between high school and postsecondary instruction. Both were needed and both need to continue.

Increase funding for CTE. I ask our government to continue to invest with me.... Small employers have historically counted upon CTE as a source of training for their new hires more than any other source. Some smaller states, such as New Hampshire, weigh heavily on federal support to maintain their CTE programs. Furthermore, the instructional facilities themselves are used by industry to update training for their employees. I have invested in employee training to assure my organizations survival. As an employee benefit I offer tuition reimbursement as well as internal corporate training programs. I do this to remain competitive in a global industrial market. I need the competitive advantage that career and technical education provides my organization. I must do it now...quicker, smarter, cheaper and all, at less cost.

Integrate industry standards and certification such as NIMS (National Institute of Metalworking Skills) into CTE high school and postsecondary instructional programs. These are industry lead and defined to assure that education and industry communicate with one another to provide the most proficient technical skills required for success employment in the workforce.

Concluding remarks

Chairman Castle, and members of the committee, I wish to thank you once again for asking me to appear before you today along with this distinguished panel. I would like to conclude by commending you—the members of the House Committee on Education and the Workforce—for your continuing and farsighted work, to keep today's students, and tomorrow's future workforce up-to-date and prepared to support America's economy and democracy.

Chairman CASTLE. We thank each of the witnesses here today.

What I gather from what you all said is that the programs that we have in place now, even at the Federal level, are working reasonably well; perhaps a little tightening here and there and perhaps more dollars would be helpful, which is basically positive. We don't always—sometimes these programs are ripped apart, and I didn't get that sense at all.

I also believe that the handoff and the coordination from our vocational secondary to postsecondary to the employer market is starting to work better perhaps than it did before, and we appreciate that.

With that, we will go to questions by members, and I will yield to myself first for 5 minutes to ask a few questions. And I want to set a basis on what others have said.

For instance, Ms. Quinn, who talked about the workplace and Dr. Ihlenfeldt has a very clear calling for what they are looking for and what they need to do at the community college level, and something that Ms. Dunkel actually said, which is the Career Clusters.

But I want to ask Ms. Brand and Mrs. Stevens, based on their backgrounds—I see this a little bit in Delaware—but I worry that vocational schools are trying to pigeonhole students when I don't think they necessarily should be, both in terms of the academic courses, but in addition to having the broad skills to go out in the workplace. I think the old days of training people as pure plumbers and carpenters may be behind us. And I would be interested in your thoughts on that, since Mrs. Stevens is in the field and Ms. Brand oversees some of these things, your thoughts on what I just stated.

Mrs. STEVENS. It seems to be changing. Is it changing rapidly enough? If not, is there something we should be doing in this reauthorization to deal with that particular issue? Because, to me, the greatest problem we have in vocational education is staying up with the changes that are happening out there. It is a very fast-changing world, and are we doing the right things? We only look at this every 5 or 6 years, so this is our opportunity to look at this for the next 5 or 6 years.

Ms. BRAND. I think for too long children and youth have been pigeonholed into lower-track courses and to low expectations. And thanks to No Child Left Behind and some of the other reform efforts that have been put into place, I think that is changing, but we still have a lot attitudes that need to be changed at the school level.

Teachers, in particular, need to understand that students can achieve much harder and much greater work if they are given the support and the expectations for them are high. So it is a cultural and attitudinal change that needs to catch up across all of career technical education. It is happening in many places, but that is not always the case.

Career guidance and counseling is a large part of what needs to happen, as well as individual support for students, so that they understand that they have many options ahead of them. Career guidance and counseling is in pretty poor shape in most high schools. Guidance counselors are overwhelmed. I think the numbers in California are a thousand students to one. And in most urban high schools, guidance counselors have to deal with 4- to 600 kids. It is impossible for them to deal with the kinds of aspirational things that they need to deal with them on.

Early guidance and counseling, both focused on pathways connecting them to postsecondary education, making it easy for them to move through that system, I think are changes that need to be considered by the committee.

Chairman CASTLE. Mrs. Stevens, I will use myself as an example. I graduated from high school and had no idea what I wanted to do, so I went to a liberal arts school and graduated from there and had no idea what I wanted to do. And went to law school and still wasn't sure what I wanted to do. And yet I know there are 9th graders who are being told, you should make a choice; and it doesn't seem to resonate with the workplace today in terms of the broader skills that children need.

I was impressed by your testimony in this area, but I was wondering, how are you adjusting that part of it and should we be adjusting it?

Ms. STEVENS. I think there are a couple of things I would like to speak to.

As part of the effort we have with career guidance in partnership with our New York State Department of Labor, we have developed what is called Career Zone. It is an Internet career guidance tool, if you will. And what that has done—it has been built with the New York State learning standards, our Career Clusters. It was designed with New York State students that helped create that, and we have in a year over a half a million hits.

One hundred ninety thousand of our students have created career portfolios that are password protected. Students spend as much as, on average, about 77 minutes each time they are into the site and much of that is after school. That site can help them drill down and look at what is really available in the broad array of clusters rather than a narrow view.

So that partnership has been very, very successful and we continue to work on that. I can speak on that more specifically.

In our approval process, in getting that, where students can make choices, we have tried to put assurances in to get an approved program. The locals are required to do a self-study. They are required to have external members of business and industry review it, and ultimately, we review it. We look at that as an opportunity for students, but we also look at the alignment with our graduation requirements, all students taking and passing five State assessments.

Students who go through our approval process and pass the technical assessment get something added. They get a career and technical endorsement on their diploma. And we have seen an interesting phenomenon that we are going to track. We have had a 7.4 percent increase in our career technical education for secondary students. This is important because we think students are voting with their feet for quality.

And to your point, Mr. Chairman, we are also finding, as we work with our locals, that students can be in a particular program and working with their counselors and teachers. If they find they want to make a switch in choice, they often have opportunities within that career technical center. We want to be sure that all students have an idea of the broad array of careers, what it takes and where the path will lead in their postsecondary experiences.

And my last point is, in order for us to really provide for our Board of Regents where we are with this policy, we have contracted with an independent evaluator to look at the implementation of the policy across—to look at our strengths and weaknesses and review the policy.

Chairman CASTLE. Thank you, Mrs. Stevens.

Mr. Kind.

Mr. KIND. Thank you, Mr. Chairman.

I want to thank the witnesses for your testimony and the particular insight that you bring to this important subject matter.

As I look at the community college system across the country and the unique system that we have in Wisconsin, I view some great challenges coming up in future years. But where there are some challenges, there are also some great opportunities. Where there is some risk as we go forward with maybe some of the changes that are being proposed, I think there are going to be some great rewards in the system.

And among the big challenges—and there are many that I have been focusing on—is the funding issue, access and affordability. We can't take our eye off the ball when it comes to making sure that the students have the ability and the financial means to be able to access these colleges as we go forward, and yet the trend lines are not encouraging on this front. As you look at the difficult economic times that are coming out of the State budget cuts and the impact that is having on a lot of colleges, it is going to be important for the Committee to recognize that as we move forward.

Another challenge is obviously the competition in the global marketplace today that students are facing themselves, that the current workforce is finding themselves in, and the ability to upgrade their skills to these changing conditions.

And then, finally, it is an aging workforce, too, that we know is coming and is going to pose huge challenges in a lot of careers and

professions and how we are going to be able to feed a demographic time bomb, retirement that is about to go off and the unique role that community colleges are going to play.

Let me just ask the panel generally, with the President's budget proposal, calling for approximately 300 million-plus in cuts in the Perkins funding program, but also simultaneously talking about a new $250 million program, whether any of you had a chance to look at that and think about it, decipher it at all, whether that makes sense.

I know there is not a lot of meat on the bones just yet, but the President is continuing to talk about this as he goes out in the countryside and visits many of our communities. If you could touch upon the impact that a lot of the cutbacks at the State level have had on the community college system and what challenges that has posed and the importance then of this reauthorization process, especially the funding level for the Perkins program.

Dr. IHLENFELDT. I will speak to Wisconsin first of all.

We have had significant cutbacks at the State level over the past years in terms of our State funding. We have had restrictions on our property tax, which provides the second leg of that stool. And obviously, as you point out, you can charge students just so much. Access—our tuition equates to access at a technical college and the higher we raise tuition, the further we cut back on the number of students that have the ability to take advantage of technical education.

As you look at Perkins funding, it provides us with many of the support activities that are necessary for the programs that we have and the wide range of students that we need to serve at the college. Without that funding, we would be in a very difficult situation—at least in Wisconsin, I suspect with most colleges around the country—to handle the wide variety of students that we deal with.

That money brings in about—almost a million dollars to my college for the support services that are necessary; and with any cutback in that, we would not be able to provide a lot of the opportunities that we do to students.

I think, as we move forward, it is going to become more critical as we move into the advanced manufacturing technologies that are going to be necessary to keep this country afloat to make it competitive as a global market. We are going to have to work closely with the K-12 system and the university systems in the country to make that a reality. And dollars at the Federal level are going to be essential if we are going to do those types of things because of the high price tag of many of those.

Mr. KIND. Let me stay with you and open it up to the other witnesses. In regards to the Tech Prep demonstration grant money—and you referenced the Health Academy—there has been an idea about the possibility of eliminating the separate funding stream for the Tech Prep program and just absorbing it into the Perkins Act generally. Do you have any thoughts in that regard or any recommendations?

Dr. IHLENFELDT. The Tech Prep has served a vital role. It has exposed students at K-12 level to technical education. We have had an uphill battle in getting students comfortable with technical education, maybe getting their parents comfortable with technical edu-

cation; and demonstration projects through Tech Prep have led to providing those types of opportunities.

As the Chairman indicated, it may look like we are categorizing students or forcing them into a particular track, but let me give you examples.

We have students that have gone through the Health Academy and have decided that—our objective obviously was to get them into nursing, but they went through it because they want to go into pre-med. What better way at the high school level to move into a program than to go through there? It gave them the exposure that they need. That particular part of the funding is critical.

I think we need to spend more dollars on exposing students to advanced technologies that are coming down. That is going to be critical, and so that focuses on a particular need in our region at least.

Mr. KIND. Ms. Brand.

Ms. BRAND. Two points: First of all, with regard to the issue of helping students access postsecondary education, I think one of the promising models that Congress needs to look at is the dual enrollment, the concurrent enrollment that allows high school students to take college credit and basically save on the cost of college tuition. And there is enough evidence that those have promoted access and success in postsecondary education. So I think, given the experience that we have had with Tech Prep, both the regular Tech Prep program and the demonstration program, I think you can build on that.

Secondly, with regard to Tech Prep, my approach has been that it is time to let the demonstration go and to basically turn the Basic State Grant education or the basic funding for career technical education into something that looks a lot more like Tech Prep, which is the program of study that I described in my testimony; that there is no reason why all of career technical education shouldn't look a lot more like what Tech Prep is doing with some add-ons, with some amendments and improvements. But I believe that it is time to move that on, to take a hard stand and just say that this is what we think current technical education should look like, and it is time to drive that down through the system.

Ms. STEVENS. Congressman Kind, on your point about funding for community colleges, in New York State we, like many other States, continue to be challenged. But I can tell you from our community college universe, that they are very much in support of continued Perkins funding. We made strides in that seamless transition, and I would agree with the dual enrollment and those opportunities. So there is really strong feeling.

Mrs. STEVENS. I, again, think in terms of what I have told our wonderful Tech Prep community that they are likely to be the mothers and fathers of the new legislation because they really have shown the way in the way those connections need to be made.

We might offer a suggestion in the new legislation that there may be a set-aside for competitive innovation. Tech Prep really has laid the foundation for what I believe will be the future act.

Ms. DUNKEL. In Illinois, if we saw a 25 percent reduction in what we currently receive for our Perkins base State grant, it would

mean almost a $12 million reduction in our grant. So, yes, it would have a major impact on the programs we have in place.

I feel that in Illinois we have established an extremely strong secondary/postsecondary link at the State level as well as many, many programs at the local level. It hasn't always been easy, but we have worked through those collaborative efforts, and I think we are very, very strong in that area.

I also agree with the thinking of Ms. Brand on Tech Prep. To me, Tech Prep is quality, clear and technical education.

Mr. KIND. Thank you, Mr. Chairman, for your indulgence.

Chairman CASTLE. Mrs. Biggert is recognized for 5 minutes.

Mrs. BIGGERT. Thank you, Mr. Chairman.

Ms. Dunkel, in your testimony you describe Career Clusters as a way of providing a broad focus allowing students to learn about an array of careers rather than specific jobs; and you also suggest that Career Clusters ensure alignment and integration of academic, technical and employable skills. Could you elaborate on that last point?

Ms. DUNKEL. I guess the easiest way to describe that for me is to almost think about a wheel with spokes. If you look at the very basis of that wheel, it is a foundation; and that foundation for a career cluster—let's just give an example of agriculture and natural sciences—would include the key academic skills, knowledge, and abilities that any occupation in that entire cluster would have aligned with.

Then at the very middle of that wheel would be the core competencies that would go across any occupations within that cluster. There are also pathways that are included. And then on the very outside of that wheel would be very specific occupations that students probably would not experience until late high school or postsecondary education. So all through the implementation of the Career Clusters, the academic and technical and employability skills are aligned with each other.

Mrs. BIGGERT. So these technical classes really would reflect and incorporate the academics—

Ms. DUNKEL. Absolutely.

Mrs. BIGGERT. —that students learn in math, science, English whatever. Then you have recommended that the reauthorization process create a direct connection between accountability and local use of funds to drive program improvement, suggesting that locals must be required to spend funds on activities to improve their performance. And could you expand on that also?

Ms. DUNKEL. Yes. Actually, if we look at our core indicators with Perkins, the four core indicators really are identifying key areas in which schools and community colleges should be making progress and performing at a particular level.

If, for example, a school in Illinois or anywhere were not able to meet their performance target in the non-traditional completion goal, then at the State level we would work with that local entity to identify some strategies that they could particularly use funds on and implement at that level to address that lack of performance. It is really taking how we are using the funds and directly connecting it to performance on the core indicators and hoping to improve that performance.

Mrs. BIGGERT. Well, what should locals be required to do? We worry about the word "required" or "mandate" or anything like that.

Ms. DUNKEL. Each year the locals have to submit an application to the State agency for review and approval, and in Illinois the local application actually asks the schools to show their performance against the State's goal and against their own annual adjusted goal at the local level. If they are not meeting that performance target, then they have to identify within their plan very specific activities that they will use their Perkins funds on to address that performance goal.

I know many other States have started to do that with their local planning process, but it is not required.

Mrs. BIGGERT. Ms. Quinn, in your testimony you said that your business looks for employees with new and broader knowledge and skills than was necessary in the past. How do you ensure that your incoming employees have strong math, science and language skills? Do you test them?

Ms. QUINN. No, we don't actually test them. But in the interview process not only are they interviewed by an H.R. Person, but we get our engineering staff involved. So we can screen out a basic level of knowledge. And we also rely heavily upon our community college system. We are familiar with the output and have been very pleased and happy with that output. So we rely very heavily upon the criteria that they impose and then take the process one step further when they come through the interview process.

Mrs. BIGGERT. There was an article in the New York Times yesterday which I am very disturbed about and that was saying that the U.S. is really falling behind in science—research and development and science and that other countries are getting ahead of us. I think we are a very competitive Nation. I don't like to see that happen, particularly in this climate where we do need new and creative ideas.

I just wondered if you really think that the students that are coming out really have the basic skills that they need so that we ensure that we are going to be the country that still has their future in the science.

Ms. QUINN. I would say that they have the basic skills, but they don't have all of the necessary skills. It typically takes about 2 to 3 years of continued training within the organization to bring an employee to the full potential for what we are looking for. So we invest very heavily in additional training either by sending them to additional outside courses and/or internal training that we offer.

Mrs. BIGGERT. Thank you. Thank you, Mr. Chairman.

Chairman CASTLE. Sort of ironic because Mr. Kind had cited the exact same article from the New York Times and had it submitted for the record. I happened to use it yesterday in talking about the stem cells on a radio interview. The article seems to be the most quoted article of the week as far as I can ascertain.

Mrs. Davis is recognized.

Mrs. DAVIS. Thank you, Mr. Chairman. Thank you all for being here.

Ms. Brand, I want to go back to one of the things that you said about trying to have Perkins Act funding be on a grant basis rather

than an entitlement. I was wondering what criteria you thought should be established if it switched over in that way.

Ms. BRAND. Thank you. The State would be involved in setting some of the standards for making those competitive grants, and in the report that we released that includes this recommendation for competitive grants we do lay out some ideas of what States would look at as they develop the criteria. We would want to ensure that they have the main elements of the program of studies that I described, which include the rigorous integrated curriculum, strong teachers, and the links to postsecondary education involvement with employers' guidance and counseling. So there are some core elements that would need to be part of the grant application.

Then the State can also look at accountability measures that they have in place. But we would leave that up to the State and not—we certainly—I would not dictate from a Federal level that you would put those kinds of requirements in the law. Continue to allow States the flexibility to work, as I think you have heard from the two State directors here. They are already doing similar work right now, and they have their priorities and they have their system in place. So we would recommend that the States would be in charge of detailing the exact requirements.

Mrs. DAVIS. Would there be any loss, then, to communities that perhaps weren't getting their act together? How would we reconcile that?

Ms. BRAND. The whole issue of moving to competitive grant is somewhat controversial. You would be taking money away from certain communities that are getting it right now. That is the challenge of moving toward something like this. But I think it is worth looking at in terms of promoting a real stimulus to communities to very intensively look at improvement of their career and technical education programs for a concentrated period of time and to get them kind of up to speed as opposed to just kind of little by little hoping that changes filter down.

My experience with the past reauthorizations from the Perkins Act are that it takes 5 to 6 years for them to filter down to the local level, and I think we just may need to consider some ways to make that happen more quickly.

Mrs. DAVIS. One of the issues, of course, is in trying to make certain that vocational education, whatever teachers who are working in this field with young people, that they stay current. Programs that suffer through cuts and others, teacher training fads, we might say, how does that affect people who really—we are hoping that at least they are staying very current and they are interacting particularly with the clusters in their own communities to have the highest and I guess best use of knowledge that is being demonstrated within the country today. How do you think we need to deal with that?

Ms. DUNKEL. One of the probable uses of Perkins funds that our regional delivery systems in Illinois use is for professional development of teachers; and it is critical, especially in the career and tech ed areas. Many times, schools are not able to find a teacher with a teacher preparation background. The particular area of health occupations is a good example. So they have to depend upon people who have appropriate work experience to teach those courses. So

for them to be involved at a very in-depth level in professional development is very, very critical.

Mrs. DAVIS. But within the climate that we have now with the number of budget cuts do you see that as one of the compromises that school districts are making? Is it as high a priority? And what role would you hope that the businesses in the local community are playing? I know there are a lot of wonderful players that are out there that are trying to do this, but I think the reality is that we really don't have the access to a lot of that new technology for our teachers, structures that we need to have. What will change that?

Mrs. STEVENS. I think one of the things that is evolving in New York State is there have been real challenges in getting the right kind of professional development, sustained, continuous over time, not one-shots either. As we have moved along in this integrated model for program approval—we have been at this about 3 years—we have seen an interesting thing emerge at the local level. As the academic and current technical teachers meet to look at student performance and really where the gaps and strengths are, they have developed some professional development targeted to that. They have also engaged some of the businesses and industries in those various programs.

So we see some partnerships emerging because there is mutual need in having students be successful in moving out of secondary school into most secondary experiences and work sometimes together. So we are seeing those emerge.

All of our districts are required to have a professional development plan for all of their teachers. As of February 1, any new teachers into the New York State teacher certification system are required to complete 175 hours of professional development each 5 years; and we see this as a real positive thing as the systems change across there. But professional development, to have highly qualified teachers, the best teachers in the classroom, whether it is academic or current technical education, is a priority and is a challenge for all of us.

Mrs. DAVIS. Thank you.

One quick question I guess to Ms. Quinn and others, I remember many years ago we talked about students having their grades essentially checked by the companies that they were going to for jobs, very much the way college transcripts would be used. Do you see very much of that? Are students feeling that their grades really do matter as they go out into the business community?

Ms. QUINN. Yes, I think to the students and to the future employers it does matter. Excellence has value.

Mrs. DAVIS. Or they ask for them—I guess that is my question—as you work with employers?

Ms. QUINN. Often times the technical-type employee comes with a portfolio today. So when they walk into the interview process we have transcripts, we have maybe like design projects that they have worked on. So you can get a very good sense of what their background has been, whether they are coming right from the high school level and/or the community college or even the 4-year engineering degree school.

Mrs. STEVENS. I would like to just share in New York State as an example we have seen some interesting things happen region-

ally where businesses have joined together in working with one of our urban school districts, have agreed on like a work skills certificate so students who have a certain attendance, a certain grade point average are often hired at a little bit more hourly wage, and the businesses agree to really support the students and make sure they are at school and not working too many hours. So we see some very interesting mutual-need partnership connecting it.

I would also add as part of our approval program each student has to develop their own employability work skill profile. When they apply for even part time work in high school, they often take that with them to demonstrate what they have done not only academically but in their technical programs.

Mrs. DAVIS. Thank you, Mr. Chairman.

Chairman CASTLE. I have another question I would like to ask, so we are going to have a limited second round here, hopefully won't take the full time, but we will still set the clocks just in case. My question may be something you can't answer, so don't strive too hard if you don't really know the answer.

The question is, if you know it—I realize you are not drafters of legislation. You may not be that familiar with the intricacies of the law. I have heard your testimony on the dollar part of all of this loud and clear, though I am perfectly willing to hear comments on that. What specific recommendations, if any, do you have for changes in the Perkins Reauthorization Act that we are about to undertake here in the next few weeks? You don't have to do it by citing a statute. If there are certain areas that you think need to be changed or emphasized, that would be sufficient. If you don't know the particular act that well, then your testimony will certainly stand in for you what you want to get done. I didn't want to go away from the hearing without seeing if you have any specific thoughts or recommendations. Anybody?

Ms. DUNKEL. One of the areas I would like for you to take a close look at are those that deal with fiscal requirements. Perkins does have the maintenance of effort requirement, which is pretty much an all-or-nothing requirement, as well as the State administrative match and the hold harmless for State administration. It is becoming more and more difficult for States, as our State budgets are in deficit and we have seen impacts at the State level, to maintain those requirements with Perkins. So I would just recommend taking a close look at those requirements.

Chairman CASTLE. Thank you.

Anybody else?

Dr. IHLENFELDT. I guess I would encourage you to look at the occupational areas, driving the occupational areas that are going to fuel the economy of this Nation as we move forward in whatever way you can in the grant. I think too many times we have heard it with the science and math, we accept the status quo.

One of the challenges we have, at least at the community college level, is gearing up for the new technologies that are coming on board. Anything that can be done in terms of teacher preparation I would also encourage you to drive that through partnerships, because it can't occur in and by itself in any one system, albeit, a secondary system, or a postsecondary system.

And I would encourage you, as you revitalize Perkins, to target some criteria that encourages the development of partnerships between the systems and with the business community as well. Because that is the only way that things like teacher preparation, getting students ready and interested and targeted into those occupations can occur.

Mrs. STEVENS. I would also encourage as you draft the legislation that we look at some common definitions of what a current technical education student is. As we look at the performance measures I think we need to look at secondary and postsecondary so that the picture and the story can be told and I think in a clearer way perhaps. So I think there is some tweaking that ought to happen in that area.

Ms. BRAND. Just briefly, as Congress considers education legislation I think one of the things that you need to keep in the forefront is the move toward creating K through 16 systems, and I think across all the legislative vehicles that you have there should be a review of how those connections can be made more strongly. I don't have any specifics right at the moment, but I think that, regardless of which piece of legislation, it is that kind of underlying theme that needs to run through a lot of the changes to make sure that 5 years from now we are not coming back saying this barrier exists and this barrier exists, and to look at it with that perspective.

Dr. IHLENFELDT. I would encourage you not to saddle us with a lot of new accountability factors. I think that many times that causes us a great deal of staff time and paperwork, if you will, to make things happen. I think there are enough accountability measures already in place by accrediting bodies and data that is collected on the State level that could be utilized, as opposed to creating new accountability measures that take away from the dollars that are available to us.

Chairman CASTLE. We are pretty good at demanding accountability. We are probably not as good at understanding what it does when the rubber hits the road.

I think your comments are not only well directed toward this bill but a lot of other particularly education legislation that we handle. But I tell what you is helpful, and that is feedback from all of you in very specific terms. I tell my educators that back in Delaware.

You complain about Federal requirements, et cetera, a lot of them are State requirements, but, whatever, they are complaining about the requirements. Give me specifically what it is that you are complaining about, what is the regulation, what is the statute, what does it cause you to do, so that we can understand that and make recommendations for changes.

I think we pass a lot of laws very generically and generally without understanding the ramifications of what we do further down the line. It is really helpful to specifically see what that is. If you are spending 50 hours of staff time preparing what seems to be some simple request, that is the kind of thing we should know. Sort of using you as an example for almost everything we seem to do in Congress and particularly even in this committee.

Dr. IHLENFELDT. That is not a statement against accountability. I think we all need to be accountable. But there are efficient and effective ways of doing it.

Chairman CASTLE. Mr. Kind.

Mr. KIND. One follow-up question, but I want to echo the Chairman's sentiments in terms of the feedback. It is crucial. You are aware of where the rubber meets the road and how it works in the real-world type of thing. It is helpful to us to get this feedback not just in the formal hearing process but throughout the reauthorization process.

I know, Mr. Chairman, during the IDEA reauthorization markup you had created a Web site encouraging that type of feedback for IDEA instructors and parents and anyone involved. I was wondering if you did do the same thing for Carl Perkins or is there an opportunity for people to—

Chairman CASTLE. We had so many complaints about how much time it took to do the Web site.

Mr. KIND. Staff is cringing behind us.

Chairman CASTLE. We have not done it, but it is certainly something we will take under rapid advisement.

Mr. KIND. Let me get back to my last question here. I would be remiss, as one of the leaders of the Rural Education Caucus here in the House, not to ask about what we are trying to attempt in the reauthorization bill. That is that local reserve fund for servicing rural areas.

Now in my congressional district we have four technical colleges, a couple of community colleges, a host of satellite campuses, too, many of them servicing rural areas. If any of you have any specifics on how this local rural reserve fund has worked or is not working, we would be interested in hearing about that today.

Have you had any direct knowledge of this reserve fund that was established, Dr. Ihlenfeldt?

Dr. IHLENFELDT. No, I haven't.

Mr. KIND. Does anyone?

We will have to delve into that a little bit further.

Ms. DUNKEL. In Illinois, we chose not to request the reserve percentage because we have a regional delivery system. We have 60 regions in the State, and their responsibility is to work with all of the schools that offer career and tech ed.

Mrs. STEVENS. Our experience in New York was similar. We have 38 regions, so we made sure we touch the rural areas.

Mr. KIND. Thank you all again. We appreciate your testimony. It was a very helpful, very productive hearing.

Chairman CASTLE. Let me thank the panel. They were very thoughtful, very helpful in our deliberations on this. We appreciate it. You are always welcome to follow up if you have other thoughts when you get away from here in the form of a letter or whatever. Because we truly are interested in getting your thoughts. We are just trying to write legislation, and you are more in the field than we are. So that makes a difference. We thank you.

If there is nothing further, we stand adjourned.

[Whereupon, at 3:40 p.m., the Subcommittee was adjourned.]

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