



## **WORK FORCE SUMMIT**

**"America's 21<sup>st</sup> Century Skilled Work Force Crisis:  
Who Will Do the Work? Will They Be Prepared?"**

**June 22, 2006**

**MR. LAWRENCE:** Good afternoon. Good afternoon. My name is Tim Lawrence and I serve as executive director of SkillsUSA. Welcome to our forum, America's 21st Century Work Force Crisis. Who will do the work? Will they be prepared? This forum is an expression on something SkillsUSA has been doing for many years.

In the past, we have held what we call round tables and invited participants and policymakers attending this conference just to sit down and talk in casual conversation about how SkillsUSA could work together with industry and government to help solve the work force crisis. The discussion almost always ended up being about the same topic, this challenge of growing the American work force.

As those of you who have just been touring the championships have seen, career technical education and SkillsUSA are part of the solution. We're certainly not the only answer but we're happy to help host the discussion on the larger issues and solutions here today.

I want to thank our distinguished panelists for being here to speak with you and I want to thank you for coming to be a part of this forum. SkillsUSA invited the Kansas City business community to be with us today and this year, because there are so many of you here, we want to thank you for your support for SkillsUSA since 1994 in this community. We have had incredible support from the Kansas City business community. We're going to be talking, certainly, about concerns you have here in the Kansas City metro area. And undoubtedly, many of you have also found some parts of the solution. We want to hear both from you and the other industry guests in this room. We're fortunate to have the support of many here in Kansas City. The Kansas City Chamber of Commerce, the Kansas City SkillsUSA advisory council. We're happy that you're all here.



Now, I would like to introduce one of our student leaders, Christina Fernando, who will introduce our moderator, Dr. Jim Stone.

**MS. FERNANDO:** Thank you, Mr. Lawrence. On behalf of nearly 285,000 student and instructor members who are members of SkillsUSA this year, I welcome you to today's forum. SkillsUSA students are enrolled in over 140 occupational areas but we share one goal, to



become champions at work. That means we must have mastery of academic skills and technical skills but there is more. We have to have the right attitude; towards work and toward the people we work for and with. That's what SkillsUSA does for students.

Through our involvement in SkillsUSA, we're in a position to look and learn from our instructors and industry partners as we learn and practice those essential attitudes and skills.

It is now my pleasure to introduce our moderator, Dr. James Stone. Dr. Stone is a director of the National Research Center for Career and Technical Education.

He is a native of Washington, D.C. and he grew up in Virginia, where he later managed retail establishments for more than ten years. He left that career to teach secondary marketing education in Fairfax and Lowry County. He earned his BS and doctorate degree at Virginia

Polytechnic Institute and State University and a masters in school administration at George Mason University. He is currently a professor in the Department of Work and Human Resource Education at the University of Minnesota.

Dr. Stone has maintained an active program of research over the past 20 years. He has been responsible for more than \$5 million in external grants focusing primarily on the role of schools linking youth and adults to the workplace. Welcome, Dr. Stone.

**DR. STONE:** Thank you, Christine. I appreciate those kind words. In fact, I wrote that, it was for my mom. She's not here so I really made it up. First, two orders of business. I was asked to be a moderator by my good friend, Tim Lawrence. This may prove to be his undoing. He should learn by now don't put me in front of a microphone with a group. But the first thing I want to ask you to do is for those of you that have these devices with you, please turn them to pleasure mode. It goes downhill from here. I also just wanted to provide a couple words about the National Research Center for Career and Technical Education, of which I'm a director. As Christina said, I'm a professor at the University of Minnesota and that's my day job. About eight years ago, a group of us got together and were able to secure the grant which is funded through the U.S. Department of Education to operate the National Research Center for Career and Technical Education. In that work, I work with colleagues at seven other institutions; six of them universities plus the Academy for Educational Development.

We have a large body of work that relates to this conversation so I invite you to visit our website. Dial toll free [www.nccte.org](http://www.nccte.org). As Tim said, we always seem to be talking about worker shortage. On the other hand, we always sort of seem to muddle through somehow. But the muddling seems to be getting much more difficult these days as we look around with increased international competition and other issues that really affect both the market demand, as well as the labor supply.

We have some estimates that 73 million Americans will retire by the year 2030. I will not be among them because, as I said, I'm a college professor so we don't get paid very much. By the way, I was in business for a number of years and decided that that was too much work. So being a college professor is a cool scam. If you could get into it, I would highly recommend it. If in fact we're going to lose 73 million people out of the labor market, who is going to fill them in? Some estimates say that at the moment, we have maybe 41 million potential workers to fill in behind those 73 that are absent or that will be leaving. All moving to Florida and Las Vegas, apparently. There is a huge gap there. What is going to fill that gap? And more importantly, it's more than just the numbers. It is the quality, it is the skills that these folks will possess. And will these skills match up with the demands of the marketplace, of the labor market, and of industry that creates those opportunities for workers? There is -- I keep using this notion of demand and supply. I'm delighted that there are people on the panel here who actually know what those terms mean because I just use the words. But it is a matter of who is going to build the work force. Where are we going to get workers and who is going to build the work force on the one side. And then on the demand side, what sort of opportunities will there be created through Certainly on the supply side, if you will, we have organizations like SkillsUSA that are doing an outstanding job of preparing young people like Christina to move into the workplace of tomorrow. We also have, more broadly, programs like Career Technical Education in the high schools and in the post-secondary.

But while on that side we have these opportunities for helping young people begin the transition from adolescence into productive adulthood and continued education once in adulthood, we're facing a situation now where we have virtually a crisis in the percentage of young people who start 9<sup>th</sup> grade who fail to complete 12th grade. I think most of you have seen the reports that were put out this week. The current estimates are barely two out of every three successfully complete high school. About 68 percent is the average. And in urban areas, it's much more profound a problem than that. And as you break it out by ethnic and racial groups, the problems are even worse. So on the supply side, we have a genuine problem. And industry and business certainly have a role to play there through partnerships that come about. It's a challenge, certainly. Now, we certainly have workers who are other kinds of careers than the ones they are in now. We're all familiar with the average number of jobs people will have during their lifetime. And education has a role to play there, as does the kind of education that occurs within business and industry. But this is a genuine challenge that confronts us. It's a challenge that is more dramatic a challenge in this country than others for reasons that we can talk about perhaps at another form. But we have got a terrific panel here today to talk about some of these issues. If I were to sort of go through their vitae for each person, that would just about take the hour and a half that we have set aside so I'm not going to do that.

I'm going to briefly introduce them and then have them provide some perspective on this issue that Tim has raised. But I wanted to sort of lay out what we hope to have happen here today. You are the expert panelists, also. Just a few of us got better seats. So we envision this as a conversation. This is not a one-way monologue -- or septilogue or whatever the appropriate Latin term is -- but rather it's a conversation. So we have invited these folks to provide a few words. I have all kinds of

questions because, after all, this is all about me. But I would rather -- I told you you would be sorry,



Tim. But what we really want to know, though, is what is on your mind. So we're going to present some ideas, some information, some facts and background. I really want you all to ask questions but also, we may turn around and ask questions of you. So we have two microphones here. When the time comes, we would like you to line up. Be prepared to ask questions or challenge what you may hear from this stage. But before you do that, we want name, rank, and serial number. We would like to know who you are, what organization you are with, and your role in that organization so we kind of have a sense of who you are. But also be prepared for us to ask you questions. I really would like this to be a conversation. I was raised in the south so I was taught by my grandmother that ladies go first, even though that is sometimes politically incorrect. But if she were here in the room and I didn't start by introducing our ladies first, she would spank me.

So I would like to start with Dr. Gail Schwartz, a colleague of mine. She is currently the director of the Division of Academic and Technical Education in the Office of Vocational and Adult Education in the United States Department of Education. Did I mention there will be a test? She at one time was a professor. And for some reason -- I won't even ask but she was a professor at George Washington University in the School of Education and Human Development. She has also served as the director of staff development in training for the District of Columbia's Youth Services Administration and she has served as a consultant in the Pennsylvania Department of Education. But perhaps the most intriguing part of her resume is that she has been a consultant to the U.S. Department of Justice. And so reaching back to her roots, when we leave here today, she will frisk everybody. Starting with me.

We also have with us Stacy Jarrett Wagner, who is currently the managing director of the Center for Work force Success at the National Association of Manufacturers. In her role, she has oversight of the Center's projects, the work force development, training and employment. She works very closely with the business members of that organization and with the professional work force development community. She also manages the Center's research and employment skills and is a team member of the Manufacturing Institute's Dream It Do It -- I love that phrase -- and it's various campaigns. She's also one of the authors of the 2005 Skills Gap Report. If you haven't had a chance to read that, I urge you to. It's a really eye-opening report.

Mason Bishop is the deputy assistant secretary in the Office of Employment and Training Administration in the U.S. Department of Labor. He's responsible, among other things, for overseeing key work force investment programs and developing and implementing work force policies and priorities and assisting with congressional relationships, as well as legislative issues. He played a lead role in the reauthorization of the Work force Investment Act. Prior to this role, Mason was legislative marketing director for the National Association of State Work force Agencies. So you can see, he brings a lot to the table here. In this role, he helped states with outreach efforts to employers and the public and managed various projects on behalf of states.

Cameron Ferguson manages the Product Safety and Engineering Services Department of the Technology and Solutions Division of Caterpillar. Over the last 25 years, Cameron has held a variety of positions in product support and various other operations for Caterpillar. In these capacities, he's lived in Singapore, Jakarta, Geneva, and now he lives in the most exotic locale of all, Peoria, Illinois, where they have extraordinary restaurants, anyway. As you will hear in a few minutes, he grew up in Scotland before immigrating to Peoria in 1968. Prior to working for Caterpillar, Cameron worked for General Dynamics Electric Boat Division and he currently serves as the Chairman of SkillsUSA Youth Development Foundation. Al Frink is the assistant secretary for Manufacturing and Services International Trade Administration at the U.S. Department of Commerce. He was selected by President Bush in 2004 for this role. He is a small business executive who has successfully led and grown an internationally recognized manufacturing company, Fabrica. Fabrica International in 1974 started out with a small loan from the SBA and now has \$60 million in annual revenue. An extraordinary success story by any measure. All of their operations, I wanted to add here, including the manufacturing and distribution, are located in the United States. He is a champion of export and he is also a committed and dedicated volunteer on cultural and education issues that address Hispanic and native American issues.



Dr. William Keeton is an assistant vice president and an economist. Harry Truman always asked for that one-armed economist. Do you remember that story? I'm sorry, he has two. On the other hand -- that's common that Truman wanted a one-armed economist, it's an old story. I'm sure Bill heard it way too many times. But he's with the Federal Reserve Bank of Kansas City. He joined the bank in 1983 as a senior economist. He's a recognized expert on banking issues, as well as a major contributor to the bank's analysis of regional economic issues and outreach programs. He received his Baccalaureate degree from Yale University and his PhD in economics from MIT. Awesome. I'm impressed. Before coming to the bank, he taught at Yale. He has also served in the Peace Corps in Columbia, worked for two years on the Council of Economic Advisors in Washington, DC.

And the final person I would like to introduce is Clyde McQueen. He has been president and CEO of the Full Employment Council in Kansas City. By the way, one of our audience members wanted to know if you were Steve's younger brother. On behalf of an audience member. He's responsible for directing a staff of 100 employees who are involved in job training, education, economic development activities, transportation, youth development, and welfare work. This is a busy man. He also, in addition to that, served on the board of the Greater Kansas City Chamber of Commerce, the Work force Development Council, the U.S. Conference of Mayors, the Economic Development Corporation of Kansas City, United Services Community Act. You are one busy fellow. This is incredible. Where did I leave off? He's a member of the National Work force Association, National Association of County Training and Employment Professionals. And in his spare time, he received a Masters baccalaureate of Arts Degree in speech com in political science from Southwestern Texas State University in San Marcos, Texas. This is an awesome group that we have assembled here but I'm willing to bet that out there is an equally awesome group. So again, I encourage you to think about questions for the panelists and I encourage you to challenge things that you may not agree with but also be prepared for us to ask you questions.

So we have asked each of our panelists to spend about three minutes providing their perspective. I have the proverbial hook and at the end of the three minutes, we'll exercise it so that we have more time for conversation.

So at this time, I would like to introduce Clyde McQueen as our first speaker. And we have asked him to sort of draw the big picture for us. Not only the Kansas City data but also what the national data tells us. Trends and work force needs, expectations, and the reasons for the skilled worker shortcomings. Clyde?

**MR. MCQUEEN:** Thank you, Dr. Stone. Again, welcome to all of you. As a Chamber of Commerce board member, spend your money, have a good time, and buy all the high-priced stuff you can buy. As President and CEO of the Full Employment Council funded by the U.S. Department of Labor and city, county, and private contributions, I have had the opportunity to view the need for highly skilled workers from both the employers and the employees' perspective.

In fact, I can go into one room with employers and talk about the need for skilled workers and then I can go into another room and hear from the employees about the need for good jobs. And our challenge is how do we match those who need good paying career oriented jobs who don't have the skills with those employers who need skilled workers in a timely manner. Because the pipeline and the demand side always tend to be misaligned. According to the 2004 book, the Jobs Revolution --

Changing How America Works, the skilled worker gap in the United States is 2010 and 14 million by the year 2020. The American work force will grow at a much slower pace than it has over the course of the last half century and our work force is aging. In fact, there will be a full employment program for the mature experienced workers, as my dad tells me when I call him old. The share of the work force that is 45 years of age and older will increase from 33 percent in 1998 to 40 percent in the year 2008. By 2030, 41 million new workers will enter the work force while 73 million will enter retirement. According to the 2004 Kansas City Metropolitan Area Long Range Forecast compiled by the Mid-America Regional Council, the population of the eight-county Kansas City metropolitan area will grow by nearly 30 percent by the year 2030. The number of jobs will grow by 52 percent. In other words, Kansas City will add 553,000 people and 607,000 jobs during that time frame. It's important to note that presently, just on the Missouri side of Kansas City in Jackson, Clay, Platte, and Cass Counties alone right now, we have 530,000 payrolls.

That means that you will see a doubling of those employment opportunities. Between now and the year 2012, we will see a 13 percent increase in the number of secondary teachers needing to replace those retiring from the work force and to fill new schools that are being built in the rapidly growing outlying areas. We will need to add 600 more elementary school teachers, 1,500 new registered nurses, where the average age right now for a registered nurse in Kansas City is 46 years of age. We will need nearly 3,000 computer and mathematical related jobs. We will need 5,000 new employees for skilled construction extraction positions, that's an increase of 19 percent, where the average age of a construction worker in Kansas City right now is right around the age of 47. We all know that more education leads to a lower level of unemployment. In 2003, unemployment among high school dropouts stood at 9.4 percent, high school graduates at an unemployment rate of 5.5 percent. Unemployment among college and community college graduates only 3.1 percent. And college graduates earn 100 percent more in their lifetimes than high school graduates do. Currently, our nation is not doing all we can to prepare young people to take advantage of the benefits associated with higher education. We will need 1.8 million more workers with two-year degrees than we currently produce. We will need 3.3 million more workers with four-year college degrees than we educate. We will need 1.9 million more workers with advanced degrees than we graduate.

As a nation, we have 30 million skilled worker slots and only 23 million Americans to fill them. What is worse, here in Kansas City, we lag other cities when it comes to producing a highly skilled work force. In 2003, 5.9 percent of the population held an associates degree compared to seven percent in Boston, eight percent in Seattle, and eight percent in San Jose, California. Twenty-one percent of Kansas Citians have bachelor's degrees, again lagging Boston with 24 percent, Seattle with 26 percent, and West Virginia with 35 percent. In Kansas City, ten percent hold a graduate professional degree compared to 12 percent of Seattle, 19 percent in Boston, and 18 percent in San Jose. But with this challenge is great opportunity. Just think. With all the opportunities that exist for skilled workers and all the people walking around who don't have skills, now is the opportunity that we have to truly skill-up, educate those who are unemployed or working below poverty levels. So our challenge is how are we able to link and align the supply in a just-in-time manner with the opportunities that we created when we decided to go fishing, draw retirement, or go to the park. And that our kids will be able to help pay your retirement, help supply your fish, and help the parks stay green. That is a challenge that we have and the key is partnerships. We have partnerships with manufacturers, construction companies. With the construction industry, I see KC Borden, IBEW out there. Gary Kilmer construction trade just recently graduated 28 -- actually, 30 workers in electrician fields that have never been experienced before in the minority community.

The Dream It Do It Campaign, Hospital Association. All of these designed to better connect the real world of work with the world of education and the result is our community. Thank you.

**MR. STONE:** Thank you, Clyde. I now would like to turn to Stacy Wagner. Throughout the time here, I think that Stacy is going to focus on the National Association of Manufacturers 2005 Skills Gap Report and some of the reasons for the dearth of skilled workers and the activities of the Manufacturing Institute to address this problem.

**MS. WAGNER:** Thank you, Jim. Well, I thought I was the one who was here to sort of give you the bad news but I think Clyde has done his fair share of that. And good news, as well. And I don't only have bad news. And I would like to actually not say that I'm just the bearer of bad tidings. It's really a pleasure for me to be here today on behalf of the National Association of Manufacturers because not only do I get to talk about some of the things that we're doing to help increase the pipeline for skilled workers going into manufacturing but I also get to talk a little bit about manufacturing because I don't think you hear enough good news about manufacturing. Now, at lunch today, Assistant Secretary Frink did give you some very good statistics about manufacturing. Oh, by the way, at NAM we like to call him the manufacturing czar. That's what he's known informally as. And he did give you some very good statistics. Let me just reiterate some of those which are that there are 14 million Americans right now working in manufacturing. They are being paid on an average annual wage about \$12,000 more than in other sectors of the economy. Manufacturing output has continued to grow since 1947 at the same rate as the economy. When you look at worldwide manufacturing as a percentage of value add, we are the same as we have been for the last 25 years, which is about 25 percent of the global economy. So there were – another important part, the private investment in research and development, two-thirds of that comes from manufacturers. And when you talk about that, I don't want to just say it's research and development, I want to talk about it as innovation. So manufacturers are heavily invested in innovation.

So those are some of the interesting facts about manufacturing that I wanted to just reiterate because every time I turn around, I hear someone saying something about manufacturing and isn't that going away. And it's dark and dirty and dangerous and dead end. I went to the doctor last week, new doctor. I said I need a new doctor, my old doctor went off my health care plan. And you know, she started to perform this painful procedure. You know how it is when they perform a painful procedure, they start asking you what do you do to try to get your mind off what really hurts. I said well, you know, shorthand, I'm in manufacturing. I work for the National Association of Manufacturers. She said well, you don't have much work any more; do you? That's all gone offshore; hasn't it? And I thought, I thought what you were doing to me is painful. But please, this is really the kind of thing that I just don't want to hear over and over again because I do hear it over and over again and it's just not true.

Okay. That being said, we are facing a very serious dilemma in manufacturing around finding enough skilled workers. And when you look around today and I see all of these great kids and they are smart and they're self-possessed and they're going to go on and they are going to do great things and people are here to hire them and I think this is fabulous. But it's really just not enough. Because when you talk to our manufacturers -- and I brought a copy of this Skills Gap Report and it certainly can also be downloaded from our website. But last year when we conducted the survey, 90 percent of our manufacturers said they could not find enough skilled production workers right now. And you know, when we look at the kids today, they're entering the work force and they're the

future work force but we have got problems right now. And we certainly have problems, as Jim has mentioned this morning, that you know, when we look at the deficit of workers who need to have some sort of post-secondary education to get the high skilled jobs in the future, we are really looking at this gap, this skills gap. It's not that there are not enough people, there are not enough skilled people. So 90 percent of our manufacturers said they couldn't find enough skilled production workers; 39 percent said they couldn't find enough qualified unskilled production workers; 65 percent said they could not find scientists and engineers; and 44 percent said they couldn't find enough sales and marketing people. This is what makes up manufacturing. They can't find enough people to stay competitive to meet productivity levels and to meet customer demand. And yet, the paradox is that when we asked our manufacturers what were the key business drivers over the next several years, the top three with the first one was high performance work force.



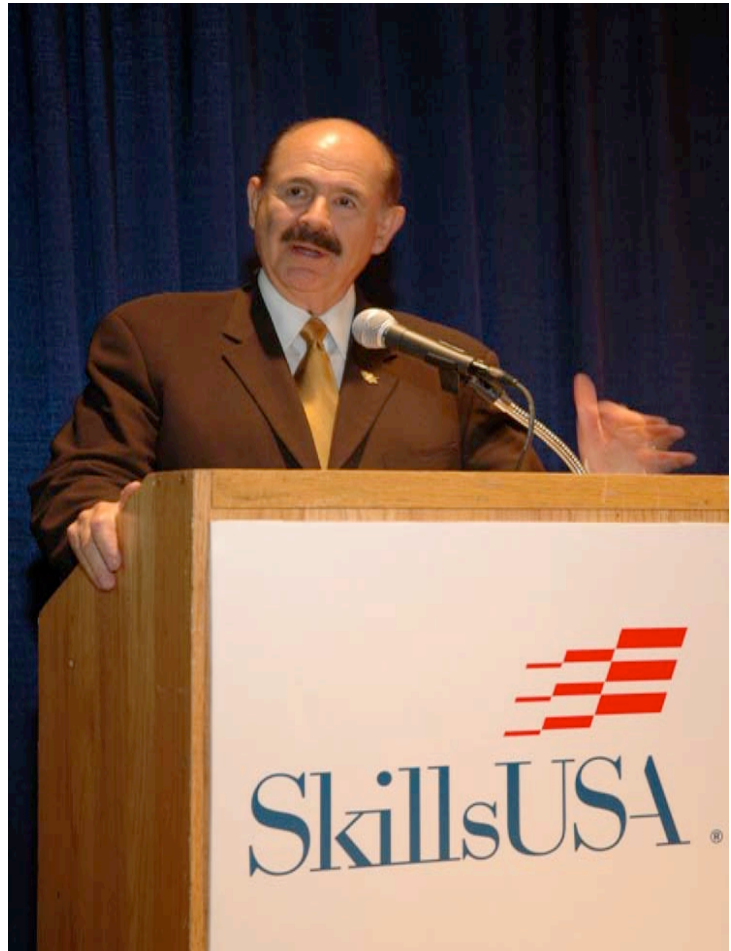
Second one was new product innovation, third was low-cost producer status. All very important. But for us, the real ah-ha was that the first time ever, high performance work force was right there at the top. So it's very clearly a dilemma -- a critical dilemma or a crisis, however you want to phrase that. But it's a real problem for us now in manufacturing, that we can't find enough qualified workers right now. So you ask yourself, there is sort of two problems with that. We can't find enough skilled workers right now but we also can't attract enough young people into manufacturing. So you could say well, why are people worried? I had some questions recently about --I was in an interview the other day and somebody was talking to me about -- they were interviewing me about older workers and they said so what do manufacturers really think about older workers? And I said they love their older workers. They really love their older workers. But I will say there isn't a pipeline of younger workers coming up. So while they want to keep their older workers, they definitely want to build that pipeline up. I have just been given time and have only gotten through about half of what I want to say. So there is two real issues here. One is what are we going to do about our incumbent workers in manufacturing and the second is what are we going to do about the pipeline of skilled workers. We have a Dream It Do It manufacturing careers campaign, which is to help young people understand their passion for manufacturing -- actually, their passion for their careers and they can do that in manufacturing. And I can talk more about that. But there are a lot of strategies that the debate to attract people into manufacturing and to change that image of manufacturing so that people understand that is out there. I have to stop there. Thank you.

**MR. STONE:** Thank you Stacy, I appreciate it. While we're in the manufacturing mode, let's turn to the Czar. And I'm curious from your perspective, what are the top needs of the manufacturing sector, what are employers telling you about the skill sets that they're seeking, what does your department recommend, what are the effects to international trade? You have three minutes.

**MR. FRINK:** In conclusion, I would like to...

**MR. STONE:** Good place to start, yes.

**MR. FRINK:** I think this guy kind of missed being a stand up. Stone rocks. Where is that drum when you need one? I had a chance to speak in detail in the other room so I'll make mine rather short. I think we have all identified what the issues are. The good news is these kids in the other room who are working to compete are entering one of the best job markets in America's history. They have more demand than supply and that means top salaries, easy placements. These kids are not going to be struggling to find opportunities, to say the least. We need to do a better job of marketing these opportunities. SkillsUSA needs a better job of marketing. If I was at that stage of giving a lot of money to SkillsUSA, I would tag that all of this money has to be used strictly for promotion because you have got one of the best-kept secrets in American going on here and we need to get the word out what SkillsUSA is doing, how much good it's doing. We have to market the opportunities in manufacturing. We have to get the students aware, the parents aware, the academia aware. Why aren't we directing people into these great opportunities? Why are so many of the high schools closing out their programs with great opportunities like I did where I had counselors who said we need you to go in this area?



So there is a lot of work to be done and I am a sales and marketing person by background so I think that 90 percent of our problems can be solved with good marketing strategies and I think that this is an area that needs to be looked at from that perspective. As a matter of fact, the students should be taught how to market themselves. When they get out in the world, they're entering one of the best job markets ever. I think their ability to market themselves and brand themselves is going to be a part of the future. Jobs that people say I don't want my kid to get into are not dead-end jobs, they're

actually starting points. Everybody who I have ever talked to started at the entry level or the ground level and so it isn't an end-all job, it's a great start. And I'll share with you an experience. As I came out in this job, it was in a heavily competed -- it was a campaign. The president was running for office and I made a decision to quit my job and leave California and go 3,000 miles across the country and I didn't even know if the president was going to get re-elected so I'm a risk taker. And I'm talking about all of this and we had some job numbers that were improving and somebody from the audience, a gentleman from the press, said yes, but they're all flipping hamburgers for a living. I said that's an interesting term. I'm a marketing guy, I like brands. Flipping hamburgers. Sounds like a shark attack. Really has a good resonance to it, it's a brand, it works, I like it. Fact of the matter is I used to flip hamburgers for a living. I did some of my best thinking while I flipped hamburgers for a living. As a matter of fact, Ray Crock did some pretty good thinking while he was flipping hamburgers for a living and built an empire called McDonald's. So these are not end-all jobs, they're great starts and they're great opportunities.

The President has -- I think the program he's put in place is called the American Competitiveness Initiative. I talked about it in the other room, it has 135 billion. Remember, the President is a businessman. He has two priorities, primarily; security of this country and the economy. And the economy is tacked to innovation; 135 billion attached to research and development, and most of it is to attract students into higher skill levels. Math skills. Cool math, cool science. We need to make these opportunities sound cool and hip to the young because the opportunities are there. So as I said, I'm a bit of a marketing person. We're doing everything we can at my office in the Department of Commerce to connect with people who drive the areas that solve these problems. And I'm certainly doing it in my opportunity to speak with folks like you to get the word out because the opportunities are there. It's not going to end short term. The word of manufacturing's demise is greatly exaggerated. It is going to be with us as a part of America's culture for many years. And actually, the best jobs are going to be in small companies. There is riches in niches. And so much of what will be out there for manufacturers will be the small companies who built something better than anybody else. That's how I built my company, added value. So anyway, with that, I'll just cut it off because I want to make sure we have time for Q&A. And thank you for the chance to say a few words. Thank you.

**MR. STONE:** Thank you, Al. Career and technical education, then called vocational education, was created or at least began its life as a federally supported program in 1917. And this will be on the final. It was -- all of you remember Smith and Hughes? Never mind. It was created by Congress in part due to the need to transition young people especially but workers from an agricultural to what was becoming a mechanical and industrial society at that time. So the U.S. Government has had an investment going for quite a long time in education and work force development through public education but there has always been a kind of a schizophrenic sense of what they were doing. Is it education? Is it training? And that debate -- it started then, it goes on today. So Gail Schwartz is here to perform what will be the miracle of miracles. And that is she's going to actually explain federal policy related to public education and, specifically, career and tech ed and how these policies seek to address the education and training needs of students and employers. And again, in three minutes. Take it away, Gail.

**MS. SCHWARTZ:** Thank you, Dr. Stone. The way I'm going to explain it is we are going to do a visual here. See, I'm sitting here next to Mason Bishop. Labor, education. We're trying to connect and we actually are, we're doing some good things. But it is totally inter-related, the whole work force development, education, economic development. And as I'm sitting here listening to

everyone, I'm thinking how can I just give you some succinct nuggets about what we're doing at the department related to work force development? I think a couple things that I want to say as kind of a foundation are that we are guided certainly by the No Child Left Behind legislation, which speaks to the issue of high standards for all students and making sure that everyone, every child, every student in this country gets the education they need so that they can be competitive in this economy. So that's our underlying -- that's our foundation. Then within my office, the Office of Vocational and Adult Education, we certainly are guided by our current legislation which each time is it's reauthorized, it's ratcheted up and the accountability measures and the integration of academic and career and technical education, we look at that and that gets raised. The bar gets raised there, as well. And while our office has been certainly enacting the legislation as necessary, we have also been a leader in the whole area within the Department of High School Reform. And all the work that we do is about ensuring that the programs that we administer are providing the kinds of services to students that will give them the skills and knowledge they need to be competitive for college, for careers, for whatever training that they want to go into, or whatever they want to do after they graduate from high school. So there are a number of initiatives that we have in place right now that speak to this issue. And as Al said in the other room, when he was talking about how sometimes it takes a long time to turn that wheel or to make progress.

But we feel excited in our little office in OVAE about the kinds of things we have been doing. One of the initiatives, just real quickly, is called College and Careers Transition, where we selected 15 community colleges, 15 high schools, and asked them to work together to develop programs of study or pathways that would help students easily transition between high school and post-secondary education and develop these models, do some research, so that we can then share those models with other high schools and community colleges so they can replicate that. And the leap for innovation in the community college leads that initiative. Within that, those of you here in the audience, I'm sure you are all familiar with Career Pathways and Career Clusters. And imbedded in all that is the combination of good career and technical skills training along with the strong academic skills training and the rigorous curriculum. Another initiative that is built upon the Texas State Scholars Program is the National State Scholars Initiative. Simple concept where we look to schools to establish a college prep curriculum. It's business and education partnership where business people go into schools as early as eighth grade to talk to young people about what they're going to need to do, the kinds of courses they are going to need to take so that they can be successful in whatever they want to do after high school. We are currently waiting for the Newkirk legislation which we're hoping will be enacted this summer. We are not sure but we suspect that it will include the Career Pathways and programs of study concept, which is terrific because it's what we have been talking about and working with states on. And the last piece I would like to mention is that we have a new assistant secretary nominee who, as soon as he is confirmed, will go full throttle at making sure that we continue to enact these initiatives, make sure that we are looking at rigorous academics and strong career and technical information for all our students. And in particular, interest in the community college piece. Which we talked about a lot in our office and we certainly, when you look at vocational education, there is a large number of dollars that go into community colleges from our office. But we really want to look at how we can promote what community colleges are doing and share that information around the country.

So again, our goal in our office is to make sure that every program that we support or that we fund is about ensuring that kids get the academic rigor that they need, the career and technical education that they need so they can be competitive. So that's where we stand.

**MR. STONE:** Thank you, Gail. Of course, it's not just adolescents and students in high schools and early college careers who need education and training to prepare them for this work force that is evolving. There are individuals who are not in school, may be already employed but need to be re-skilled, up-skilled, or develop completely different skills to maintain their own individual competitiveness. Mason Bishop, we have asked to talk a bit about the DOL policy and initiatives to prepare a skilled work force. So I'll turn it over to him now. Thank you.

**MR. BISHOP:** I hope you don't mind if I stand up. One can be a little different, right, than the rest? But secondly, I can't see half the room because the podium is blocking. So if you don't mind, I'll spend my three minutes standing here. My friend Tom, who is standing in the back of the room, said to me, You know, a good suggestion for your three minutes would be based on a little story which is that he and I were at a conference a couple months ago and somebody from the department – it wasn't Gail -- somebody from the Department of Education was speaking at this conference. And I happened to say to him something to the effect of, Does the Department of Education view SkillsUSA like the Department of Labor does? And I didn't define what the Department of Labor's view is on that and so Tom said to me, You ought to talk about what the Department of Labor's view is on SkillsUSA. I would like to do that here for a couple of minutes but before I do that, I would like to tell you a little story. We had what was called Groundhog Job Shadow Day about three years ago with the Department of Labor whereby young people from the Washington, D.C. area would come in and shadow for a day. And I had a young minority male about 16 years old from inner city Washington, DC who came in and shadowed me. Now, first of all, he thought I had the most boring, awful job in the world. He told Secretary Chow that later that day because I lots of meetings and such. Because this young man loved airplanes. He could rattle off to me every single detail about every single military plane there was. He said, Did you know this one can fly this fast? So in my naivete of the time, I said to this young man, I said, You know, do you get good grades? He said, Yeah, I get pretty good grades. In my mind, I'm thinking my best friend from high school in Arizona went to the Air Force Academy. So I said to him, Hey, have you thought about going to the U.S. Air Force Academy where you could learn to fly? And he said to me, What is the U.S. Air Force Academy. And that was the light bulb for me that went off three or so years ago that told me that the number one challenge that we have in this great United States of America is that young people do not know what their options are. Now, I fundamentally do not believe that the traditional approaches to helping these young people, whether they are in school or out of school, are what is going to work and I believe SkillsUSA is what is going to work and I will tell you the difference. I believe a lot of the traditional youth approach has not been -- some people may not like it when I say this but I say it, anyway, because I believe it -- that we can't treat each of them like a social service case. Like somehow, the good kids, or the elite kids or whatever we want to call them, are going to go off to four-year college and somehow everybody else in our country, we're going to pick up the pieces, do lots of process and dump lots of money at them and try to do lots of social service activities, and treat them as though they are like some kind of individual social service case. Rather, I fundamentally believe, and what I see from SkillsUSA, is what I think are ultimately the ways we're going to address the challenges that have been presented here today, which are really threefold.

One is that employers are at the table and they have got to be at the table because we have got to solve this as an economic development problem, not as a social service problem. Number two, at the heart of SkillsUSA is the fundamental premise that you have got to get your high school education. Then three, leading into post-secondary and then make education relevant to work. And that to me, Tom, in answer to your question, in the short three-minute sound byte, is why I think

SkillsUSA works, because of that. And I think somehow, we have got to figure out -- and we have been working with Tim to spread this to the out-of-school youth population which you have heard Clyde talk about all the statistics and I don't need to. In Baltimore right now, we're trying to use the SkillsUSA model to see if we can attach to charter schools, to community-based institutions to one, assure kids get a rigorous and good high school education; secondly, leading into post-secondary and good careers. And in my three minutes, hopefully, standing here and being as blunt as I possibly can, I think that's how we together are going to solve this national crisis we have in the United States of America right now is that we have got to make school relevant for young people and we've got to present options to all young people no matter what their race, their ethnicity, their family income and the like. So hopefully, that will spur a few conversations and questions and thank you for the opportunity.

**MR. STONE:** Thank you. Let's move on quickly now to something a little more specific and ask Cameron Ferguson to speak about what he sees as a top priority within Caterpillar for skilled workers and also address, to the extent that he wishes to, employers and employees based on his experience in somewhat of a comparison between the U.S. and other countries.

**MR. FERGUSON:** First of all, it's great to be here but I want to make clear I'm not from Caterpillar's HR department. I'm a manager in our technology and solutions division, which is basically a research and engineering. Pulling together a few numbers and also some different experiences that I have had working with our dealers, we can maybe address some of the issues here. Caterpillar builds construction equipment, as you probably know; diesel engines, turbine engines, and so on and so forth. But we're very much in the people business. Caterpillar today employs roughly almost 82,000 people and 44,000 of those are in the United States. Let's move out a little bit further. Our dealers, who we really rely onto market and support our product. We have 182 dealers around the world and they employ 105,000 employees of which, again, roughly 44,000 are in North America.

Today in North America -- well, in United States, our dealers and there is basically 59 of them, today they could hire about 3,000 technicians right now. We're 3,000 short. And as I talk to other manufacturers, be it Volvo, John Deere, they have exactly the same problems. They cannot get enough technicians. We're turning work away. We go further out, let's talk about our suppliers. We actually have a lot of North American-based suppliers. They're having tremendous trouble, like ourselves, finding welders, assemblers, machinists to be able to do the hard work on the shop floor. Now, manufacturing, Stacy's point, is not a dirty business anymore. These factories are extremely safe, well lit, in some cases air-conditioned. They're a good place to work and they earn a good living. What is Caterpillar doing about all this? We have several factories all over the United States and in each community, each factory or each facility is very much involved in the community, getting into the high schools, even going so far as getting into middle schools and grade schools to educate young people on what it is to work in business, what it is to work with our dealers, what is it like to work in an office environment, what is expected of you as you graduate into business. We also are closely aligned with the army recruiting command. They bring in a lot of young people who then -- and they give them training. So we actively go after young men and women coming out of the army who have specific operational and occupational specialties. So we go after them quite a bit. The Caterpillar Foundation also supports a lot of schools. We have a matching -- what we call a dealer matching excellence program. Last year, the foundation and our dealers spent \$1 million in about 54 school and this school year, we are heading up to about 1.6 or 1.7 million dollars with 68 schools. And that's really to encourage young people to get into manufacturing and technical service

careers and make sure they're getting the education that we need, our industry needs, for those young people so they can be productive when they do get into business. In addition, I don't know if you have had the opportunity to go through the floor, but you may have seen the Caterpillar display there on Think Big. A lot of manufacturers today are getting into schools and creating very much a close alliance with their dealers and with the community colleges on a company-specific curriculum. On our Think Big Program, basically the graduates go to school for two years, get an associates degree, but their technical training is 100 percent Caterpillar. Toyota has the same thing, John Deere pretty much the same, and it's the way that we are finding that we can accelerate the process of getting young qualified people up to speed very quickly and become productive employees. What do we need from young people?

Obviously, it's the usual stuff; people who have the right attitude, desire to work, be part of a team, strive for quality, can work safely. But it goes beyond that. We want to make sure that everybody that we hire has an ability for reading comprehension. It's not good enough to just get a degree or get a skill and then come in and start to work. Continuous learning. New techniques, new technology makes those people, if they don't keep up with it, they become redundant. So we want to make sure that their reading comprehension is way up there. Computer skills; everything is computerized today. Nobody uses a typewriter, nobody writes memos. Everything is computerized so everybody must be able to use a computer. As you may know if you follow the annual reports, Caterpillar is very heavily involved in Six Sigma. So we would like to see Six Sigma in the education, not to become a black belt or a green belt, but to have an understanding. Because they graduate, even our hourly employees today, our union representative employees, they are on Six Sigma teams, striving to make our company better and more competitive globally. So again, a head start, if you understand what that is all about.

There are two groups of people that are really our stumbling blocks to getting young people into our industry, be it manufacturing or the technical support, and I apologize if you're in these two groups. One is the mothers and the other one is the high school counselors. They do not understand that you can make a career out of manufacturing or technical support, be it a technician or be it working in the shop or whatever it may be. We spend a tremendous amount of time trying to convince both groups that there are viable, good careers, well-paying jobs, in those areas. We spend a lot of time trying to convince mom and we spend a lot of time in the high schools talking to the high school counselors. A Caterpillar dealer technician today, field service with a little bit of overtime, he's making over \$100,000 a year. That is good money. And so those are the two areas that we're really focusing on and we try to do it. of the things that we do -- and again, it goes back to the moms and the high school counselors. Being a technician or being a mechanic, being a grease monkey, is definitely looked down upon. You don't want to do that. Mom and dad wants junior to be a doctor, lawyer, engineer, whatever it may be. And unfortunately, in the other countries, be it Germany, be it in the UK, even Indonesia where I spend a great deal of time, technicians is an honored profession. They work in white coats, they are out there on the shop floor, and there are looked upon as somebody who has a great deal of education, great deal of knowledge, and can fix things. They have a tremendous amount of respect from the local population and that's something we need to strive to get back to here in the United States.

**MR. STONE:** Thank you very much. We'll now turn to our last speaker. And before I do that, I wanted to let you know what our plan now is, as soon as Bill is finished with his comments, we'll go directly to questions. So if you have questions, again, I'd like you to advance to one of the microphones. Name, rank, and serial number, and then provide your question to the panel. So now

we would like to have Dr. Keeton talk a bit about the positive or negative economic consequences that can arise from an adequate or inadequate preparation of a skilled work force, particularly from a regional perspective. Bill?

**DR. KEETON:** Thanks, Jim. I do view my job here as talking about this problem from the perspective of an economist and from the perspective of someone who follows the regional economy. As Jim noted, Harry Truman said he longed for a one-armed economist because all of his economic advisors kept telling him on the one hand, on the other hand.

Well, in this case, I think I can be a one-armed economist because I do think it's pretty clear that we do have an inadequate supply of skilled workers in the country and that it is a problem, both for the country. Let me just start out by saying why I think it's a problem for the nation. I see three reasons for being concerned about it. First is that the kind of mismatches we're seeing between the supply of skills and the demand for skills make it a lot harder for policymakers to do their job of keeping inflation down and at the same time achieving low unemployment. If you have a lot of people unemployed because they don't have the right skills, trying to bring down unemployment by stimulating the economy and monitoring the fiscal policy is going to tend to produce a lot of inflation but not bring down unemployment that much. So that's one problem.

Another problem of having an inadequate supply of skills is that it holds down our overall rate of economic growth. Some economists estimate that in the last century, improvements in skills and educational attainment contributed as much as a third of a percentage point per year to growth in the real GDP. And if we want to maintain that kind of growth this century, we have to make sure that we continue improving skills and educational levels.

I think the final reason for worrying about the skills gap is that the failure of supplied skilled workers to keep up with the demand can worsen income in the quality of this country. If the supply of skilled workers doesn't keep up with the demand, wages for skilled workers tend to go up relative to the wages of unskilled workers and that increases income inequality. And as our former chairman Alan Greenspan often pointed out, when you have increases in income inequality, it reduces support in the country for policies like free trade or deregulation that help stimulate economic growth.

Now, at the regional level, I think it's also very important to do something about the skills gap. And one of the reasons is that research by economists shows that one of the most important factors that firms look at when they decide where to locate is the quality of the local labor force. So if in an area like Kansas City we want to attract firms here, we have to make sure we have an adequate supply of skilled workers. Now, what are we seeing in our region? Clyde talked about this and gave some good information on this but I'll just say that when we talk to our business contacts now, about half of them -- this is around our seven-state district. About half of them are saying that they're having difficulty finding some kinds of workers. Not all workers but certain kinds of workers. That's a pretty big percentage. It's not as high as it was in the economic boom of the late 1990's when as many as 80 percent of our contacts were saying they were having difficulty finding some kinds of workers, but it's still a big number. There are some reasons for thinking that the skills gap in our district is going to increase and one of those reasons is that some of the industries that are very important in our district such as the aircraft manufacturing industry in Kansas, the energy industry in Oklahoma and Wyoming, have a very high percentage of skilled employees who are in their 50's and close to retirement. And when those workers retire, the skills gap is going to get worse. Now, as I said, you know, the track of improving the quality of the labor force is important for the regional

economy. Sometimes, I think there is a tendency to focus just on the very highly educated workers, the ones with college degrees or advanced degrees. And as Clyde said, we do have a shortage of those workers. But I think that, ironically, our best chance of attracting more of those kinds of workers may be to do the kinds of things that SkillsUSA is doing, improving skills in the middle of the job distribution, improving skills for blue collar and white collar workers. Now, why do I say that? Well, one of the main factors that attract very highly educated workers to a region is the jobs. They are attracted by amenities; the availability of mountains, a favorable climate, but the job is really a key factor. If we can improve skills in the middle of job distribution, firms are going to look at a region like Kansas City and say workers there are highly productive, let's move there. And if they do that, that's going to create jobs for the very highly educated workers, too. And that will draw them to the area, too. So that's why I think it's really essential to improve skills in the middle of the job distribution, as well as at the top.

**MR. STONE:** Thank you, Bill. Now it's your turn. We are opening the floor for questions, comments. The mikes are there. First one up is always going to be the -- thank you. We actually have a participant. Come on down.



**MR. PERRY:** Steve Perry with the Illinois State Board of Education. I'm the industrial trades and technology education consultant for the state. I have been in this position for a little over a year and I don't know if I have so much a question but maybe some insight as far as some critical skill shortages. In the City of Illinois, we focused on three; health, science, transportation distribution logistics and manufacturing being the three of our most critical skill shortages. And just coming out of the teaching at secondary level, I think it's going to get worse with some of the higher standards

required by No Child Left Behind. We have talked about these higher standards but if No Child Left Behind can include career and technical education as a part of that. What is happening, at least in Illinois, is that with these higher standards, schools are starting to focus more on science, math, and English -- which is not a bad thing at all, in fact we need that. But that's taking less time from the career and technical education courses that student can take. Because of that, I think our students are going to not be able to participate as well or as often. And I don't know what Illinois can do or what the solution is but I think it's going to be very difficult to see these critical skills shortages increase, especially as Cameron mentioned earlier. I sit on a task force on the critical skills for manufacturing and transportation with Dr. Bob Sheets from NIU and we are trying to hit on parents and on guidance counselors to get them to see that manufacturing is not that dirty place to go to work anymore. And so I don't know, you know, how can we get the federal government to embrace career and technical education so that our schools will embrace it? Because all they're looking at right now is are they meeting and exceeding in those standards of English, math, and science. Because if they're put on the watch list, they're not focusing on career and technical education. That's the furthest thing from their mind. So how can we get the federal government to embrace career and technical education so that our schools can then also see the importance that they are focusing on it so that they can re-embrace it, as well? Thank you.

**MR. BISHOP:** I want to ask you a question because this is something that again bothers me. We treat standards and rigorous math, science, and reading as somehow different than career and technical education. Now, when I was out on the floor today, I was sneaking around -- I told Tim this. I was sneaking around in the back and that sort of thing. And I saw kids doing "x" equals this and "y" equals that and the algebraic formulas and everything else as they were doing their various projects and competing. And to me, it was totally indicative of the integration of career and technical education and rigorous foundational academics. So my question back is can we not get a little more creative -- and I know there is issues, I guess. But why can't applied math and applied science and applied reading and those sorts of things be integrated so we don't think of career and technical ed as these courses over there and reading and math as those courses over here? But rather why don't we have math courses that meet career and technical education needs and those occupations that also then help kids become proficient in mathematics, as well? That's what I don't understand whenever I hear these kinds of questions.

**MR. PERRY:** Well in Illinois, Illinois is a locally controlled state. So what that means is basically, it goes to the local school board and the local school boards will then decide if these applied courses would -- could be accepted as math and science classes. And right now the school boards are not -- at least in my view, they are not seeing that yet. And I think we're making strides towards that. But yet if it's not run by the state, then the local schools, school boards, then decide yes, we can give you math credit, we can give science credit for that. But until then.

**MR. BISHOP:** I guess what I have to argue then is I don't think diminishing the No Child Left Behind expectations we have is the answer then. The answer is we have to work collectively as a federal, state, and local government to come up with -- and that's kind of what I was alluding to in some of my comments. What are those career and technical pathways that kids can access at the local school district level that both meet the rigorous educational academic outcomes they are going to need to be successful in careers but also then help them open up career pathways, as well. Again, that's what I see some of -- and correct me if I am wrong but that's some of what I saw out on the floor today. I think we all need to work together and do a better job trying to drive that agenda forward, both at the state level and national level.

**MS. SCHWARTZ:** I guess my question is I was going to go to the pathways piece and I wonder if Illinois has adopted that in any serious ways, the whole pathways concept? Because that's exactly what Pathways is about. It's not separating the two. It's having high quality career and technical education combined with the high level rigorous academic work group.

**MR. PERRY:** We're working on that. It's slow but that's the direction we're trying to go.

**MS. SCHWARTZ:** One more thing, not to monopolize on this one question. But let's talk afterwards because our CCGI project works also with high schools and he's working with states around this whole concept and he is doing some very technical assistance and maybe we can work something out.

**MR. STONE:** Thank you, interesting conversation. Just a quick aside as we get our next questioner up. One of the challenges in this is – the points that are being made are all excellent. Unfortunately, what happens oftentimes at a local level or even a state level is try to find simple answers to complex problems, which is always a bad solution. And the simple answer to increasing rigor and improving the outcomes of high schools is to add more traditional academic classes. So many states have now moved to four years of mathematics, three years of science, four or five of English communication and so forth. The school day is a zero sum gain. As you add requirements, you reduce the opportunities for all kinds of electives. The kinds of opportunities that you're describing that we studied in our center and that skills provides kids and others, terrific opportunities to do precisely that. The problem is that they don't look like the traditional math class or science class and So now we're requiring in some states every child take Algebra II. I mean, how many of us walked out today and said I'm going to do a quadratic equation? So there are more complex answers to these complex problems that probably would provide better solutions but it's sort of breaking past that set of perception about what rigor means. That's been debated and there is no clear answer on that. So I've got to move back to my moderator status. Yes, ma'am?

**MS. LANE:** My name is Shelly Lane. I work with Nashlee Forsmith. I'm account manager, which is a staffing company so I get to look for people with all kinds of skill sets. But I'm also a state certified sign language interpreter of the deaf and have worked in the college classroom as an interpreter for eight years. So I would like to interpret for you because it would be more entertaining than what I usually get.

**MR. STONE:** Thanks, I think.

**MS. LANE:** I also have three children so I'm a mom. And trying to let them pick their own path but it's hard. Basically, I had three kids in three different levels last year. I had one in elementary school, middle school, and a high schooler. And I think I can this is that two things. The No Child Left Behind sounds like a good concept; however, my son in fifth grade was taking the math portion and all -- now, it could be just his school but all they did was study math. No science, no social studies, nothing else. Now my son is gifted so he was able to go and do other things other days but I think that the No Child Left Behind is kind of getting a little misconstrued. The teachers are being based on their test scores and such like that so I'm not sure how we can get away from that. So my child missed a lot of other things during that year and complained about it. He is a very smart child. Probably will end up being an engineer. My second thing is that because I do work with the deaf and I do try to help them get jobs, they are wonderful workers in the manufacturing section because

they are focused on their job. They're not chitchatting with everybody, they're not distracted easily. But we can't get them into jobs because we can't get them education or what have you. People are afraid to hire them. What could we possibly do? There is a whole entire group of people that we're paying for because they're on disability where they could work.

**MR. STONE:** Thank you.

**MS. SCHWARTZ:** Okay, I want to make sure. The question is how can we ensure or what can we do to make sure that people with hearing disabilities or the deaf can be integrated into the work force. It's discouraging to hear you say that because I feel like we have made so much progress over the years in terms of ideas and services and jobs for individuals with disabilities. So I think the only thing I can tell you is that I can carry this message back to the department office of special education and rehabilitative services and say check into what they are doing or what is going on in that particular area and see.

**MR. BISHOP:** We actually at the department of labor are working -- just to give you some -- you mentioned disability. If you heard from Social Security Administration their projections on the costs, both in terms of social security and Medicare, in the next ten years with regard to people who are going to be collecting disability payments, it would make you very nervous about the quality of social security that is coming. Never mind the retirement part of it. So we actually have been working very closely with Social Security Administration and others to try to see what we can do about the abysmal employment rates of individuals with disabilities and it is very, very low. First and foremost what we have done is actually jointly funded through the One Stop Career Centers in what will be every state by this year what are called navigators, who are people who are specifically dedicated to helping individuals with disabilities who are looking for employment. People that impact such that various services and supports that might be available in the community that can help that individual get access to a job. So that's been one of our main priorities in terms of that area. In addition, the department of labor has funded various initiatives around assisted technology and the like but there is a lot of work that still has to be done in that arena. Nobody really has a lot of good answers but we are aggressively trying to address the problem by at least having dedicated people in each of the states and local communities who can help the individuals with disabilities through the public work force agency which Clyde is involved in, for example, at the local level, to be able to help navigate through what might be a difficult access to programs and education. So we're trying to address that.

**MR. STONE:** We have time for maybe two more questions. Yes, sir?

**MR. RASEY:** I'm Joe Rasey, a local entrepreneur. A couple of things. Stacy, you are a hero of mine and Mr. Frink, you are, too. Because I think there is a couple things that we kind of miss sometimes in our society today. One, I don't think people know how to dream much anymore. They don't think creative. I talk to a lot of people and talk to them about creative thinking. They tell me something they think is creative and I say that's pretty normal to me. What is creative about that? Another thing that we don't do, I don't think, and somebody touched on a little, I day. How many curriculums in high school have anything about really selling themselves or a product?

The fourth thing is negotiating skills, I think, are just enormously important and are the touchstone. The last point is on career days, how often do we see entrepreneurs at them and giving people a little background about how do you ultimately become an entrepreneur? Because most people probably

don't come out of high school and become an entrepreneur immediately. You start flipping hamburgers or something like that. But how do we educate people for the future so that down the road, they do become entrepreneurs and that does require that creativity in the other skills. I would be interested in your perspectives.



**MS. WAGNER:** I'll go ahead and start and talk a little bit more about our Dream It Do It manufacturing careers campaign because I think it touches on those points. I do want to throw out one thing, though, that one of the sort of complaints -- or accolades that we get here in the United States, complaints against others, is that we're facing this apparent -- well, not apparent. There is a billion new workers in the work force with the advent of populations in India and China but there is also the discussion that they're not as creative, that we are still the leader in higher education and that we are still the leader in innovation. So some would say that we actually are, in fact, one of the most innovative and creative societies on earth. So I throw that out there.

Second of all the Dream It Do It -- no, the second point I wanted to make was that we sometimes feel like we're alone in our perceptions of manufacturing. And Cameron had talked about this, which is -- and I was married to a German man at one time and it seemed like whenever we would go to Germany, everybody was an engineer. And I studied in Vienna and Austria for a while and everybody was studying engineering and I thought why -- this was a long time ago. Why don't we like that in the U.S? It was very confusing to me because it seemed to me to be a great career. But there is something happening and there is a new study out by the Organization for Economic Cooperation and Development which looks at the European union countries. And what they're facing is a decline in graduates in science and engineering. So as I was reading the report -- because I thought that can't be. You know, they love that over there. But when I was reading the report, they were saying that the percentage of the graduates is declining in these fields and one of the reasons is the image that they wear the white coats, that they're geeky, that they don't have enough time to spend with their families, all of those kinds of things that we assume here, as well, that our young people are looking at. So I think that's kind of interesting for us when we start to approach that.

And then the last thing is we are starting to approach that. Because a couple years ago -- you know, we have been coming out with these skills gap reports for about 15 years now. We do it every five years, this is our third report. And I think we get a little tired of always finding out what the problems were without ever coming up with the solution for that. So what we did a few years ago is we went out -- you know, because we were talking to manufacturers and they were saying you know, we have got all these people who are approaching retirement age and we don't have a pipeline coming in and we don't understand why young people are not coming into manufacturing. So we went out and we talked to a lot of people. And chief among those were kids and their parents, and they all said horrible things about manufacturing. They just didn't see it as entrepreneurial. They didn't see it -- you know, these funny things -- you had to wear a hair net, you couldn't be entrepreneurial, you couldn't be creative, you couldn't be creative, you couldn't be innovative. They would actually use examples like from Laverne and Shirley and from I Love Lucy when she was on the assembly line. So clearly, Nickelodeon is showing a lot of those. So we knew that we really had to -- but when we talked about manufacturing jobs and did you know you could do this or did you know this was that, they said well, that's manufacturing? I didn't know that.

So there is a whole misperception and we have to begin to do the kinds of things that are happening now, especially with SkillsUSA, which are to get the kids involved, to get them into Caterpillar where they can have internships and mentorships, and to get manufacturers into the schools and to work with educators and so forth. And Dream It Do It is starting to do that. We actually see that as a regional economic development campaign based on a work force component. Exactly that sort of thing where you can't grow your regional economy unless you look at the work force skills. And I'll give one more tiny example. I'm from the south so I can't draw a breath and talk for ten minutes at least. But there was an interesting article in the New York Times a couple months ago, very insightful. And Duke Power was looking to build a new power plant somewhere in the south. They were looking at North Carolina, South Carolina, and Georgia. So all the regional economic developers began to scramble, and state economic developers began to scramble, to put together these packages with tax incentives and so forth. And they all put together these very good packages and actually, it was won that the plant was going to be built in Gaffney, North Carolina, a tiny, tiny little town on the border. And the winning proposal -- the thing that won that proposal for them was that they said they would add more math and science curricula into their K through 12 education system so that by the time the facility got built, they would have a work force. And that was what won the South it's very clear that work force -- these packages of incentives, that work force is enormously important in that. So that's kind of a long way around saying that.

**MR. STONE:** Thank you, Stacy. We have time for one last quick question.

**MR. GLENN:** Tony Glenn from the Nebraska Department of Education. I am the Industrial, Manufacturing and Engineering Curriculum and Educational Specialist. With that said, actually, the first question or comment, my bosses are in the room so Cameron, where do I find a job application just in case I get in trouble here? But most importantly, for the federal government, specifically the Department of Education, how do we get the federal government to recognize the value of career and technical education at a higher level?

**MS. SCHWARTZ:** Well, I know that it is how the field is feeling right now, it feels a bit discouraged but I have to tell you that it might feel to you like the federal government is not supportive of career and technical education but it really isn't the case. And I know that when the President talked about combining all high school initiative and combining careers and technical

education or integrating it into that, it certainly was not something that made the career and technical education community happy. But it does not mean that there isn't value in career and technical education.

And I think you know that Congress certainly supports career and technical education. We have leadership within our office that certainly does and as the new legislation gets rolled out, you'll see that our office will be out there providing support and assistance around career and technical education. And I think that, you know, what the responsibility of our office is is to continue to share the good information. To share, you know, with SkillsUSA we know we're not -- they're just incredible. And we're going to take everything that we have seen here and take that back to the department. And in addition, the data. You know, the department is, you know, very tough about good data but I think that the field has been, you know, providing really good data. And within our office, you know, we're putting that together and sharing that. So you know, if it helps to know that our office certainly is behind you and supports you, congress does. And again, don't think at the highest levels there isn't support for PGE. It's about looking for ways to integrate a high school initiative and PGE. So keep doing good work and it will all be okay.

**MR. STONE:** We're almost out of time but I see one or two questions.

**MR. SCOTT:** My name is Roy Scott. I'm from Northrop Building in what is left of New Orleans. And I was wondering -- I have heard a lot of things about skilled labor and skilled people coming to work and I was wondering, how many people trained within your own workplace? We started, we were in the same situation that you guys were in. We were waiting on skilled labor and skilled labor and there is not too many people jumping at the chance to go into the shipbuilding industry. After Katrina, we lost one third of our work force and about three years ago, we had started and implemented a training program and we have the capabilities of training 54 different craftsmen on our shipyard right now and we now have 797 employees that we wouldn't have had, had we not done that.

And it might be something for you to think about. We start to finish a program, we pay these employees to come in while they learn. We put them out on the yards with first class people so that they can learn the craft. And depending on what craft you choose, that decides what program you're going to be in. So it's just something for some people to start thinking about because, as we all know, we're not getting the skilled crafts out there that we need to have and it's something for a lot of people to start thinking about.

**MR. STONE:** Thank you for that observation. Clearly, the apprenticeship programs are under-utilized in this country, many would argue, and I think this is a perfect example. Do we have one last question?

**MS. WHEELINGER:** Hello, I'm Janet Wheelinger. I'm with Baker University, which is a small university here in Kansas City on the Kansas side. We are a methodist school. And the one reason why I came here basically was to get ideas on how to help the community. We do continuing education with teachers and also for the corporations. And if anybody in the room, from you up there all the way around here, if you have any ideas that you would like to help us present and help the community, we'll be happy to do that. Thank you.

**MR. STONE:** Thank you for that. I want to thank all of you for coming. We're at the end of our time. It's clear there wasn't enough time, it never is. This is one of those questions that, clearly, a lot of people are thinking about and clearly, we need to think about new ways of trying to address some of these issues. I do on behalf of SkillsUSA and myself, want to thank you. If you would like a transcript, dial toll free -- actually, contact Jennifer Throm. Jennifer, stand up. That person, contact that person. Again, dial toll free.

And I want to leave with you a story. How many remember Claude Pepper? A senator from Florida, I believe it was. Many of you do. He was a champion for health care reform. He died at the age of 196. Methuselah's younger cousin. When he got to heaven, St. Peter saw him and just waved him right in, not a problem. In fact, God wants to talk to you because he's just so impressed. You're so much what he likes. So Claude was sitting there with God and they're chatting and finally, Claude says, God, do you think we'll ever solve the health care reform issue in the United States? God paused for a moment and said, Probably but not in my lifetime. I have a suspicion that the problem that is before us today has similar dimensions. It's an ongoing issue. We are a dynamic economy, we're innovative. We may not have some things but by golly, we do have people with ideas, and it's an economy designed to allow those ideas to grow into companies that can start with a small seed grant and in a few years be cranking out \$60 million in revenues. But at the same time, the dynamics are constantly changing. We are faced with international competition, people who work at lower rates of pay, and are getting better and better educated in their own countries. All of these things are issues but you know, after 200 plus years we seem to muddle through somehow. But I think the muddling needs to be more directed and certainly, SkillsUSA offers a model, one of many, that we should look at and support. Apprenticeships within organizations and in partnerships with schools are certainly another model and there are more beyond that.

So again, I want to thank the panel. And I truly wish we had more time but I want to thank you and I know you have other things on your agenda. So join me in a round of applause. Class is dismissed.

**MS. SCHWARTZ:** One more thing, if you want to know more about Dream It Do It, there are some brochures on the back table to give you an idea.