

Efforts are under way at the national and state levels to develop ways to use such assessment mechanisms beyond measuring individual student achievement, to compare achievement across, for example, districts or states.

Fifth, Current Federal Programs May Not Support Systemwide Reform.

Existing federal categorical programs, such as Chapter 1, played little part in these districts' reforms, although the districts received funding from a variety of such programs. District officials said that federal categorical programs--targeted to specific groups of at-risk students such as the disadvantaged and those with disabilities--were not supportive of reforms directed to improving achievement of all students. On the other hand, federal programs did not seem to significantly hinder reform activities.

We did not study in depth how those at-risk students who have been the traditional focus of federal programs fared under reform in the four districts we visited. However, teachers and administrators in two of the districts noted that teachers believed they were better equipped to deal with at-risk students in the regular classroom, and officials from one district pointed out that the proportion of students with disabilities that were mainstreamed had increased during the course of the reform. On the other hand, success is not guaranteed. For example, in another district, test scores of minorities improved but still lagged far behind those of nonminorities. The district was still looking for ways to improve achievement of minority students in relation to nonminorities.

The districts' use of federally funded technical assistance was mixed. Districts used systems such as the Educational Resources Information Center in researching reform issues, and the two larger districts had obtained some assistance from federally assisted centers. The two smaller districts, on the other hand, did not seek help from these types of centers and laboratories. One

superintendent pointed out that his district needed on-site consultation and support and that the nearest federal laboratory was too far away to make that practical. We did not assess the extent to which federally funded research and technical assistance efforts currently support systemwide reform, or the extent to which they could do so. However, we noted some potential limitations. For example, many of the federal technical assistance centers target specific programs, such as Chapter 1 or bilingual education programs. Also, there are only 10 regional laboratories, which have and could support reforms in a more general sense than centers associated with individual programs. There are also education research and development centers which assist school reform efforts; many focus on discrete parts of the education process, such as assessment or teacher evaluation.

IMPLICATIONS FOR FEDERAL ROLE IN FOSTERING SYSTEMWIDE REFORM

Mr. Chairman, systemwide reform holds promise for improving student learning. Having key components of the education system linked together promotes monitoring of student achievement to ensure that progress continues and enables all school personnel to work together to improve student performance. Systemwide reform can accommodate a variety of instructional and administrative reforms and could provide a framework by which their success can be measured.

But, in the absence of state and federal actions, maintaining commitment and finding resources for systemwide reform may be difficult for many districts. Systemwide reform is slow, evolutionary, and continuous. It demands a great deal of time, commitment, and flexibility from its participants. Continuing reform over the years may be difficult for many districts. Frequent changes in leadership make commitment harder to maintain, and yet we know that nationally superintendent turnover is

relatively high, especially in large urban districts, where the average tenure is 2 years. Also, many districts in the nation, again including many large urban districts, are facing significant financial difficulties. Finding funding and energy for reform while trying to adjust to reductions in state and local funding may make undertaking systemwide reform a more difficult task in the 1990s.

Local involvement and acceptance of the standards that drive the reform are necessary. The districts we visited were using existing standards, both the national mathematics standards and state standards, as guides but were adapting them to local curricula. The emphasis on teacher involvement also reinforces the need for local input.

In conclusion, if voluntary national standards, and related assessments, are developed, they could provide direction and serve as a starting point for district reform. But national standards and assessments alone are not likely to be sufficient to ensure systemwide reforms are undertaken or that they are compatible with the national standards. The Congress could take a variety of actions if it wishes to encourage district-level systemwide reform. For example, Congress could

- support efforts to develop voluntary high national and state content standards and support development of exemplary assessment methods appropriate to those standards.
- ensure availability of technical assistance and professional development to districts implementing or seeking to implement systemwide reform.

- make existing federal categorical programs more conducive to systemwide reform by, for example, giving priority for grants to applicants serving targeted groups in the context of systemwide reform. In making these or other changes, such as those recommended by recent studies of Chapter 1, provision should be made to ensure the needs of at-risk students are met.

Congress could also direct the Secretary of Education to

- take steps to disseminate information about successful reform efforts, and
- review the scope and functions of the federal research centers, laboratories, and technical assistance centers to determine the extent to which they could assist in systemwide reform efforts.

In undertaking these or other actions the Congress should include federal and state governments as well as private agencies where appropriate. Further, recognizing that some districts and states are already undertaking systemwide reform in the absence of national standards, these actions should help ensure those efforts are directed toward the new, higher standards envisioned in current national standard-setting activities. Finally, although these actions are outlined in the context of encouraging district action, they are not meant to preclude federal support for state- or school-based reform.

Mr. Chairman, this concludes my testimony. I will be happy to answer any questions that you or members of the Subcommittee might have.

Chairman KILDEE. Thank you very much, Dr. Morra. I have a question for Dr. Meisels. Doctor, performance assessments ask teachers to look at assessment in a brand new light and must, therefore, it seems to me, require a great deal of staff training. How is this accomplished in the sites in Michigan where you are testing performance assessment?

Dr. MEISELS. We are currently working in Flint, as well as in several other districts, such as Willow Run. I am not sure if I said the right or the wrong thing.

Chairman KILDEE. You said the right thing.

Dr. MEISELS. It happens to be the case. In fact, performance assessment requires a rethinking of the way that teachers work with children, in terms of evaluating their work.

We have found that the amount of effort that is involved in this is not impossible because at this stage, when we go beyond Michigan, there are more than 6,000 children and 250 classrooms that are involved in working with us at the University of Michigan on performance assessment. It does entail a commitment on the part of school districts to do some retraining. We think the commitment is greater at the beginning and then, over time, decreases.

Chairman KILDEE. Have you operated in a preschool area, where very often you find the teachers are very young, often underpaid, and have less training? Have you worked with that type of professional group?

Dr. MEISELS. We are working with teachers of preschool and teachers of Head Start as well as State-funded preschool programs. Most of our Head Start work is in the State of Massachusetts, and we are also working here in the District of Columbia with the District of Columbia public schools and some of their prekindergarten programs. So there is a lot of diversity among the teachers. We, as well, have a contract with the Bureau of Indian Affairs to work with teachers in three sites, two in New Mexico and one in South Dakota. Again, we are talking about a lot of diversity.

We have found that the more expert teachers are, the more able they are to do this kind of observational assessment. But with training and support, we can bring them along so that everyone can participate in it. So I think this is very consistent, for example, with what is asked for in the Head Start standards.

Chairman KILDEE. I have a question to both Dr. Earle and Dr. Morra. In this whole question of systemic reform which we have been talking about for several years, and we reported a bill out which almost passed, no one agrees exactly as to what systemic reform is. Everyone seems to be for it. Are there certain basic, essential components which a good systemic reform program should include? Could you tell us what some of those components are?

Dr. EARLE. Yes, I can give a try here. I think we know what it is. I think we do not exactly know how to do it. I think it is the strategic part that we are lacking, more than a knowledge of what elements need to be included.

From my point of view, I think we need to think of curriculum goals and standards, assessment systems, teacher development programs, and policy backup for all those things, in a way that makes them coherent and aligned with each other. Those are the pieces, it seems to me, you have to have right.

You have to have the alignment, you have to have the partnerships to create that alignment, and you have to have the content standards and assessments and teacher development going along the same track. They cannot be fighting each other or going off in different directions.

Once you have that piece together, then the issue becomes, How do you do that? That is where I think the NSF program is really attempting, through the States we are working with, to find some answers to that.

Chairman KILDEE. Dr. Morra?

Dr. MORRA. If our four districts were here, I think they would say to you that there are elements that are key. Those elements are starting with the standards, and that the standards are for all kids, and they all emphasize that it is critical they are for all kids, not just for some kids.

The standards have to be in all areas; they cannot just be in one, although you may have to start there. They think that eventually they have to be for all areas and for all grades. They believe that those standards should be tied into a curriculum. That curriculum, in turn, has to be tied into instruction. Teachers need to be trained, and they believe that is an absolutely critical part of the link. All this has to be tied into assessment.

They would feel strongly that those five areas are interconnected and must be linked. They would also feel that it is important that there be some local ownership and involvement in developing those standards.

Chairman KILDEE. Thank you very much.

Mr. Goodling?

Mr. GOODLING. Thank you, Mr. Chairman. I had one question for Rob, but since we spent 2 hours, most of which had nothing to do with Title IV, which is what the whole story was supposed to be about, I did not get a chance to ask him.

Chairman KILDEE. I will mention that to Secretary Reich.

Mr. GOODLING. Well, it was not all his fault. I am just sorry everybody else left now. Everybody is saying the same thing we have heard for the last 3 years, no matter where we have testimony: Would you please give us some flexibility? Would you slow down the categorical business? We could make better use of your money. We would serve children better. But they are all gone, so they did not hear your efforts yet. I heard flexibility come out of everybody again today.

For the record, the one concern I was going to mention to Rob, which he mentioned in his testimony, is that the language in Title IV is vague with regard to who will actually be responsible for the development of the skill standards and the related assessment and certification system.

The language in section 403(c) of the bill states, "The National Board shall invite and obtain the full and balanced participation of representatives from business and industry, employee representatives, and representatives from educational institutions, community based organizations, State government, appropriate State agencies, and other appropriate policy development organizations."

It does not say how the organizations will be selected or work together. There is no language requiring the partnerships of indus-

ry, labor, and experts in the field of education and training be developed from the bottom up, which is exactly what they are doing presently with the grants that are out there. Nowhere is the word "partnership" even mentioned, and yet industry-led partnerships are what have proven to be critical to make the grants from the departments of labor and education work.

That, I think, is what Rob was explaining as one of his concerns with the way the legislation is put together.

I have a couple of questions for the witnesses. In the GAO report, I have a feeling that you had a strong focus on the need for long-term professional development in order for teachers to effectively assist their students in achieving high standards. In our hearings that we have been having, most of the people who have done something about this seemed to have used Chapter 2 money. Did you find Chapter 2 money being used for the training or retraining as they went forward with their reform efforts?

Dr. MORRA. We found some of the training was actually provided through external funding that the districts were able to secure. Local businesses sometimes provided some of the money. One district got a State grant that enabled them to do some of the training. Another district got some foundation funding.

Title II funds were not specifically mentioned, and it seemed to be that districts were using whatever they could lay their hands on to provide that kind of longer-term training.

Mr. GOODLING. In the testimony in the Chairman's district on Saturday, Title II was mentioned over and over again. In a hearing in my district, the day before, it was the one place they could get their hands on some money to do what you have to do if you are going to make any changes, and that is to train the people who are going to be on the firing line: administrators, supervisors, teachers, and so on. They made good use of Chapter 2 money. I just wondered whether these four districts used it in that manner. We have been cutting back on Chapter 2 money, so it makes it more difficult for them all the time.

The second question I would have is this. On page 15 of your report, at the bottom of the page, there is a footnote which indicates that service delivery standards could discourage some districts from implementing reform based on high content standards, if substantial resources are necessary to meet the related service delivery standard. This is what I have been trying to preach and preach and preach: we may discourage the people who need the reform efforts the most and need our help to provide some of the money because there is no way under the sun they can meet those delivery standards.

Not only on the bottom of page 15, but I think in your testimony you indicated a concern about whether they could or could not meet these standards and then would not be available for grants.

Dr. MORRA. There are some, certainly, in the field as a whole, and there is debate about whether delivery standards—sometimes called opportunity standards—are needed. We wanted to reflect that debate in our report. That certainly is an issue that many feel strongly about.

In our districts, I think it is important to mention that they ranged pretty broadly, in terms of per-pupil expenditures. We had

two districts that were over the average per-pupil expenditure and two that were really below it, one of which in particular was a very poor district with about a \$3,300 per-pupil expenditure.

That district would say that there is some ability to reprogram, to prioritize resources and try to undertake the systemwide reform. On the other hand, there is an issue with some of the school districts that are the type of school district that, let us say Kozol described in his *Savage Inequalities*. Can they do systemic reform at the same level, at the same time, with the same resources as a suburban school district?

Mr. GOODLING. Dr. Meisels, I appreciated your testimony. I am glad you mentioned Flint. My whole purpose, of course, of including the commission in my legislation came from the points you made with the goals panel and the encouragement of the goals panel to do that.

I do not see how we can determine what it is we are supposed to do, first of all, to have children ready to learn, and I do not know how we determine whether they are ready to learn if we do not go out and study the situation and get some recommendations. I do not know how we can handle goal number one without some kind of commission effort on that part.

Do you believe that the legislation that is before us would be better served if it included the early childhood commission?

Dr. MEISELS. I do believe it would be much better served if it were inclusive in that way. I have actively, for the last several years, worked with both the resource panel on Goal One and the technical advisory group and staff to the goals panel. I believe that the work we have done fits very well with the legislation that you are looking at now. I would hope that it could all be incorporated in some way.

The national commission that we are talking about here is something that would have an oversight role. It is something that would lend us some authority, as we attempt to do major innovation within the field. It is something that I think would be like an anchor—or perhaps a rudder is a better word—for you on the committee and for Congress in general and the Department of Education to know that we are going in the right direction. That is what I see it as doing for us.

Ultimately, the commission is not going to devise these assessments. The commission is going to have oversight over those who do devise them.

Mr. GOODLING. In the hearing in the Chairman's district on Saturday morning, I believe every one of them, at least all of those dealing with any kind of early childhood education, said, "Please, please stop asking us for standardized test assessments of these youngsters. It is devastating and accomplishes nothing."

Dr. MEISELS. It proves to be extremely harmful and very misleading. It is time that we take steps in different directions, steps that I think can be very productive for children and teachers and families. That is what we are laying out for you here.

Mr. GOODLING. In relationship to Dr. Earle, I understand that each State received \$2 million under the NSF program for math and science reform. Do you think that was a sufficient level of funding?

Dr. EARLE. Each State is eligible to receive up to \$2 million per year. Interestingly enough, in the first year, they did not all ask for it. They did in years two and three of the competition.

No, it is not enough, but it is enough to get started. I think that is one of the things we found. It is going to both cost more and take longer than our program. It is going to take more than the money we have available, and it is going to take longer than 5 years. I think the notion that this is a long-term effort is absolutely correct. But it does seem to be enough to get people's attention, to get them starting on the process, and to get them thinking about how to leverage the money.

Mr. GOODLING. Thank you.

Chairman KILDEE. Mr. Sawyer?

Mr. SAWYER. Thank you, Mr. Chairman. I began to think I was invisible down here. Everybody kept talking about how everyone else had left. I am not chopped liver down here, folks.

Virtually every one of you has talked about the importance of professional development and teacher training, the ability to elevate that element along with the expectations that you measure at the other end, and in fact, the importance of professional development in order to be able to use newer and more effective assessment techniques. Yet, I look at the majority of the Midwestern States and the way in which they are organized to deliver their services in the most fundamental ways.

I compare my State of Ohio often with a State that, for most of the last 20 years, has been roughly the same size, Florida. They have roughly the same blend of rural and urban areas and a population that is within a million or so of one another. My State has 612 school districts, and Florida has 66. I am not saying that Florida makes a lot of sense for Florida to have some of those districts as large as they are.

But I am absolutely certain that in Ohio—and, I suspect, Michigan and parts of Pennsylvania—there are districts that simply do not have the wherewithal, the capacity to develop the kinds of institutional support that systemic reform implies and demands in the kinds of things you are talking about.

Mr. Goodling is talking about flexibility and the need to ensure that. One of the ways we have tried to begin to build that in is to allow and in fact encourage districts to act in consortia, particularly in arenas like professional development, to move from the dog-and-pony show into something that is more lasting and more substantive.

Are there ways that we can do a better job, in terms of encouraging, provoking, and promoting that kind of joint activity, if in fact you think it is necessary and useful?

Dr. EARLE. I have a comment about that. One of the things we have learned through the NSF program is that a lot of States are developing a regional strategy to implement. Ohio is actually one of them. I do not know if it is recreating something that used to be or creating something new or a little bit of both. It does not take away from districts. Districts continue to exist and do what they do.

For some things, and I think professional development is definitely one of them, it makes sense to get together, in some other

pattern besides individual districts, to take a look at how to help teachers get additional skills, whether it is implementing content standards or a new assessment or whatever it is.

I would say that a good number of our States, and even some surprising ones like Rhode Island—you may think, "Well, Rhode Island does not need to divide itself into regions." There is something about this notion of regions that are already there, as intermediate units of some kind, or creating them if they are not there for the exact purpose that you described.

Mr. SAWYER. Are there others?

Dr. MORRA. To some extent, I think that the districts would say that their own approach was unique and had to have the input of their community, their teachers, their principals, and so forth. Each felt strongly that there needed to be input into developing the standards, in developing the curricula, and aligning it to instruction.

They would do things, for example, like having different teachers become the instructional leaders to look into a particular package and see whether it was suitable. So there was a lot of work that goes with part of the teacher support that is directly in terms of developing that district's specific approach. They would say that was important.

On the professional development side, it sort of crosses the boundary in that some of the development activity is actually a training activity. We have basically teachers who have stood up and done a lecture model, very often for many years. This whole system requires a very different teaching style. That kind of training has to start at why the district is reforming and what the reform is envisioned to look like. It has to continue on into teaching differently, teaching for the higher-order skills rather than the lecture format, working with groups, being much more of a coach than a lecturer.

That kind of professional development may have some commonalities across districts. But other parts of it, I think the district would still feel that it needed to sit down to develop its own system.

Mr. SAWYER. Dr. Meisels?

Dr. MEISELS. I would just like to say that we should not underestimate the complexity of reform. We should not underestimate the complexity of changing assessment and curriculum. This is, indeed, a very complicated matter. It is something that people have had a long time to learn how to do the way they do it now.

So whether it be systemic reform in math and science, whether it be systemic reform in early education or in assessment, this is going to take a long time. It is going to take a lot of support. I think that pulling together coalitions and consortia are very important. In fact, I cannot see how local districts can take some of these ideas and, on their own, implement them.

We are talking about standards development. We are talking about assessment development. For that, we should, I think, have a number of options—not a single option by no means—but a number of options or opportunities and as many supports as make sense, given our resources so that we can help people to do some-

thing. The doing of it will be so complex, let alone the development of it, that not all of us can do all of those tasks.

I do not think those 600 districts in Ohio or the 500 we have in Michigan or even the 64 in Florida can all do that. They do need us to create models and create incentives for adopting those models.

Mr. SAWYER. Thank you.

Chairman KILDEE. Thank you very much. I think that corroborates one of your ideas for an amendment, does it not? I think that was a very good question.

We have a similar situation in Michigan as you have in Ohio. We have one city in my district, a larger city of my district, that has three school districts. It is the city of Burton, Michigan. There is Bentley, Bendell, and Atherton. They would probably benefit by some type of possibility for a consortium, working together.

I really appreciate your testimony today. I really appreciate also your endurance and your patience. Scheduling around here is very difficult. We had to get the Secretary in. We will have a markup on this, hopefully, on Thursday. We have had Secretary Riley before, but Secretary Reich had not been here before.

I really appreciate your patience, your understanding, your endurance, and your tremendous help in your testimony this morning. It has been specifically helpful to us. It has not been generalities. Very specific things have emerged from your testimony that will be helpful as we draft this. So I want to thank you for that.

We will keep the record open for 2 additional weeks, even though we hope to have the markup on Thursday. That is one of the contradictions that exist around here at times. We will keep it open, nevertheless, because the full committee will still have the benefit of that testimony. We may even have some additional questions for you, which we will submit in writing.

With that, we will stand adjourned. Thank you.

[Whereupon, at 12:55 p.m., the subcommittee was adjourned, subject to the call of the Chair.]

HEARING ON NATIONAL SKILL STANDARDS

TUESDAY, MAY 18, 1993

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ELEMENTARY, SECONDARY,
AND VOCATIONAL EDUCATION,
COMMITTEE ON EDUCATION AND LABOR,
Washington, DC.

The subcommittee met, pursuant to call, at 9:35 a.m., Room 2175, Rayburn House Office Building, Hon. Dale E. Kildee, Chairman, presiding.

Members present: Representatives Kildee, Miller of California, Unsoeld, Roemer, Green, Woolsey, Strickland, Payne, Goodling, Gunderson and Roukema.

Staff present: Susan Wilhelm, majority staff director; Tom Kelley, legislative associate; Jack Jennings, education counsel; Omer Waddles, staff director, Subcommittee on Postsecondary Education and Training; Jay Eagen, minority staff director; Nichelle Carter, system manager/staff assistant; Mary Clagett, professional staff member; Randel Johnson, labor coordinator; and Andy Hartman, education coordinator.

Chairman KILDEE. The Subcommittee on Elementary, Secondary, and Vocational Education convenes this morning to discuss Title IV of H.R. 1804 which proposes to establish a National Skills Standards Board.

Secretary Reich appeared before this committee May 4 and testified that the establishment of skill standards within industries is critical to raising and training the skill levels of all workers. Today's hearing was scheduled in order that members could have another opportunity to discuss the issue raised pertaining to Title IV.

And shortly, I think, Mr. Goodling is on his way here. We would recognize him for an opening statement. Other than that, my usual procedure, I will get the witnesses up to the table and then we will save our questions until after their testimony.

So our witnesses this morning are Cheryl Fields-Tyler, American Electronics Association; Marc Tucker, President, National Center on Education and the Economy; Margaret Piesert, Director of the Health Care Workforce Project, Service Employees International Union; Raul Valdes-Pages, President and CEO, Denver Technical College; Mike Baroody, Senior Vice President for Policy and Communications, National Association of Manufacturers; Dr. Paul R. Sackett, Professor of Schooling in Labor and Industrial Relations, University of Minnesota. If they would come up to the table, please.

STATEMENTS OF SHERYL FIELDS-TYLER, AMERICAN ELECTRONICS ASSOCIATION; MARC TUCKER, PRESIDENT, NATIONAL CENTER ON EDUCATION AND THE ECONOMY; MARGARET PIERSER, DIRECTOR OF THE HEALTH CARE WORKFORCE PROJECT, SERVICE EMPLOYEES INTERNATIONAL UNION; RAUL VALDES-PAGES, PRESIDENT AND CEO, DENVER TECHNICAL COLLEGE; MIKE BARODY, SENIOR VICE PRESIDENT FOR POLICY AND COMMUNICATIONS, NATIONAL ASSOCIATION OF MANUFACTURERS; AND PAUL R. SACKETT, INDUSTRIAL RELATIONS CENTER, UNIVERSITY OF MINNESOTA

Chairman KILDEE. Unless you made arrangements among yourself in order of testimony, we will proceed in the manner which I called. That would be Ms. Cheryl Fields-Tyler.

Ms. FIELDS-TYLER. Good morning, Mr. Chairman and members of the subcommittee. I am happy to be here this morning.

My name is Cheryl Fields-Tyler. I work with the American Electronics Association. I direct AEA's activities in workforce policy and practices, and I am directing our demonstration project funded by the Department of Labor to explore this whole area of voluntary skill standards.

I want to start off with a story. Over the past year or so, I have been spending a lot of time out in our companies to try to ascertain how the world of work is changing and why as an industry we need skill standards.

One particular place we visited several weeks ago is a large electronics telecommunications manufacturing company. We met with four frontline workers, hourly workers, all of whom had been with the company at least 15 to 25 years. Across the table from us they sat and explained to us how their jobs had changed.

Number one, until about 4 years ago they literally had to raise their hands on the manufacturing floor to consult with a peer sitting next to them. They had to make an appointment, basically, to use the rest room facilities. It was a very typical Tayloristic, segmented work type of environment, very high pressure, very isolated, very uncollaborative, and in no way were the frontline workers consulted or involved in the work product process.

Over the last 3 to 4 years an unbelievable transformation has taken place in that company. The people that 4 years ago had been in this very isolated work environment are now doing cost control, are doing production scheduling, are ordering their materials directly from outside vendors.

These are people with high school diplomas. Most of them have been in their jobs, again, for 20 and 25 years. They have been retrained after being on the job for that long. It was wonderful.

A wonderfully mature woman, probably in her late 50s, talked about the skills that she had learned in her workplace and how that had impacted the way she interacted with her grandchildren because she had learned new communication skills, new ways to even work with her own personal finances. It was a fascinating story.

I share that with you to try to give you some insight into how the world of work is changing in my industry.

AEA represents the high-tech industry broadly conceived. We are over 35 SIC codes, almost 3,000 member companies in our association all over the country. Eighty percent of our member firms are under 200 employees so we are really at the forefront of the small company entrepreneurial spirit in this country. We are the toolbuilder for the rest of the economy in many respects.

And we are also an industry that, when you look at us, you would automatically think innovation. That is what drives the competitive advantage in our industry.

I am here to tell you this morning that innovation no longer makes it in even our industry, where research and developments still are very key to our competitive strength. The real strength for many of our leading companies is their workforce, the ability to tap everyone from the janitor to the CFO, from the frontline, direct-line labor force to the people in the accounting department to get involved in improving work processes, to improve the product and the value delivered to the customer and to the stakeholders of the company.

What this means is new demands for skills in these workplaces. People who used to do nothing but sit in front of one work station, do one thing over and over again, are now doing work scheduling and production scheduling. I think that that gives you some idea of how these skills have changed.

In a word, the reason why we are interested in doing this standards project and the reason why I am here today to talk specifically about the National Standards Board is that we think standards are very important, and, in fact, we would argue probably a vital tool to beginning the transformation of our workforce on a broad scale to be able to compete more effectively in worldwide markets.

The problem is not just skill deficit. And I want to make that issue clear because oftentimes you will hear that the problems are always we just don't have the skills. It is also a problem that we don't have any way to recognize the skills that we do have.

And that is really the key of skill standards. It not only identifies the performance benchmark that we should aspire to if we are going to be world-class performers in a worldwide economy, but it also is going to give us the way to demonstrate to individuals who get those skills and to companies who inspire those skills in their workforce a way to let people know that they, in fact, have them. It is a very important distinction.

The way that we are going about this is we have selected three broadly defined occupational clusters in our industry that are very, very important to the competitiveness of our industry long term. The three that we have selected, I am going to go over them here for you in just a moment, but it is important to realize that what I am going to tell you is not the typical job definition in the old style of defining jobs.

I am really talking about more critical functions in a high-performance workplace, high performance meaning where employees are empowered from the very lowest level of the company to the very highest, and that those levels are getting flattened out so there may not be much more than four or five levels in many of our companies, especially the small ones. But that empowerment goes again from the factory floor clear to the executive board room.

The three occupations that we are looking at this year—again, they are broadly defined occupational functions—are manufacturing specialist; pre- and post-sales analyst, which is a mouthful but what that really means is the person both before a sale and after the sale of a product is interacting on the frontline with the customer and inputting customer requirements back into the design and production process; and the third one is administration services and information services support, what the old clerical function has evolved into in these high-performance companies where you never see a secretary doing the same kind of work a secretary did 5 years ago. They are utilizing power technology tools. They are learning new versions of technology on a daily basis almost. They are constantly translating information across all different kinds of functions within the workplace.

I think many people when they hear us start to describe what those occupations are wonder, well, where is the electronics in any of those occupations. And it is a good question. But it is an important aspect of our vision of how national standards work is that these occupations are broadly conceived.

The way that we are going to go about this is that we are imagining that these functions have a certain content that is very specific to the high-tech industry, but it is also going to have a lot of core skills and abilities that would transfer across all of these jobs probably within our industry but likewise outside of our industry to other industry groups. Let me give you an example.

The way that we are going to be defining, for instance, what it takes to be a manufacturing specialist, there is three components to it. One is getting a very good understanding of how that role functions in a high-performance, high-technology workplace. Number two is identifying the competencies, what do you have to be able to know, do and apply in order to be a full-fledged manufacturing specialist, someone who is really good at your job. The third component of the standards is the performance criteria, how do you know when it is done well.

All those three things together go together to make a standard. That is what our standards are going to look like. Say for the manufacturing specialist, we have 30 competencies and sets of performance criteria to be a manufacturing specialist at world-class levels of performance in our industry. Maybe 10 of those are going to be in common with what it takes to be a pre-, post-sales analyst, so that you start to see kind of a modular approach.

There are going to be whole groups of competencies that cut across lots of different jobs within our industry. Likewise, if you are going to be a manufacturing specialist in the food processing industry or in the automobile processing industry, manufacturing industry, perhaps eight of our competencies are also going to be found in those two industries as well.

The goal here is portability of these credentials across broad sections of our labor market in this country. It is moving away from the idea that training is to train you for your next job, and it is moving toward a vision of training for your next job and also training for long-term employability, high-skill, high-wage jobs.

That being said, I would like to talk a little bit about why we think it is very important that this skill standards board be char-

tered and be chartered correctly. The most dangerous thing that we could have in this country is to have lots of different parallel industry standards running up against each other without this portability across various industries. It is going to put us right back where we are right now where when we have downsizing and labor market sort of overages in some industries. We are going to have no way to transfer those skills across industry and no way for workers to know what it is that they are able to know and do that can transfer across a whole variety of workplaces.

This national board has the promise of giving us that kind of national system by bringing all the stakeholders together at the table under industry leadership. And I think that is a very key point, and I will talk a little bit more about that later.

We can come, I think, to a point where industries at various levels own the system within their own industries, but they see themselves fitting into a national system that all the stakeholders own together, workers, government, educators, industry. Those are the primary stakeholders in our view. Again, the national board has the promise of being that.

We have some concerns in the way that the current language reads that we think may actually block that promise, and I want to bring those things clearly to your attention.

I already mentioned the need for industry leadership. Speaking from an industry point of view and also as project director of my project, and also because my primary customers are the government, because you are funding and helping us become a catalyst for this, workers in our industry and also educators, both K-12 and community college and vocational technical educators.

We realize that every stakeholder has to be at the table, but, likewise, if industry does not perceive that it is leading this and at some deep level perceives that it, quote, unquote, owns the system, you will not get the full-fledged, rich participation of industry over the long term. The bottom line of that is that the standards are going to lose their value and currency over time.

And that is a very important point. If these standards are actually going to be very valuable to the people who get them, industry has to be the one who recognizes and values them. And employers, basically, have to be the ones who recognize and value them.

We would argue very strongly that the chair of the board be an industry-based individual. Likewise, we think that a majority of the representatives on the board should be from business, industry, and include trade and professional organizations. We would argue that trade and professional organizations can play a very important bridging role to the various industry constituencies that need to be represented in this interest but cannot be with just eight seats at the table from industry representatives.

Likewise, the legislation should be very clear that the standard development is propagated by industry-led coalitions of the appropriate stakeholders within the criteria set by the overall board. Again, this is a very critical tension to hold in mind as we try to charter this board, that the board doesn't necessarily—the function, in my opinion, is not that the board sets standards. It is going to draw from the very best that we have in this country to endorse

standards that industry develops with regard to all of its stakeholders.

With regard to the way that the industries work within this proposed board, we would suggest that the legislation should not prescribe in any further detail the stakeholder representation within the industry committees or, however they are conceived, the groups that bring forward the standards. This is a very important point because not every industry looks the same.

My industry is about 3 to 7 percent unionized. We are very happy to have union workers working with us at the table as we work through these standards, and, in fact, many union workers are going to be involved in our focus groups. But the other 97 to 99 percent of our workers that are not represented by unions likewise must be involved and have some way to provide input.

This is a very important point because we cannot be too proscriptive or we are going to lose a lot of the richness of our current workforce and their input. And I would argue that that is a very important component to making the system work. The board functions must be clearly defined so it is clear that the board's role is not to set standards but it is to identify those occupational roles and the clusters of industries that need to work together to create standards across broad industry groups.

Again, this is a convening and facilitating and endorsing function, and we think it should be very carefully worded to stay that way.

A more sort of specific point but in the long run I think equally important is that the definitions in Title IV must reflect the best of what we know now and how the standards will look in the future while avoiding proscriptive language.

In short, AEA hopes that the committee can clarify some of these issues and rework the language of the bill so that this measure can receive the good and full support of business and industry. We really want to be a player in this. We really want to make a difference for our workforce, for the competitiveness of our own companies as well as for the Nation. We think this is very important work. We are committed to help prepare America's workforce for the rigors and high rewards of high-performance work because the electronics industry, again, is starting to see more and more that our strategic advantage in worldwide markets is our workforce.

Voluntary standards will be an invaluable tool to create and maintain a U.S. workforce that is demonstrably world class, and a world-class workforce is the key to attracting and keeping the high-skill, high-wage jobs that America needs.

Thank you. I would be glad to entertain your questions.

Chairman KILDEE. Thank you very much.

[The prepared statement of Ms. Fields-Tyler follows:]

**TESTIMONY OF CHERYL FIELDS TYLER,
AEA DIRECTOR WORKFORCE EXCELLENCE AND
AEA VOLUNTARY STANDARDS PROJECT DIRECTOR,
AMERICAN ELECTRONICS ASSOCIATION
BEFORE THE SUBCOMMITTEE ON ELEMENTARY, SECONDARY AND
VOCATIONAL EDUCATION
UNITED STATES HOUSE OF REPRESENTATIVES
ON HR 1804, GOALS 2000 TITLE IV**

Mr. Chairman and members of this distinguished committee, good morning. My name is Cheryl Fields Tyler and I direct education and workforce policy and programs for the American Electronics Association--also known as the "AEA." I very much appreciate the opportunity to brief you on AEA's U. S. Department of Labor-funded pilot study of voluntary workforce standards and to share with you our vision of the benefits such standards can provide to current and future workers, high-tech employers, educators and trainers. The Subcommittee is to be commended for your interest in this issue of great importance to the high-tech industry.

First a word about AEA and the industry we represent. AEA was founded in 1943 by 25 California electronics firms. Since that time, AEA has grown to represent more than 2,700 companies from all segments of the high-technology industry, from silicon to software, telecommunications to defense. Over 80 percent of our membership are small, entrepreneurial companies with fewer than 200 employees.

Electronics is the nation's largest manufacturing sector with approximately 2.4 million American workers employed directly in the industry. This is about three times the number of employees employed directly in the auto industry and about nine times those of the steel fabrication industry.

World-wide sales of U.S. electronics firms now total over \$400 billion per year. Electronic products are pervasive throughout U.S. business, industry and private life. Moreover, as the tool builder for the rest of the economy, the U.S. electronics industry is key to innovation, manufacturing, service, and productivity throughout

the U.S. and the world.

In November of 1992, the U.S. Department of Labor announced that AEA would receive a \$300,000 grant to undertake the first 12 months of pilot study of competency-based, voluntary worker standards for the high-technology industry. Through our pilot study, we believe we are creating a promising, dynamic model of voluntary industry-based standards development based on ground-breaking government, business, education, and worker collaboration. I would like to share with you why AEA believes this work is critical to safeguard the economic vitality of America's workers and employers, and some critical factors that must be successfully addressed if the emerging national voluntary skills standards system is to truly benefit U.S. students, workers, educators, and employers.

Working Smarter

The hallmark of America's high-tech industry has been innovation. But in today's business environment, it is not enough to innovate. Within three to six months, competitors will produce a similar--and often cheaper and higher quality--product. Furthermore, competitors are fully able to outpace U.S. companies in investment in plants and equipment, making it difficult, if not impossible, to sustain market preeminence through capital investment alone.

The sustainable advantage in today and tomorrow's marketplace is the ability to take innovation and continuously improve the work processes that speed and improve design, manufacturing, distribution, customer responsiveness, and marketing. The absolutely critical component to improving work processes is highly-skilled people--from the receptionist to the engineer, from the facilities manager to the financial officer.

The dawn of the Technology and Information Age has given us new tools--and new challenges--for making work more productive. Yet, the majority of America's workplaces are designed for--and our labor force educated for--the mass production, segmented work models of the past. Our nation must learn to work smarter--especially as we face international economic competition that is making enormous investments to increase their own economic productivity.

The world's leading companies are learning what it means to "work smarter." Companies of every size--and in virtually every segment of the economy--are bolstering productivity growth by creating "high performance work organizations" that focus on continuous improvement of work-processes. In such workplaces, highly skilled people utilize effective training, teamwork, technology, and information tools to achieve major strides in product innovation, quality, customer responsiveness, and time-to-market.

Employees in such work organizations are empowered decision-makers. Management layers disappear and bureaucracy decreases. Front-line workers' skills increase as they assume many tasks formerly reserved for managers.

"High performance work organizations" structured in this way require a "high skills workforce." Not only must such workers be equipped with basic skills and content knowledge. In high performance workplaces, employees in virtually every job function must be able to make wise decisions, use technology and manage information adeptly, communicate effectively, and work in teams toward common goals--and do so at levels of competency benchmarked to world standards of excellence.

The Role of Standards

AEA is seeking to demonstrate how voluntary standards can be developed and maintained because we see tremendous potential value to our work--for us as an industry and for our workforce--but also for us as a nation.

We do not believe worker standards are a panacea to cure us of our education and training ills. We do believe, however, that if the system is constructed well voluntary industry-led, developed and managed worker standards can be an invaluable tool. For example, such standards for the high-tech industry could:

- Become a catalyst for employers to spur the shift to high-productivity, high-performance work--which means creation of high-skill, high-value added jobs, a more competitive U.S. economy and greater front-line worker empowerment;

- Communicate more clearly to education and training institutions the skills workers need to succeed and the training strategies that can prepare workers long-term employability in high performance jobs.
- Increase worker opportunity and industry-wide recognition of skill attainment;
- Create clearer career path options for current workers and career opportunities for new entrants;
- Communicate more clearly to the K-12 community the "core competencies" that high-school graduates need for employability in high-skill, high-wage jobs;
- Maximize benefits of training expenditures while reducing costs for remedial training; and
- Strengthen U.S. trade capability by aiding company efforts to comply with international skills standards.

Electronics industry voluntary worker standards would be of particular value to the small and medium-sized employers that make up over 80 percent of AEA members. Such benefits include ready access to benchmarking data, skill analysis tools, training that reflects industry needs, and workers with the skills needed to speed the conversion to high performance work.

The AEA Pilot Study in Voluntary Standards

I want to give you a brief description of AEA's vision of voluntary standards and how we are going about developing them. One way to think of our work is in the common business "customer-supplier" relationship. We see voluntary occupation standards as one key industry effort to become a much better "customer" of America's education and training system by defining what are the skills needed for long-term employability in high-skill, high-wage jobs.

So in our effort to be a "better customer" we have designed our pilot to have four

main components:

- Identify competency-based, world-class standards for three non-baccalaureate-degreed "high-performance" industry occupations,
- identify gaps in current training and identify effective training strategies to reach the AEA-identified voluntary standards through grassroots field-studies at 5 AEA U.S. locations (i.e., Washington, Oregon, California, Massachusetts, Colorado)
- ascertain feasibility, value, and options for assessment of performance to AEA-identified benchmarks, specifically including the feasibility of "portable credentials" for those workers who meet the AEA standards, and
- communicate findings to foster industry, educator, worker, and government understanding of the value and potential limitations of voluntary worker standards for the electronics industry.

Right now we have identified three critical occupations for the high tech industry are in the process of developing standards. The three occupations we are studying are: manufacturing specialist, pre/post sales analyst, and administrative and information services support. It may be helpful to note that these are not "jobs" in the traditional sense that we now have in our Directory of Occupational Titles. Each is really an "occupational cluster," that is, not a narrow definition of a job, but a functional definition of critical roles in high tech workplaces that may encompass any number of "job titles."

Our goal in standards development is to fully define the function of these roles in high-tech workplaces, identify the competencies necessary to fully fulfill the role—that is what one needs to be able to know, apply, and do—and identify the key indicators of proficiency, that is what tells you that this job is being done well. It is important to note that in our vision standards encompass all three of these areas: function of critical roles, competencies necessary, and performance criteria—all related to the actual work to be done yet also encompassing those skills that are critical for long-term employability in a rapidly changing work environment.

The way we are defining the standards and how we see updating them to keep pace with the way work in changing is also a critical piece of our vision. In short, we are going to the experts--the people who do and supervise these functions everyday in high-tech workplaces around the country. Through focus groups with high-tech industry workers we will learn what it takes to do these jobs well--and how you can spot a job well-done when you see it. The "draft standards" generated from the focus group research will then be presented to groups of stakeholders throughout the year to validate and fine-tune the standards.

We will also conduct a feasibility study of what assessment options will work to both give individuals meaningful "portable credentials" that signify competency attainment while also giving employers a set of tools to know what workers know and do. Assessment is a critical piece to creating a national system that will be valuable both to employers--but especially to workers. It is also the most complex--but that should not stop our efforts. For in the end if the standards developed are to be valuable to the individuals who work and study to achieve them, we must develop nationally recognized ways for people to demonstrate what they know and are able to do.

We see the system being modular in the sense that people would get certified in the competencies of an occupation--almost like a sophisticated scout "merit badge" system. In such a modular system, many competencies might apply to several different job roles in several different industries--while others are more specific to the work processes of a certain industry.

Why this effort needs to be National--but not Federal

To get at why we believe that this effort needs national encouragement and facilitation, think again about the occupations we have identified as critical to the high-tech industry--manufacturing specialist, pre-post sales analyst, and administration and information services support. Not one has electronics in the title. What does that mean?

The bottom-line is that we wanted to demonstrate in our first year what the full potential--and where the most need is--for occupational standards. We self-consciously selected occupational functions that while having a "high-tech" content

also will likely have a tremendous amount in common with similar roles in other manufacturing industries and service industries.

This point is critical to our vision of the role of standards. At a most fundamental level, standards should be a tool to create highly skilled American workers that are not just trained for their next job, but who are also equipped with the employability skills needed for high-skill, high-wage jobs in the future. The only way we can get to that goal is to have a system that allows for core elements of standards to cut across multiple occupations and multiple industries.

Let me share with you a concrete example of what I mean. For the sake of this example, let us say that we discover that there are 30 competencies to be a manufacturing specialist in the electronics industry. Perhaps 10 of those competencies will also be critical to the pre/post analyst role--helping people move laterally or diagonally within the electronics industry. But, to take it one step further, one might also discover--and we think we will that there are also common competencies across various industries. So that maybe out of the 30 competencies it takes to be a manufacturing specialist in the high-tech industry, 12 of those are common to the automobile manufacturing industry, and likewise 8 are common to the food processing industry.

AEA's Position on Title IV: The National Skill Standards Board

The vision is portability within a national system that is accessible to current and future workers is what prompts us to support this title of the Goals 2000 bill. Without such a national body chartered to convene, encourage, and enable the industry-led development of standards we run the very serious and sobering risk that we will end up with many industry systems that do not talk to each other systematically nor to the various stakeholders who have a genuine interest in the standards.

Our support of this title is guarded, however, given these specific concerns:

- If standards are really going to be a valuable tool to the key stakeholders--that is to current and future workers, the education and training community and to the government--America's employers must perceive that

they are at the forefront of this effort. Without such a clear leadership role, employers simply will not participate fully--and thus the standards will lose their value and currency. AEA recommends that the board be made up of a majority of representatives from business and industry, including trade and professional associations and that workers--both union and non-union--be included as well. Moreover, we suggest that the first chair of the Board be an industry-based individual. Moreover, because of the critical role that we envision for community and junior colleges in this new system, we also suggest that representatives of such organizations make up a substantial number of the education component on the Board.

- The legislation should be clear that standard development is propagated by industry-led coalitions of the appropriate stakeholders. The legislation should not, however, proscribe in any further detail stakeholder representation with regard to the industry-led coalitions which develop standards. Such proscriptive language would derail the broad industry support and commitment necessary to make standards truly beneficial to all. In every way, the system must be a voluntary mutually beneficial collaboration of the stakeholders. This legislation can help facilitate such a system, but if it tries to proscribe it, the effort will fall short.
- Board functions must be clearly defined so that it is clear that the Board's role is to identify occupational roles that cut across industries and encourage industry coalitions to work together to define standards for such roles. At no time should the Board "set" standards. Rather it should spur industry-led coalitions of the appropriate stakeholders to develop, communicate, and implement voluntary standards.
- The definitions in Title IV must reflect the best of what we know now of how standards will look while avoiding prescriptive language. For instance we suggest that the "skill standards" definition be rewritten to encompass all three of these areas: function of critical roles, competencies necessary, and performance criteria--all related to the actual work to be done yet also encompassing those skills that are critical for long-term employability in a rapidly changing work environment.

AEA hopes that the committee can clarify some of these issues and rework the language of the bill so that this measure can receive good business and industry support.

The Workforce as Key Strategic Advantage

AEA is committed to help prepare America's workforce for the rigors and rewards of high-productivity, high-performance work because the electronics industry views its workforce as a crucial strategic advantage as we compete in global markets. Voluntary worker standards will be an invaluable tool to creating and maintaining a U.S. workforce that is demonstrably world-class--and a world-class U.S. workforce is key to attracting and keeping the high-skill, high-wage jobs America needs to maintain its economic health and the standard of living of its citizens.

I would be happy to answer your questions about my written or oral remarks.
Thank you.

Chairman KILDEE. We will go to our next witness and come back and ask questions of the panel. Mr. Tucker.

Mr. TUCKER. Thank you, Mr. Chairman.

My name is Marc Tucker. I am President of the National Center on Education and the Economy.

The proposal that you are here discussing for a National Skill Standards Board is, in fact, a central idea in the much larger proposal for creating a national skill development system for the United States which many of us believe holds the key to American competitiveness in world trade.

And, in fact, in the future of our achievement there is a very broad consensus, I may say, around the principal elements of this design, and it comes out of the work of the Commission on the Skills of the American Workforce, which our organization assembled in 1989. That Commission was chaired by Ira Magaziner and was co-chaired by Ray Marshall and Bill Brock, Democratic and Republican Secretaries of Labor in the Carter and Reagan administrations. And it had on it a number of leading American CEOs, labor leaders, governors and civil rights leaders, including, I might say, John Jacob and Eleanor Holmes Norton.

They worked for over a year, and their work was supported by the largest research study that has ever been done of the relationship between the skills of a country and its economic future. That study was conducted in the United States, Germany, Sweden, Denmark, Ireland, Japan and Singapore.

The report, *America's Choice*, was issued in 1990. When it was issued, we began a major effort to see that it was implemented throughout the country. Hillary Clinton, then a partner in the Rose law firm and a member of our board of trustees, directed the implementation effort.

I will try and summarize for you in a few lines what that 125-page report said. It started by pointing out that real wages in the United States have been dropping steadily over the last 20 years. And it pointed out as well that this was clearly not an inescapable consequence of the pulling together of the international economy. It is clear that that is not the case because, as it pointed out, a number of our competitors were experiencing real improvements and steady improvements in their great productivity growth and in real wages even as ours were holding steady or going down.

What we concentrated on was the difference. Why were those nations experiencing the economic growth and stability while we were becoming steadily a poorer country? The one-phrase answer to that is high-performance work organization. What we discovered was that in those countries that were succeeding economically, advanced industrial countries, work was being organized quite differently than it is generally in the United States.

What they are doing in the companies and in the industries in those countries that are succeeding is assigning to people on the frontline the duties and responsibilities that we typically assign only to management or to professionals. It is precisely the kind of transformation that Cheryl was just describing to you. And it is taking place in the American electronics industry and in a few other industries, but we discovered on balance only 5 percent of

American firms were moving in that direction and 95 percent were not. The numbers are quite different in other countries.

We, in effect, were competing on wages and hours with the Philippines, Thailand and Mexico, while other countries were competing on quality with Japan and Germany. The future for this country, if we follow that path, is a future of low wages and spreading poverty. The alternative is to compete on quality.

The only hitch, however, in employing high-performance work organization, is that it means that the frontline needs to be nearly as well educated and trained as are your managers and professionals. You have to ratchet up the entire system, and we have to do that very quickly.

Everything depends on the frontline, the 70 percent of our workforce whose jobs do not require a baccalaureate. When we looked at what these other countries were doing to make sure that their frontline was up to that task, there were a lot of answers. But a crucial part of the answer was standards. There was not a single country that we visited that was producing first-class high school graduates and highly trained workers that did not have a system of clear standards. And wherever we went where it worked, those standards were linked to assessment without exception.

Now why is that? It is, in part—and let me just talk about the piece that this panel is talking about today. It has to do with how you motivate people, workers and students, to put in the effort, the time and the money that it requires to become highly skilled.

In those countries that have explicit skill standards of the kind that you are now talking about, that are broad, that are set with the leadership, as Cheryl just said, of industry, with the participation of labor and education, where it is known that you have to achieve that high standard in order to get a good job in a good-paying industry, then people will put in the years of time, the dollars and the effort required to reach the standard. And when there is no standard, they will not.

You can't have an effective system, we concluded, without standards. And you can't make the standards real without assessment. To have a standard without assessment means, in essence, there is no standard. It is only when somebody says, here is the exam you have to pass, that the standard in effect becomes real.

That is why we need standards. That is why we need assessments. And that is what leads us to a National Skill Standards Board. Why national and why a board and why does government need to be involved? In essence, because, again, what we found as we looked over the rest of the world was that what we are lacking and what those other countries have is a system.

And Cheryl, in essence, just explained why. You need to have standards in place in a country in which people are mobile; that is, will move among firms over time. But if those standards are too narrow, you will create a rigid economy. People will be trained just for this thing. And if technology starts to change and consumer taste starts to change, they will resist the changes that are required because that is all they know how to do.

If you have very broad standards, as Cheryl just said, and things are not going well in one piece of the electronics industry, they will be able to move easily into another piece. And if things are not

going well in the electronics as a whole, they will be able to move into other industries that have common skill requirements with the electronics industry.

If you don't have the mobility, you are dead. You will create a rigid economy that will slowly fall behind other economies that are able to change much more quickly with changing technology and changing consumer tastes. To create a system in which you can do that requires a body, a single body. It is only the Federal Government that can provide the catalyst for creating that body.

The States, since the issuance of America's Choice in 1990, have been working hard on skill standards for professionals and technical people. They have almost stopped their work in that arena because each State that has been working on it has concluded that they can't build a system just for that State. We have got to have a national system. And they are, in effect, waiting on the Federal Government to take the lead.

As Cheryl just said a moment ago, in the electronics industry they have concluded, both for the good of the industry and for the good of the country as a whole, they need standards that link up to the standards in other industries. It is my understanding at the moment that there is serious discussion in this committee about decentralizing a great deal the setting of standards; that is, having the board itself simply carve up the world into a set of arenas and then delegate the setting of the standards almost entirely to committees organized along industry lines.

In my view, this would be a very serious error. What that would lead to is not one system of standards but 20 or 30 or 40 systems of standards in the United States. Whereas other countries are working toward merging standards, creating larger systems with fewer standards in them, we would be struggling with cacophony.

I would hope that it would be possible to design a system in which the committees in effect that were working in particular arenas had considerable autonomy but within a set of rules, if you like, on system building that were created by the national board and in which what they came up with, to use a word Cheryl used a moment ago, the standards that they came up with had to be endorsed by the board as a whole. That, in my view, is the only way we will get to a system.

It is essential in my view and, by the way, this was a central conclusion as well of the General Accounting Office study on this subject, that the employers have a very strong sense of ownership of this system. It is very important that labor participate strongly and that educators participate strongly and I believe that the civil rights community participate strongly. But if employers do not end up with a sense of ownership of this system, then they will not use these standards in the employment and promotion of people. And if they don't do that, then there is hardly any point in getting out of bed. That is the whole purpose.

It is in that act of taking the standards seriously in employment decisions and promotion decisions that the whole system becomes real and of use. It is only in that way that it will motivate people to get the skills they need to make our economy work.

Last point. As I see it, this system of standards that you are here discussing today could become and should become the central hinge

around which this country builds a whole labor market system. These standards should be the standards against which people study as apprentices. They should be the standards against which people work when they have been dislocated from one industry and wish to qualify for work in another. They should be the standards that our government-supported job training programs work against in all of their various activities. We should have one system of standards driving all of these various aspects of our human resources development system. If we do that, I believe, we can produce a system which is as effective as the best in the world.

We have a long way to go from where we are to get there. We can get there I believe in pretty short order but not without this board which is here proposed.

Thank you very much.

Chairman KILDEE. Thank you.

[The prepared statement of Mr. Tucker follows:]

Marc Tucker

Thank you, Representative Kildee, and the members of the Committee, for the invitation to speak with you today. I am Marc Tucker, president of the National Center on Education and the Economy. Four years ago, the Center created the Commission on the Skills of the American Workforce, whose report, *America's Choice: high skills or low wages?*, inspired the legislative proposals that are the subject of today's hearing. I served as a member of that Commission and helped to draft the report. Following release of that report, Senator Kennedy joined with Senator Hatfield, Congressman Gephardt and Congressman Regula in introducing companion bills in the Senate and House designed to provide a legislative framework for making the recommendations contained in *America's Choice* the law of the land. Since then, those bills have framed the national debate on federal policy on workforce skills and served as a focal point for a developing consensus among the actors who must be involved.

Three years ago, when the Commission's report was released, Hillary Clinton was a member of the Board of Trustees of the National Center, and I asked her if she would lead the effort to implement the Commission's recommendations, to which she agreed. Her husband, then governor of Arkansas, was deeply involved in school restructuring and workforce skills issues, both in the state and in his leadership role in the National Governors' Association. So it is hardly surprising that President Clinton's educational reform bill includes a proposal that was a hinge point of the Commission's report and of the High Skills, Competitive Workforce Act of 1992 — to create a Board that would set voluntary professional and technical standards for a wide range of jobs not requiring a baccalaureate degree.

Thinking about technical skill standards

But why do we need technical and professional skill standards at all? In answering this question, it is helpful to imagine a dimension line at one end of which are the Japanese and the other end of which are the Germans.

Consider the Japanese. One third of employment in Japan — by far the most desirable third — is in the large, lifetime-employment firms. These firms regard entry level labor as they do any other valuable input, and they contract for it with reliable suppliers, with whom they work very closely, as they would for anything else. In this case, the suppliers are 'contract high schools.' Each plant has relationships with a few high schools from whom they recruit every

year.

In the spring of the year, they ask the principal to recommend a certain number of students for employment. The principal has a strong incentive to recommend only very highly qualified students, because entry into Japanese high schools is competitive, and if it got out that a firm like Toyota had dropped her high school as a source of entry level labor, the principal of that school would be in deep trouble. What the principal takes into account as she makes her recommendations are the courses taken, the grades received, the recommendations of the teachers and the scores on examinations.

Now take the Germans. If a secondary school student in Germany wants to go to work for Daimler-Benz and build Mercedes automobiles, she must first be offered an apprenticeship contract at Daimler. What will Daimler take into account in deciding who gets offered a contract? The answer is the courses taken, the grades received, the recommendations of the teachers and principal and scores on examinations.

Let's take a look at what is going on here. First, both systems provide very strong incentives for achievement in school and in postsecondary education and training that are wholly lacking in the United States for students who do not expect to go to a selective college. Though there are clear differences in these two systems — which we will get to in a moment — the point on which they converge is sending the strong signals to students who do not plan to get a baccalaureate degree that it pays to meet high academic standards in school.

But that is where the similarity ends.

The large, lifetime employers in Japan are like a family. They expect people on the front line to do whatever is necessary to make the firm successful. That probably means many very different occupations during a lifetime of work. Because that is so, the firm is not particularly interested in the occupational skills of the people they hire. What they care about — and the only thing they care about — is capacity and appetite for continued learning. This quality they call "general intelligence." Unlike us, they believe that the most important component of general intelligence is effort, and the least important is inherited aptitude. What they want from the principal is the names of those students with staff recommendations and scores

indicating they have the highest capacity for continuous learning.

Once these Japanese firms hire an entry level worker for the front line, they will provide all the occupational education that is necessary. When we visited Toyota in 1989, we were told that the firm was planning to give every new hire for the assembly line two full years of full-time instruction in digital electronics and mechatronics before putting them to work. These workers will have the skills of what we here in the United States would think of as junior engineers.

The Japanese do not have universal, formal skill standards, because they do not need them. Because the worker stays in the firm for all or most of his working days, and because the firm knows what its own standards are, there is no reason to have standards that extend beyond any given employer.

The situation in Germany is utterly different. In Japan, if you ask a worker what she does for a living, she might say she works at Toyota. But, if you ask the same question of a worker in Germany, he is likely to say he is a machinist. Germans identify very strongly with their skill, trade or occupation, which they are likely to pursue for their whole working life. Under German law, one cannot open a business in a trade or craft that is not licensed and unless one is a certified master in that trade or craft. One can only become a master after having first apprenticed in that trade and served as a journeyman. To proceed from apprentice to journeyman, and then from journeyman to master, one must pass written and practical examinations to receive the necessary certificate, the criteria for which are the same throughout the nation. It can take as long as ten years to change these criteria for any given trade or craft.

The advantage of the Japanese system is substantial. It is very much better adapted to a world in which technologies and consumer tastes are changing ever more swiftly. When workers identify with their firm and are willing to develop new skills and change their occupations whenever that is necessary to keep the firm competitive, both firm and worker are likely to be constantly on the leading edge of change. A nation that, from the education and skills point of view, puts the greatest priority on capacity and willingness to learn is the one that is most likely to succeed in a world that will favor organizations that are constantly learning.

So, why not adopt the Japanese system? Because the lack of skill standards in the Japanese system works only because employees in the big firms are there for life. That would not work in the United States. Our society is among the most mobile in the world.

The need for standards that go beyond the firm arises in mobile societies. In Japan, people work hard at learning because the most desirable employers provide substantial rewards for that behavior. In a mobile society, individuals are less likely to invest heavily in skill development unless they are sure that the skills they develop will be honored by many employers — ideally, all the employers in the nation that require that set of skills.

Incentives, standards and skill development

Issues of incentives are at the heart of this argument. As matters stand now, only the selective colleges require more than a high school diploma. So the vast majority of high school students, including almost everyone who will go into the front line work force, have no incentive to do any more than the minimum necessary to get the diploma, which is very little at all. And then young people and adult workers have no great incentive to invest heavily in continued skill development, because they have no way of knowing whether the training they are investing in is what a future employer will be willing to pay for. All of this is in sharp contrast to our competitors, who provide very tangible rewards to young people who work hard in school, and who are able to assure people of all ages that when they invest in their further skill development, that investment will pay off, because the training they have invested in is valued by the employers they want to go to work for.

These incentive systems turn on standards. Clear standards make it clear what competencies will be valued and therefore what one must learn how to do. Clear standards provide a reliable way for employers to recognize accomplishment, which makes it possible for them to reward it.

A three-tiered system of skill standards

So the question now is, how can the United States get as much of the benefit of the Japanese system as possible while still adopting some form of formal, universal skill standards? The

answer, in our view, is a three-tiered system of standards. The first tier will be provided by the National Education Standards and Improvement Council. The Council is meant to develop the kind of standard that is represented by the Japanese expectation for graduating secondary school students — a universal expectation of high academic mastery, combined with a demonstrated capacity to learn. I hope it adds to that a demonstrated capacity to apply what one has learned to complex, real-world problems.

The second tier would consist of a system of professional and technical certificate standards that would cover a very broad range of manufacturing and service occupations not requiring a baccalaureate degree. It would serve, among other things, as the linchpin of a first-class school-to-work transition system.

I assume for the moment that students who have met the standards established by the National Council are entitled to decide for themselves whether they wish to go directly into the work force, enroll in a college-preparatory program ('college' here meaning a baccalaureate degree program) or enroll in a program of technical training and further education leading to a college degree or certificate below the baccalaureate degree.

Many, perhaps most, will choose to enter programs leading to these professional and technical certificates and degrees. These programs would be two to three years in length. They would consist of part academics offered by an educational institution and part structured training, offered by an employer. The requirements for getting these certificates and degrees would be spelled out mainly by national groups of employers, so that students who completed such a program would find that the certificate they received was honored from coast to coast when they were looking for a job. But all of these professional and technical certificate and degree programs would be so designed that the student who completed one was part way down the road to a baccalaureate degree; there would be no dead ends in this program.

I believe there should be no more than 20 professional and technical degree and certificate programs, each one designed to provide the skills to perform at the entry level at a high level of competence, for a whole cluster of related occupations. One would certify, for example, the field of precision manufacturing, not numerically-controlled milling machine operator.

Many employers, perhaps most, would require only a professional and technical certificate to qualify for an entry level job in the firm. But others might require a modest amount of additional training to qualify the candidate for a particular occupation in the firm, tailored to the firm's own requirements. In some cases, that might be because of the technical requirements of the particular job or occupation. In others, it might have to do with the requirements of a particular piece of machinery. In still others, it might have to do with an employer's need to provide training in the particular way that firm does business and with the values of that employer.

It is this additional training for specialties and for employer values that would constitute the third tier of standards. In some cases, these standards might be truly national, as when they are adopted by an employer's group, a labor union, or a professional or technical association. In others, they might be adopted only by one firm (Japanese-style) or by a group of firms related by supplier relationships.

A skill certification system of this sort will make it possible for young people to prepare themselves for a wide range of occupations at a high level of entry level competence, give them the skill base required to move with a minimum of retraining among a wide variety of related occupations, and assure them that the effort they put into this training will pay off because the certificates will be portable across the whole nation and the criteria will be embraced by the employers themselves. It has much of the flexibility of the Japanese system while still retaining the worker mobility advantages of the German system.

Standards for everyone

Standard systems are like telephone systems. A telephone company that has only four customers can offer far less to its customers than one that can offer connections to 40 million customers. I have spoken so far as if the purpose of the professional and technical standards system was solely to guide the development of professional and technical skills among young people just entering the work force. But the true power of such a system lies in its potential for tying together into one system what are now many disparate and often non-functional systems. The same standards that are used to guide the initial skill development of young people can be used to guide the skill development of full-time homemakers returning to the work force, dislocated

workers seeking another career with high potential, disadvantaged workers who have mastered the basic skills but want the technical skills required to make a good living — in fact, anyone of any age, sex or race who wants to get ahead. If we had one set of standards to do all this, it would be worth while for many education and training organizations to develop the program capacity needed to bring lots of people up to these standards. Right now, poor people who participate in federal job training programs are stigmatized and have a hard time getting a good job. But if these people met a performance standard that everyone else is expected to meet, then it would not matter where they had received their training, but only that they had met a clear standard that was recognized by employers everywhere. This could make a very big difference for the people enrolled in government-funded job training programs.

Standards for performance-based systems

Once these standards are in place, and organizations and institutions new and old start coming up with programs for people who want to reach them, then something else becomes possible — the development of modes of government funding for training that are based on results rather than inputs — How many of the people who entered the program actually reached the standards? How long did it take them? How much did it cost? With common training standards in place, it becomes possible to have common measures, and common measures make it possible to establish public policies that will reward service providers who actually produce for their clients.

But the idea of having a national board for skill standards is not without controversy. The administration's proposal has raised some important questions. I would like to mention a few and quickly summarize my views on those issues.

The bill provides great latitude to the Board in organizing the standard-setting process. If everyone is in agreement that standard-setting should be industry-based, shouldn't the legislation require the Board to establish industry-based committees that will in turn develop the standards for their industries?

Some people have urged that the legislation be changed to specifically require the Board to establish industry committees. I do not think that is wise, and I will explain why.

There is, of course, a great advantage in organizing by industry: The industry groups concerned will feel some ownership of the standards they create and are therefore much more likely to use them. But there is more to it than that.

Last year, the Departments of Labor and Education gave awards to a number of industry organizations that came forward with proposals to develop industry skill standards. Among them was the American Electronics Association, from whom you are hearing today. Each proceeded, as asked, to develop standards without reference to the way in which the others were proceeding. This is a very good way to explore the territory and to develop some experience from which the country will profit enormously. But it is no way to build a national system of standards.

When school teachers cross state lines in this country, they typically have to take a whole lot of courses in the new state that look suspiciously like courses they had to take in the old state, because the two states have not agreed on a common standard for teacher licensure. They often choose to leave teaching altogether rather than endure the tedium and the expense. Suppose, in addition to electronics, a group had come forward to develop standards for the automobile industry. When an automobile mechanic opens the hood these days, she stares down at a maze of electronic equipment. If the auto industry should experience a big downturn, would we not want people who had learned a lot of electronics skills in the automobile manufacturing business to be able to transfer easily into consumer electronics or industrial electronics, if things were booming there? There would be enormous advantages in having standards that embraced not just industry groups, but skill groups that cut across industry groups.

Then there is the question of what an 'industry' is for the purposes of standard-setting. The American Electronics Association in fact encompasses many different industries, ranging from marine electronics to consumer electronics to the computing and semiconductor industries, and a whole host of occupations as defined by the dictionary of occupational titles. Many of these industries have their own associations. Electronics as a group falls under manufacturing, which has its own association. The AEA is not even alone in representing electronics taken as a whole. There is also, for example, the Electronic Industries Association. Some people have expressed strong reservations about giving as much latitude to the National Skill Standards Board as the bill does and have recommended specifying in the legislation that the Board organizes the

standards by industry or by groups of industries, and then delegates to those industries the actual setting of standards. But, as I have just pointed out, this is much easier to say than to do. Someone would still have to define what is an industry, making a map of all industries that had everything colored in, with not more than one color on one spot. Even after the Board had done this, and thrown away the possibility of organizing by skill groups when it did so, it would not be at all obvious which industry organization or organizations should be given the standard-setting job.

In my view, the Congress should not try to second guess the best answers to the issues I have just raised. The nation would be best served if the Board were left free to figure out for itself what the 'map' of standards should look like, taking into account the experience of other nations, the work of the pilot projects, and the views of all the actors who will have to make the new system work. They will have to establish a balance between the views of industry leaders who will want standards molded to the needs of their industry and of workers, who will want to have the option of moving easily across industries. They will surely want to fully involve the existing industry groups and associations in their work, but the Board should not be put in a position in which it feels compelled to give the standard-setting process away to any single organization that represents only one faction in an industry, or necessarily to give equal play to many organizations. Some industry associations — the AEA is an excellent example — will leap to the challenge and do first rate work. But many will not. Some associations will create standards that are forward looking and internationally competitive. Others will freeze into concrete standards that will condemn this country to competing on wages, a competition we can only lose. What is important is that the Congress makes its goals as clear as possible, provide the Board the latitude to figure out how to get there and then hold it accountable for its decisions. I would not tell it how to organize.

The pilot projects are well underway. Weren't they supposed to provide the data that would help us figure out how to establish a system of skills standards? Shouldn't we wait until their work is done, two years from now, before we create this Board?

No. The organizations involved in these pilot projects do not see themselves as engaged in a research project — they are building standards they actually plan to use in their industries. And it is beginning to bother some of them a lot that what they are doing does not fit together.

They know that that means that someone will have to come along to create a structure into which they will have to fit. If I were them, I would far rather have the option of working now with a Board whose job it was to design the system, so that the standards I was developing could be designed to fit into that system from day one than to be told two years from now that everything I had done was provisional and that a new Board was about to put into place a system that was almost certain to invalidate much of the work that I had done.

It is very important that the new Board pays attention to what is being learned by the pilot projects, but that does not require that it not be created for another two years.

The standards that the National Skill Standards Board will put into place will create yet another set of hurdles barring the way to good jobs for disadvantaged kids and workers. Shouldn't the Congress prevent anyone from using these standards for initial hiring and promotion until everyone has an equal opportunity to learn the material that must be mastered in order to meet the standards?

Employers use all kinds of standards and tests now to help them make the decision on who to hire. No employer would be required to use the new Board standards. It seems strange to say they should be prohibited from using these standards but can use any others they wish. The pertinent law here is Title VII and the related case law flowing from *Griggs vs. Duke Power*, which basically says no test can be administered for hiring purposes that has differential impact by race and cannot be shown to measure skills or knowledge that are actually required to successfully perform the job for which the person has applied. The bill now makes it explicit that it does not override any of this law, all of which remains in force. Thus *Griggs* and Title VII would apply to the standards and tests emerging from this Board in the same way that they would apply to any others. That being so, I can see no reason for denying employers the right to use the standards and tests developed by this Board for hiring purposes, assuming that they meet these basic civil rights criteria.

Which raises the larger question as to whether it is fair to put standards into place when some people will find it easier to meet these standards than others because they have had access to more and better preparation. But that is true now. The proportion of people who come from minority and low income backgrounds who take and pass the examinations that lead to advanced

degrees in mathematics, engineering and the sciences is appallingly low, as is the proportion of those who take the medical boards or the nursing examinations. The reasons that is so, though complex, are clearly related to unequal opportunities to acquire the necessary prerequisite knowledge. But the society does not therefore prohibit the use of those standards and examinations. If it did so, employers would find some other way to make the decision about who to hire and the ways that they chose would undoubtedly be more subjective and more subject to racial bias than the ones now in place. This is not going to be an easy dilemma to resolve.

In any case, we should not lose sight of the fact that the new skills standards can be a powerful asset for disadvantaged Americans. Standards can open doors to people who can show that they can demonstrate the required competence. And the new job training standards will be a powerful tool for improving the quality of federal job training programs.

Why limit the number of standards to 20? Why not have a standard for every occupation, or at least for every industry?

The first answer to that question is the one I gave earlier when discussing the German-Japanese dimension line of thinking about skill standards: The more standards there are, the more rigid the economy that uses them. It takes a long time to change them and people tend to identify with the specific occupation for which they have been certified, so they will fight changing them. The society that has a more flexible system will be able to respond faster to changes in technology and consumer taste. That is why all the European countries have been busy slashing the number of standards they use.

But there is another, and very important, reason. When the Commission on the Skills of the American Workforce examined these issues in 1989 and 1990, it discovered that the advanced industrial countries experiencing the best growth rates in real wages and productivity were competing on quality, not cost. They knew that countries with low wage structures would inevitably dominate the markets for mass produced goods. But competing on quality, customization and responsiveness requires a different form of work organization than does mass production.

Competing on quality means abandoning the mass production method of organizing work in favor

of high performance work organization. The Commission found that, in assembly plants, the workers had been organized into self-managing teams that took responsibility for scheduling their own production, parts ordering and inventory, equipment maintenance and quality control. In banks, the Commission found that ordinary bank tellers had been trained to understand and sell the full range of modern sophisticated bank products to their customers, from zero coupon bonds to variable rate mortgages. Insurance companies had given their field agents powerful portable computers loaded with custom software that enabled them, on the spot, to give their customers quotes that used to take a week to get to them. The back-office staff who used to grind out the numbers for these quotes had been retrained to do sophisticated custom quotes for products on which the company could make a much higher profit.

In each of these cases, the front-line staff had been given duties and responsibilities that, in this country, are rarely assigned to anyone but professionals and managers. By empowering these front-line workers, the management had made it possible to cut out many intermediate layers of management and supervision, and many specialized departments whose services were no longer needed. Because there were many fewer departments, there were many fewer steps involved in producing goods or services involved.

In addition to the money saved, miscommunications among all these organizational units could be eliminated, mistakes could be avoided and much time saved. Quality went way up, because wastage could be avoided at the point at which it first occurred, rather than waiting until it piled up at the end of the line.

These firms could respond much more quickly to changes in consumer taste because the long lead times required in conventional mass production were no longer needed. The people who actually worked on the line could make constant improvements in the product or service without waiting for the beginning of a whole new design and manufacturing cycle, which often takes years for a complex product.

For all these reasons, high performance work organization holds the key to a high productivity, high wage economy. By employing its disciplines, a company — or a whole country — can achieve the levels of quality, customization and responsiveness to changes in consumer taste that are required to establish and maintain wage levels above those that can be sustained with

standard mass production methods. Only in this way, in other words, is it possible to produce the goods and services for which people around the world are prepared to pay premium prices. If a nation can organize its economy on these principles, it can not only enjoy high wages, but it can also ensure high levels of employment and good income distribution.

But high performance work organization requires team organization and requires that the members of the team be able to do each other's jobs. It also requires that each member be able to take on a wide range of functions that are rather broadly defined. Underneath it all, it is predicated on the idea that the front-line worker is a professional. Doctors get a single basic credential, as do lawyers. One is expected to specialize, but also to know the basics of all the jobs in the whole broad field, and to be able to move to another specialty within that broad field with some facility. If our economy is to survive and prosper in this intensely competitive international environment, it will be, in part, because the average front-line American worker is not a cog in a machine but rather an autonomous, contributing problem-solver, constantly learning, constantly looking for the next challenge. This — not the world of narrow occupational standards — is the world that the new standards should be designed for.

Chairman KILDEE. I want to go back to questions on this whole idea of one system because we are getting that from you and others and particularly from Secretary Reich. So I want to go back—there is a question—see what clarification we can get on that.

Ms. Piesert.

Ms. PIESERT. Thank you.

I am Margaret Piesert. I am Director of the Health Care Workforce Project with the Service Employees International Union. Our union represents more than 1 million service sector workers in the United States, Canada and Puerto Rico. We are the fourth largest union in the AFL-CIO and the largest union of health care workers in North America.

I am pleased to be able to testify today in support of establishing a National Skill Standards Board and, more broadly, to stress the urgent need for training and skill standards in order to foster high productivity work organization in the United States, to build a secure and prosperous workforce and to keep our Nation competitive in the global economy.

As the United States has witnessed the transition to a service economy, we have also witnessed a retention of outmoded methods of production, management and work organization based on the Taylor model. This system was developed to serve mass production by relying on an elite few to plan work and to organize work. Little training was provided for frontline workers and little was expected of them.

Now the revolutions in high technology and electronic communication have brought demands for greater skills from our workforce, even in traditionally low wage and service occupations. But while the productivity imperative remains, we really aren't responding to change by providing workers with the skills they need, either in school or on the job.

In the best examples from the modern industrial sector, we have seen such problems addressed. Apprenticeships and training programs have a long and successful history in American industry, but we have seen almost nothing like it in the service sector where the largest number of employees are in need.

I would like to share with you SEIU's experiences in the health care industry. Health workers are going to have to improve their skills as the industry continues to restructure, and a strategy for upgrading skills will be needed if workers are to be able to participate in the new types of health care delivery systems and work organizations. Skill standards, continuous training and effective career development tracks will result in a more flexible and a more productive health care workforce.

My union is participating in two experimental skill standards programs in the health care industry. Both are aimed at setting uniform standards for health science and technology jobs, and both are funded by grants from the Department of Education.

One project is being carried out by the Far West Laboratory for Educational Research and Development, and that project is going to develop standards for a number of entry-level service occupations in the health care industry, nurse aides, home health aides and other support service jobs.

The other is being conducted under the auspices of the Education Development Center, Incorporated. In its initial stages, this one will set standards for entry-level workers in the bioscience industry and labs and in research. This—in its early stages, this project is undertaking an extensive analysis of the jobs in the industry, the skill content of the jobs. They are doing focus groups with workers, extensive interviews with frontline workers and getting a great deal of input from the workforce itself.

In addition to these projects, our union has a long history of negotiating career ladder programs for service workers in hospitals. Our local unions have developed, for example, a much-cited worker education program at nine hospitals in Massachusetts. The program initially concentrated on moving entry-level workers to mid-level clerical jobs, lab jobs and maintenance positions, and has since expanded to permit career movement into higher-level technical and professional positions.

The Career Ladder program at Cape Cod Hospital in Massachusetts, which has been in existence for more than 10 years, helps to facilitate more than 50 promotions every year, and the hospital now does all of its—fills all of its vacancies through internal promotions.

In addition, our experience with labor-management cooperation tells us that national skill standards will be vital to the future of both employees and employers in this industry. We see young workers coming in that, often, lack the skills to rise above an entry-level position. The mechanisms to promote skills development and certification just don't exist. There is a great deal of frustration. Turnover levels are very high.

In the health care field, this cycle of frustration is reinforced by rapidly changing technology which is making health care work much more complex. In addition, our health care workforce includes an ever-growing number of recent immigrants and non-native speakers of English. Yet in many health care jobs and in all settings there is more emphasis on computer skills and workers at all levels need to have higher skills, use computers. This goes, you know, down to central supply clerks, housekeepers in hospitals. There are higher competency requirements.

Without skill standards and training, the result for many workers coming into the health care field now is they end up in a job ghetto. There is no hope for advancement, no mobility and no escape. Even where individual facilities do offer training to employees, the content is often very employer specific and cannot be applied elsewhere when the worker changes jobs.

Our experience also tells us, though, that we need to develop skill standards carefully. Labor unions and, more important, frontline workers must be fairly represented in the development process. In fields like health care, our workers know better than anyone how countless matters of work organization can be improved. Frontline workers are the key to quality in the workplace, and they will be an invaluable resource as we undertake the mission of developing skill standards.

Thank you very much.

Chairman KILDEE. Thank you very much.

[The prepared statement of Ms. Peisert follows:]

STATEMENT OF MARGARET PIESERT, DIRECTOR, HEALTHCARE WORKFORCE PROJECT,
SERVICE EMPLOYEES INTERNATIONAL UNION

I'm Margaret Peisert, Health Care Workforce Project Director of the Service Employees International Union.

SEIU represents more than 1 million service-sector workers in the United States, Canada and Puerto Rico. We are the fourth largest union in the AFL-CIO, and the largest union of healthcare workers in North America.

I'm pleased to be able to testify today in support of establishing a National Skill Standards Board and, more broadly, to stress the urgent need for training and skill standards in order to foster high-productivity work organization in the United States to build a secure and prosperous workforce and to keep our Nation competitive in the global economy.

As the United States has witnessed the transition to a service economy we have also witnessed the retention of outmoded methods of production, management and work organization based on the "Taylor" model. This system was developed to serve mass production by relying on an elite few to organize work. Little training was provided to frontline workers and little was expected of them.

Now, the revolutions in high technology and electronic communication have brought demands for greater skills from our workforce—even in traditionally low-wage occupations. But while the productivity imperative remains, we aren't responding to change by providing workers with the skills they need—either in school or on the job.

In the best examples from the modern industrial sector, we have seen such problems addressed. Apprenticeships and training programs have a long and successful history in American industry.

But we've seen almost nothing like it in the service sector, where the largest number of employees are in need.

I would like to share SEIU's experiences in the healthcare industry.

Healthcare workers will have to improve their skills as the industry continues to restructure and a strategy for upgrading skills will be needed if workers are to participate in types of health delivery systems and work organizations. Skills standards, continuous training, and effective career development tracks will result in a more flexible and productive healthcare workforce.

My union is participating in two experimental skills standards programs in the healthcare industry. Both are aimed at setting uniform standards for health science and technology jobs, and both are funded by grants from the Department of Education.

One is being carried out by the Far West Laboratory for Educational Research and Development. It will develop standards for a number of entry-level service occupations, including nurse aides, orderlies, and other support service jobs.

The other is being conducted under the auspices of the Education Development Center, Inc. In its initial stages, this project is undertaking an extensive analysis of the skills content of jobs, including focus groups and interviews with frontline workers.

In addition, SEIU has negotiated career ladder programs for service workers. SEIU locals, for example, have developed a much-cited Worker Education Program at nine hospitals in Massachusetts. Grants to set up these programs came from a special training fund established as part of the State's universal health plan. The program initially concentrated on moving entry-level workers to mid-level clerical, laboratory and maintenance positions and has since expanded to enable moves into higher-level technical and professional positions.

The Career Ladder program at Cape Cod Hospital, which has been in existence for more than 10 years, helps facilitate more than 50 promotions per year.

And our experience with labor-management cooperation tells us that national skill standards will be vital to the future of both employees and employers in this industry.

Only by fostering high-wage jobs and providing workers with advanced skills that are portable can American healthcare providers meet the standards of quality and cost-effectiveness they are seeking.

In this industry, young workers often lack the skills to rise above an entry-level occupation. The mechanisms to promote skills development and certification just don't exist. As a result, frustration and turnovers are high.

But leaving the job doesn't benefit the typical service-sector worker. Rather, employees are held in low-end jobs by their lack of skills, and their careers are more likely to reflect movement from one low-wage, entry-level job to another without upward mobility.

In the health care field, this cycle of frustration is reinforced by rapidly changing technology and improved infection control procedures which make work especially complex.

In addition, our healthcare workforce includes an ever-growing number of recent immigrants and non-native speakers of English. However, in many healthcare work settings, computer skills are now expected even of housekeepers and supply clerks.

The result is a job ghetto—no mobility, no escape.

And even where individual facilities do offer training to employees, the content is often too employer-specific, and can't be applied elsewhere in the event of job dislocation.

But our experience also tells us that we need to develop skills standards carefully. Labor unions, and more important, frontline workers, must be fairly represented in the development process. In fields like healthcare, our workers know better than anyone how countless matters of work organization can be improved.

Frontline workers are the key to quality in the workplace, and they will be an invaluable resource as we undertake the mission of developing skills standards.

Thank you very much.

Chairman KILDEE. Mr. Valdes-Pages.

Mr. VALDES-PAGES. Thank you.

Good morning, Mr. Chairman, distinguished members of this committee. I want to thank you for the opportunity to share some of our experiences implementing skill standards at our college.

I represent a 1,300-student technical college which offers 2-year associate and 4-year baccalaureate degrees in technical and health care fields. We have been in operation since 1945. I am also an active member of the Career College Association.

In 1989, we made the decision to adopt skill standards and competency exams as a requirement for graduation. The reasons we did this are many. I will list some of the following.

This country is, for the first time, focusing on the need of first-rate frontline workers. Education in this country, including career education, often performs in a vacuum which makes it difficult to measure performance and thereby separate yourself from your competition, public or private. Colleges of all sizes often find themselves limited in the manner that they can stay in touch with the real world. What we teach is sometimes dictated more by what we know or what we want to know than by what our employers need.

We saw at our college an opportunity to forge a partnership with our employers which would allow us to become more measurable and accountable, thereby enhancing the value of our graduates. Being driven by employer needs, we can also better serve our other consumer, the student, by assuring them of a relevant and industry-standard education.

The standards we adopted were dictated by our employers. And let me be clear that in the driving force of this process is the ability to sustain an employer focus through standards. Allowing employers to dictate what we teach enhances the mouth of the funnel by which we feed relevancy to our curriculum.

The process we used is very similar to what is used in industry in product development. In a typical product development model, the first stage is to identify consumer needs through existing product research. In our educational setting we asked employers to provide us with that input.

In product development, consumers would describe how a new product would solve problems. In our setting, employers described skill sets.

In product development, you develop a product according to the specifications of your consumer. In our setting, we train our students in accordance with the input of the employer.

In product development, you establish a quality-control process to assure the finished product meets the design specifications. In our setting, we provide competency testing as our quality control.

In product development, you then send the product to market, often with a guarantee of performance. You then research consumer satisfaction to further refine your product. In our setting, we issue a skills guarantee to employers and further research satisfaction with our graduates so that we can further refine our product and continue the cycle.

I would like to share with you some brief comments from some of the employers and advisory board members that sit in our advisory board and have helped us evolve this process.

Jane Hill from Martin Marietta: "The American educational system is carrying the stigma of low-skill competency of its students. Rightly or wrongly, the perception is there and must be addressed. The competency-based education and testing is an excellent method to demonstrate to your customers, both students and the hiring employers, that you are serious about graduating skilled, thinking adults."

Don Marchese, Xerox Corporation: "By establishing a testing process to validate the actual skills possessed by your graduates at the time they would be entering the job market, you are providing a valuable service to both your opportunities and their future employers."

Steve Lindley, Federal Express: "I have been extremely impressed on the speed in which DTC has incorporated many possible changes in the CIS program. Their graduates are given the opportunity to be better prepared for careers in this technology driven industry."

Susan Bobka, Humana Hospital: "Competency exams will help employers develop realistic expectations for the graduates. The test will represent a standard of quality for the school."

In the interest of time, I will submit the rest of my comments to the record and conclude with these thoughts.

Our standards are not hypothetical. They exist, have been working now for 4 years. They are useful to both students and employers. They are not perfect, but there is a substantial improvement over not having them and operating in worlds of opinion.

Tests are always a point of contention. However, competency exams, particularly if they mirror industry evaluations, are an effective tool. They are dynamic and require continuous attention and improvement.

We have our 150 advisory board members meeting quarterly to reevaluate our standards. They are not designed to prevent people from succeeding. Rather, they are designed so that when graduates achieve certain levels of performance they know it and can be confident. They are meaningful if determined by employers. Without industry participation, skill standards would just become another opinion.

Skill standards, in my opinion, bring about a clear focus and high expectations, two of the traits normally identified in the re-

search on high-performance schools. We have observed this sharing of high expectations not only among our students and faculty but also among our employers and advisory board members.

Setting high goals and expectations helps students achieve. I would like to thank this committee for its attention, and I will entertain any questions. Thank you.

Chairman KILDEE. Thank you very much.

[The prepared statement of Mr. Valdes-Page follows:]

Mr. Chairman and distinguished members of this committee,

I want to thank you for the opportunity to share some thoughts regarding skill standards and some of our experiences implementing them. Specifically, I will address the following:

- 1) The reasons we adopted standards;
- 2) A brief review of the process; and
- 3) Future directions as we see them.

BACKGROUND INFORMATION: Firstly, in the form of background, let me give you some information on the College I represent. Denver Technical College is a 1,300 student technical college situated on two campuses in Denver and Colorado Springs, Colorado. We offer two-year Associate and four-year Baccalaureate programs in Technical and Health Care fields such as Computer Sciences, Electronics, Computer Aided Drafting, Physical Therapy Assisting, etc. The college has been operating since 1945.

RATIONALE FOR ADOPTING SKILL STANDARDS: In 1989, we made a very major change in the process by which we train students when we decided to adopt skill standards and competency exams as a requirement for graduation. The reasons for making this choice are many. They include the following:

1) This country is, for the first time, focusing on the need for first rate front line workers. As an observer at one of our recent Advisory Board meetings wrote recently, "this country is going to focus more on technology than science, and more on front-line workers at technical colleges than MBA/PHD's at national universities. We cannot run away from this trend." This observer, incidentally, is the Director of International Relations for Japan's Institute for Future Technologica, Mr. Tom Kato. In any case, if this trend is true, how we train these front line workers required rethinking and perhaps reforming.

2) Education in this country, including career education, often performs in a vacuum which makes it difficult to measure performance and thereby separate yourself from the competition, public or private. Accreditation is not by itself a guarantor of quality and no suitable alternatives have surfaced to demonstrate the accountability that increasingly more limited resources and increasingly more competitive marketplaces, which are now international, require.

3) Colleges of all sizes often find themselves limited in the manner that they can stay in touch with the "real world". Indeed many do not. What we teach is sometimes dictated more by what we know, or want to know, than by what employers want. This often leads to a disjoining of the

educational process from the workplace needs.

4) We saw at our college an opportunity to forge a partnership with our employers which would allow us to become more measurable and accountable, thereby enhancing the value of our product - the graduate.

5) Being driven by employer needs, we can also better serve our other consumer, the student, by assuring them of a relevant and industry-standard education.

6) The standards we adopted were dictated to us by our employers. Let me be clear in that the driving force of this process is the ability to sustain an employer focus through standards. If standards were developed without employers, the process would lose much of its worth.

7) Allowing employers to dictate what we teach enhances the mouth of the funnel by which we feed relevancy to our curriculum.

SKILL STANDARD DEVELOPMENT PROCESS: I would like to now describe the process by which we implemented competency at our college. We actually started testing students for competency in our medical programs approximately seven years ago. Competency testing is more common in health care than in technical fields. The rationale is simple. You want students to be able to demonstrate what they have learned prior to going to work on patients. In any case, our success with placement of students, at times we have had employers exceeding graduates, led us to expand the process to all programs.

In the fall of 1989, we accumulated information from national organizations that were working on skill standards. We used that information to develop questionnaires to send to employers separating skills into three major groups:

- a) Job Specific skills
- b) Reasoning skills
- c) Personality skills

Our initial focus has been on job specific skills, since they are easier to quantify and measure. That being said, the other two groups could not be ignored, for they were every bit as important to employers. However, because of the limited amount of time we have with students at the post-secondary level, we found it necessary to level the academic quality of the entering student by increasing the entrance requirements to the college. Core classes in math and English had to be enhanced and an interview process was begun for programs in which personality traits were considered critical. Classes to enhance these personality traits into customer relations skills were developed and implemented.

Advisory boards were expanded in size and scope - 150 individuals representing 130 employers in Colorado, from national and international companies, meet quarterly. Their initial focus was to define skills required of graduates and tests to measure those skills. Students would no longer be able to graduate without passing this exam. The advisory groups would eventually take control of all curriculum development recommendations as well as equipment needs.

In June of 1991, we announced the Skills Guarantee Program. In this program, we issue a written guarantee to employers that if graduates who have passed our competency exam do not have the skills we say they have, we will reimburse the first month's salary. I am proud to say

that after two years we have not had a claim from this program. However, and perhaps this speaks to the real value of our program, approximately 10% to 15% of the students who took the competency exam failed them the first time and had to enhance specific skills through tutoring or class retakes. In previous years, these graduates would have gone out into the workforce, side by side, with our other graduates, diluting their value and worth. It is clear that, even with a curriculum driven by the needs of industry, there are some students who are unable to completely apply the knowledge in the workplace. If you extrapolate these numbers into the universe of national front line worker training, and factor in reasoning and personality issues, we begin to get a grasp for the magnitude of the problem. Failure to establish skill standards and test student skills against those standards results in a workforce with varying skills, which therefore forces the employers to evaluate, test and retrain workers in order to meet their specific needs. It is our belief that the college's testing, evaluating, tutoring and extra work on skill development, for students with some skill deficiencies, has improved the quality and consistency of our graduates and therefore reduced the need for unnecessary industry retraining.

Before going any further, let me state that this process is no different than the model used by companies which manufacture and market successful products. Let us look at the similarities.

MARKET RESEARCH/EMPLOYER SURVEYS: In a product development model, the first stage is to identify consumer needs with the existing product through research. In our educational setting, we ask employers to provide us with that input.

CONSUMER/EMPLOYER REQUIREMENTS: In product development, consumers would describe how a new product would solve problems. In our setting, employers describe skill sets.

PRODUCT SPECIFICATIONS/GRADUATE SKILLS: In product development, you develop a product according to the specifications of your consumer. In our setting, we train our students in accordance with the input of the employer.

QUALITY CONTROL/COMPETENCY TESTING: In product development, you establish a quality control process to assure the finished product meets the design specifications. In our setting, we provide competency testing as our quality control.

PRODUCT/SKILLS GUARANTEES: In product development, you then send the product to market, often with a guarantee of performance. You then research consumer satisfaction to further refine your product. In our setting, we issue a skills guarantee to employers and further research satisfaction with our graduates so that we can further refine our product and continue the cycle.

Now, how are we different? Don't most people have advisory boards? The reality is that, in most institutions, faculty and not employers dictate curriculum. They may or may not be the same. In our setting, curriculum changes can only be made through advisory boards which meet quarterly. Curriculum development and graduate placement are under the same manager, in order to maximize industry input. Since all graduates have to now pass competency exams, student focus is changing toward the acquisition of skills as opposed to grades. Incidentally, as of Fall of 1992, the specific program outcomes have now been identified, class by class. Instructors now not only give a grade but have to certify that a student has acquired all the skills from each specific class.

Below are some excerpts from letters from advisory board members and employers relating why they feel this process is important. The full text accompanies this presentation.

"The American educational system is carrying the stigma of low skill competency of its students. Rightly or wrongly, the perception is there and must be addressed. The competency based education and testing is an excellent method to demonstrate to your customers, both students and the hiring employers, that you are serious about graduating skilled, thinking adults."

Jane Hill, Martin Marietta.

"By establishing a testing process to validate the actual skills possessed by your graduates at the time they would be entering the job market, you are providing a valuable service to both your students and their future employers."

Don Marchese, Xerox Corp.

"I have been extremely impressed on the speed in which DTC has incorporated many positive changes into the CIS program. Their graduates are given the opportunity to be better prepared for careers in this technology driven industry."

Steve Lindley, Federal Express

"As most employers will agree, our educational institutions and business communities have operated mutually exclusive from one another. However, the world is changing, and at breakneck speed. The relationship between our educators and employers must synchronize in order to provide the talent and skills required to compete in this changing environment."

Philip Wentzel, Petroleum Information

"I am in favor of the approach DTC is taking towards competency based education. It is unique and will help students and employers have confidence in their education."

Carol Gumpert, United Artists

"Employers, such as US West, would benefit from a program that guarantees graduates possess skills relevant to their future positions."

Susannah J. Labonde, US West

"Competency exams will help employers develop realistic expectations for the graduates. The test will represent a standard of quality for the school."

Susan Bobka, Humans Hospital

In order to accomplish all of this, we have had to make some changes in what we call the college "culture". When most of us attended college, our appearance, attendance, punctuality and speech were not of critical importance. Our grades were. Then all of a sudden the aforementioned traits became important. Where do our students learn proper workplace behaviors, if they do not learn this from their parents? One of the things we discovered about our students is that, in spite of good academic skills, many were first generation college students who need help understanding workplace ethics. As a matter of fact, it is important for the college to see itself as part of a continuum, which is a determinant of employment and not an isolated environment. For this to happen, our faculty had to also adopt behaviors that are consistent with industry for these are some of the so-called "soft skills" employers want. Our faculty had to take authorship for admitting, training and placing students in jobs, not just lecturing. Our faculty is available through class room or office hours, forty hours a week, forty eight weeks in the year. They are not tenured, but on a merit system that rewards performance on the basis of both evaluations and outcomes. This has forced a total re-examination on our part of how we delivered education. Our faculty now understands that the mastery of skills throughout the curriculum will determine the students' ability to pass the final competency exam prior to graduation. This results in greater scrutiny of individual skills for every student. Please note that we emphasize that passing or graduating a student who does not have the necessary skills is not doing that student a favor. On the contrary, it often reinforces student

perceptions of failure. Please also note that our process is not geared to "flunk" students, but to ensure that we provide them with the necessary skills prior to graduation.

I would like to give you some examples of changes that we have made as a result of our new relationship with employers. Some would be expected, some are surprising. Indeed there are examples of "technical upgrading" such as adding more programming and math to our electronics programs and the recommendations three years ago to teach C language in a UNIX mini-computer environment recommended by industry. There is a new program about to be implemented, again as a result of advisory board input, dealing with the growing problem of rapidly changing technology out-pacing business' ability to use it. The advisory board has also led the adoption of three generations of hardware and software changes in Computer Aided Drafting in the last five years.

The advisory board has also dealt with continuing the teaching of COBOL at the college, despite the fact that our faculty wanted to discontinue this language four years ago because they felt it was an "old" language. Our employers told us they have tens of millions of dollars invested in this language and they were not going to engage in expensive conversions overnight. Thereby, our entry level programmers need to continue to be trained in Cobol as well as C. They also talked to us about customer relations. Employers have said that all of our collective jobs involve either acquiring customers or keeping the ones we have. Yet colleges don't focus on teaching these skills. We have now developed and implemented a practical course that will help teach customer skills to students in all of our programs.

RESULTS TO DATE: While our program is relatively young, some directional results can be observed:

1. Students in technical fields are receiving higher salaries and seem to be

getting hired by more first tier companies.

2. We now refuse some job orders for graduates if salaries are below what we consider acceptable levels.

3. Entrance scores of our students seem to be increasing as a result of students pre-selecting themselves by knowing they have to pass competency exams.

4. Our overall graduate placement rates in the field for which students were trained increased by 23% in the past four years.

FUTURE DIRECTIONS: Insofar as our future work, it is clear this process is ongoing. You don't develop standards once. They require maintenance and updating. As such, our curriculum is reviewed quarterly. We are also just beginning to tackle reasoning and personality skills. We are in the process of developing an individualized learning center where video and software libraries of skills taught at the college are available on one-to-one format so that students don't have to retake entire classes for individual skill deficiencies. We aim to teach more workplace cultures inside the college and we need to find a way to link K-12 standards with post-secondary standards in order to strengthen the continuum of skills.

I believe the issue of skill standards, if approached correctly, and by this I mean in response to specific societal needs, can become a framework by which we re-think education in this country and bring about better linkage not only between post-secondary education and the workplace, but also between K-12 and post-secondary education. These are among the benefits that I see from this linkage:

- 1) The use of k-12 standards for use in admissions to post-secondary institutions.
- 2) The ability to relieve post-secondary institutions from remedial education, which will now presumably be done in k-12, and the utilization of that time to enhance worker skills.
- 3) The utilization of post-secondary skill standards as a framework for transfer of credits among institutions.

To conclude, I would like to leave you with these thoughts.

1. Our standards are not hypothetical. They exist and are working effectively.
2. They are not perfect, but they are a substantial improvement over not having them and operating in worlds of opinion. Tests are always a point of contention. However, competency exams, particularly if they mirror industry evaluations, are an effective tool.
3. They are dynamic and require continuous attention and improvement.
4. They are not designed to prevent people from succeeding, rather they are designed so that when graduates achieve certain levels of performance, they know it and can be confident.
5. They are only meaningful if determined by employers. Without industry

participation, skill standards would just become another opinion.

- 6) Skill standards bring about a clear focus and high expectations, two of the traits normally identified in the research on high performance schools. We have observed this sharing of high expectations not only among our students and faculty, but also among our employers and advisory board members.

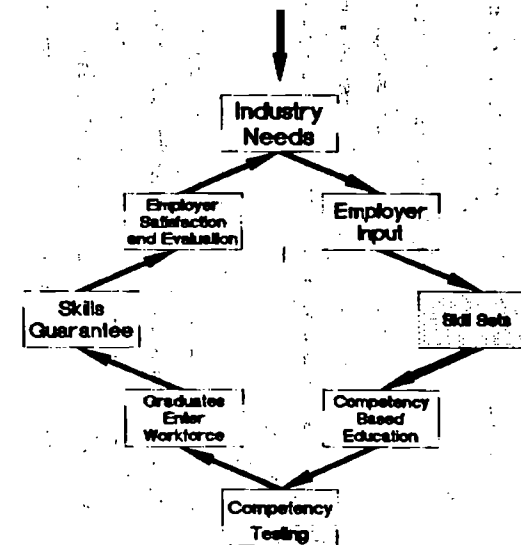
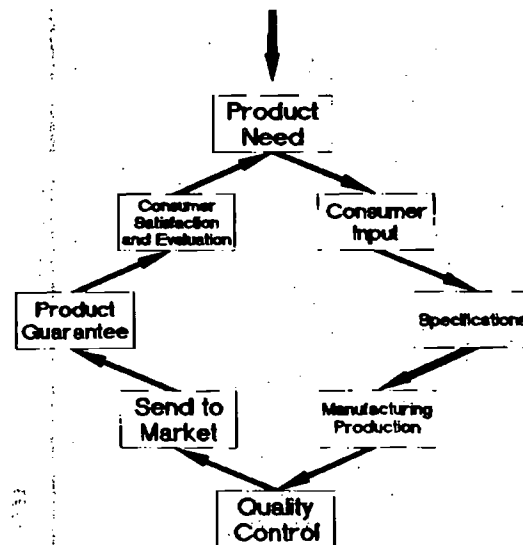
Although focusing our country's educational resources in this direction will indeed cause fear and anxiety, the ultimate potential rewards make the challenge worthwhile. Imagine that at a time where decreased financial resources put a premium on accountability, that employers are satisfied with their workers' skills, our students have learned that their investment of time and money has been well spent, and society is satisfied that its resources have been better utilized.

I would like to thank the committee for its attention and will entertain any questions you may have of me. Thank you.

DENVER TECHNICAL COLLEGE

SKILL STANDARDS DEVELOPMENT PROCESS

PRODUCT DEVELOPMENT = SKILL STANDARDS DEVELOPMENT



DENVER TECHNICAL COLLEGE

SELECTED ADVISORY BOARD MEMBERS

Martin Marietta

US WEST

Norwest Banks

Storage Tech

Xerox

Digital Equipment Corp.

NCR

Honeywell

Presbyterian/St. Luke's

Humana

Blue Cross/Blue Shield

Coors Wellness Center

Stone & Webster Engineering

Ball Communications

United Artists Entertainment

Federal Express

Hewlett-Packard

EDS

U.S. Air Force Academy

Rockwell International

Chairman KILDEE. Mr. Baroody.

Mr. BAROODY. Thank you, Mr. Chairman.

For America's manufacturers I appreciate the opportunity from you and the rest of the members of the committee to testify on this important legislation.

I think I would be remiss if I didn't offer a general observation at the start—remiss to my members—first, because it is an observation that is important to them and, second, because I think it is directly relevant to the business before this committee. That is, namely, that American manufacturing, despite the powerful myth to the contrary, is in the opposite of decline.

We like to think that American manufacturing is proving once again its ability to compete successfully in an increasingly challenging global marketplace. Our output totals our export levels which have simply doubled in the last 6 years. Our productivity performance, all of these things are powerful evidence of the strong and increasingly strong state of American manufacturing.

Relevant to this committee is the obvious, I think. This manufacturing could not have attained and maintained its current state of strength without a very good workforce. We do not come, therefore, to talk about the important subject of skills as a plea to you to help us rise from our own ashes. The perception is that we are in our ashes. I am here to try to reverse that perception. But, instead, because we think that the focus on skills could importantly be a way of building on the strong foundation manufacturing has helped to establish for itself over the last many years.

As I arrived at the National Association from the Department of Labor a little over 3 years ago, staff there was finding that increasingly our own members were concerned, however, despite what I just said, about the need for skills, the difficulty in finding them. And in surveys that were being conducted at the time I arrived they were finding as well that small and medium manufacturers were reporting that the biggest obstacle many of them often faced to the introduction of new technologies in their own workplace was the uncertainty about the ability of their current workers to present the skills necessary to operate those technologies.

With a sense that we could help our members address and resolve their concerns, the NAM embarked a little more than 2 years ago in direct partnership with the Department of Labor, a partnership which continues in the new administration, in an effort to develop a program which could be directly useful to our own members as they set about to upgrade the skills of their own current workers.

We have discovered that education and training is one of the best investments a company can make in order to stay competitive in today's global economy. And through the partnership with the Department of Labor we are working hard to share this knowledge across all manufacturing sectors.

As part of the project, we have looked for success stories throughout the NAM on how companies have changed the way they work and created new tools to move towards high-performance workplaces. We have asked our members who have had success—and for some of them the success has really been great, dra-

matic—to help those who have not implemented programs of worker training so they can also be the best of the best.

And I have attached to the testimony I have submitted to the committee a description of our program and of our progress so far. We are really quite excited about the potential of this program.

In the last 2 years the National Association of Manufacturers has, I suppose, been in about 15 cities, first conducting research which we conducted both with CEOs and with workers, with workers who were organized and not organized, in focus groups and discussion panels that we held around the country.

And we are trying to apply in our program the lessons that we have learned in that research and in the early efforts to try to turn that research into a successful program that would put CEOs, who, as I said, have mounted successful programs, together with CEOs who understand that they need to but don't really know where to begin so that they may learn from each other. And those who want to mount programs can learn from the trial and error experience of those who have done so.

It is with this in mind that I turn to the skills standards in Title IV of the bill. We applaud your efforts to focus attention on the development of voluntary national occupational skill standards. They can be a common language for jobs and for training, and they can be the building block of jobs.

The old way of looking at training was to look at the number of years it took to attain a skill. We understand now that what is really important is not how long it takes but how well the skill is attained. We know that everybody learns in a different way, some in classic teaching situations, some by reading and some by doing. We must have a system that is flexible enough to get credit for skills learned in a variety of ways, but we all have to agree on a common language of what those skills are.

Skill standards need to be based on jobs broadly defined. We no longer need to have jobs broken down into thousands of subgroups the way that we have done increasingly over the past century. Workers must be able to learn a broad base of skills using skill standards as a guide.

We recognize that in the past the private sector has not systematically arranged, specified or provided adequate occupational skills information for industrywide use for public education and training systems. With increasing competitiveness in the modern workforce, this initiative could begin to fill that need, and we at the National Association of Manufacturers know that a world-class workforce is critical to U.S. economic vitality.

That is why I am here, to commend the process of building partnerships and structures to identify the skills required in a world-class workforce. This effort is timely. The technology and information age has given us new tools and new challenges to make work more productive. Yet the majority of America's workforce, despite excellent strides in the past few years, is designed and our labor force often educated for the mass production segmented work models of the past.

Based in large measure on what we at NAM have learned from our own beginnings, through a partnership with the Department of Labor in a program for our members, I underscore the Associa-

tion's support for this initiative to attempt to design and set national, voluntary industry-based efforts to identify needed employee competencies and skill standards. Such efforts can be the underpinning of the high-performance workplace and are crucial to a world-class workforce.

We do have some concerns, however, about the current language in Title IV. I would like to share them with you and hope the committee can clarify some of these issues and rework the language appropriately so that this measure can receive good and widespread industry support.

And the effort, I would stress, must be industry led. Although others are needed to make this a team effort with other constituencies, a clear signal, we believe, must be sent to business that it is in the forefront of this effort. Without that signal, voluntary standards won't work. As Mr. Tucker suggested, industry will decide it should have stayed in bed.

Industry must use these standards. It must lead in setting them. Without that, a wholly false bottom structure will be created that simply will be ignored. Other countries have faced similar problems and faced failure when voluntary standards are not industry led.

Therefore, we recommend the following for the committee to consider as changes in the language of Title IV:

First, that the chair of the board is described in Title IV as being an industry-based individual, at least for the first term.

That the board itself be composed of a majority of representatives from business and industry trade associations and that workers, both union and nonunion, be included.

We also suggest that one-half of the education component be composed of representatives from community-type colleges.

We propose that the functions of the board be defined so it is clear that its job is only to define the industry clusters and set the criteria and processes for how industry standards should be developed. At no time should the board itself set standards. All activities of the board should be nonbinding and voluntary. All promulgation of standards should come from industry clusters. The board should endorse only that proper criteria and processes have been followed. The board should oversee the process, help keep chaos out of the system, but never mandate.

All certificates of mastery should be issued by the industry clusters in partnership with community colleges.

Any system to periodically revise and update skill standards and assessment and certification systems should be clearly understood and should be industry-led.

A sunset provision we would recommend should be included and that this process require congressional reauthorization in 3 to 5 years. We believe that this is a grand experiment, but it might not work, and if it doesn't it should be ended and something else should be tried.

And, finally, we understand there is amended language on the civil rights section in Title IV. I have looked at it. I am no lawyer. It seems to say that business cannot rely on the skills standard, assessment or certification system in any civil rights proceeding. The reality is that small business will rely on it. This language, as well

as that pertaining to methods for validating the fairness, unnecessarily burdens Title IV, which has as its major focus the development of a voluntary national system of skill standards and certifications.

We believe it is in no one's interest to revisit the many controversial issues debated during the passage of the Civil Rights Act of 1991. The principles of that Act, no more and no less, should be applicable to Title IV to the extent that provisions relating to civil rights issues go further. We believe those provisions should be stricken.

Voluntary skill standards could benefit all U.S. industries and workforces. They could help to change the way we understand work and give U.S. workers great new opportunities. They can encourage more companies, large and small, to create high-performance workplaces, to increase company productivity and enhance the competitiveness of all industry.

At the NAM we are optimistic that the Congress can respond to our concerns and to our hopes, that appropriate industry-led voluntary standards can help us all move to high performance workplaces for the future.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Baroody follows:]

MANUFACTURING HELPS AMERICA GROW

Testimony of

Michael E. Baroody

Senior Vice President for Policy and Communications

National Association of Manufacturers

on H.R.1820

Goals 2000: The Educate America Act of 1993

Before the Subcommittee on Elementary, Secondary, and Vocational Education

of the

Committee on Education and Labor

of the

United States House of Representatives

May 18, 1993

NAM

NATIONAL ASSOCIATION OF MANUFACTURERS

1331 PENNSYLVANIA AVENUE, NW, SUITE 1500 - NORTH TOWER, WASHINGTON, DC 20004-1703, (202) 637-3000

EXECUTIVE SUMMARY

The NAM supports the establishment of voluntary national skill standards. We believe they are the common language for jobs and training: the building blocks of jobs. We no longer need jobs to be broken down into thousands of sub-groups the way they have been for 100 years. Workers need to be able to learn broad-based skills using skill standards as a guide. We believe organizing voluntary industry-based skill standards encourages high-performance workplaces. We believe skill standards would be of particular value to small and medium-sized firms. Benefits to such firms include ready access to benchmarking data, skill analysis tools, and training that reflects industry needs. Employees would also benefit, with skills needed to speed the conversion to high performance work. Such efforts are essential to establishing and maintaining a U.S. workforce that is truly world class.

There are, however, key portions of Title IV of S.846 that need to be improved. We recommend that:

- the chair of the board as described in Title IV be an industry-based individual for the first term.
- the board itself be composed of a majority of representatives from business and industry trade associations and that workers, both union and non-union, be included. We also recommend that one-half of the education component be composed of representatives from community-type colleges.
- the board only identify industry clusters and set the criteria and process for standard setting. All promulgation of

standards must come from industry clusters. The board should only endorse that proper criteria and processes have been followed. The board should oversee the process but never mandate.

all certificates of mastery be issued by the industry clusters in partnership with community colleges.

any system to "periodically revise and update skill standards and assessment and certification systems" be clearly understood and industry-led.

a sunset provision be included, that this process require congressional reauthorization in three to five years. This is a grand experiment. If it doesn't work, let's end it and try something else.

The amended language on the civil-rights section seems to say that businesses cannot rely on a skill standard, assessment or certification system in any civil rights proceeding. The reality is that small business will rely on it. This language, as well as that pertaining to "methods for validating the fairness," unnecessarily burdens Title IV, which is concerned with the development of a voluntary national system of skill standards and certifications.

We believe that these changes will be an important signal to industry that this is a process in which it should fully participate. Without these clear signals and an industry leadership position, it could become a process doomed before it is begun. That would be unfortunate because the opportunities are immense.

TESTIMONY OF MICHAEL E. BAROODY

SENIOR VICE PRESIDENT, POLICY AND COMMUNICATIONS DIVISION

NATIONAL ASSOCIATION OF MANUFACTURERS

BEFORE THE SUBCOMMITTEE ON ELEMENTARY, SECONDARY AND

VOCATIONAL EDUCATION

OF THE COMMITTEE ON EDUCATION AND LABOR

UNITED STATES HOUSE OF REPRESENTATIVES

ON H.R.1820, GOALS 2000: THE EDUCATE AMERICA ACT OF 1993.

Good morning. My name is Michael Baroody, and I am Senior Vice President, Policy and Communications Division for the National Association of Manufacturers. I thank the chairman and members of the committee for the opportunity to present testimony today on Title IV of H.R.1820 -- the skills standards portion of Goals 2000: The Educate America Act of 1993.

Mr. Chairman, I would like to summarize my statement and request that it be placed in the record in its entirety.

Mr. Chairman, we at the NAM, in a special partnership with the Department of Labor, have spent the last two years travelling around the country conducting focus groups with executives and workers. Without question, we have discovered that education and training is one of the best investments a company can make in order to stay competitive in today's global economy. We are working hard to share this knowledge across all manufacturing sectors. As part

of this project, we have looked for "success stories" throughout the NAM on how companies have changed the way they work, and created new tools to move toward high performance. We have asked our members who have had success to help those who have not implemented programs so that they can also be the "best of the best." I have attached to this testimony a description of that program and our progress to date.

It is with this in mind that I turn to the skills standards in Title IV of S.846. We applaud your efforts to focus attention on the development of voluntary national occupational skill standards. Occupational skills standards are a common language for jobs and for training; they are the building blocks of jobs. The old way of looking at training was to look at the number of years it took to attain a skill. We understand now that all that is important is the skill attained. We know that everyone learns in a different way -- some in a classic teaching situation, some by reading and some by doing. We must have a system flexible enough to get credit for skills learned in a variety of ways, but we all have to agree on a common language of what those skills are. That's what skills standards are all about to me. They need to be based on jobs, broadly defined. We no longer need jobs broken down into thousands of sub-groups the way we have done for the past 100 years. Workers must be able to learn a broad base of skills using skill standards as a guide. We recognize that, in the past, the private sector has not systematically arranged, specified or provided adequate

occupational skills information for industrywide use for public education and training systems. With increasing competitiveness in the modern workforce, this initiative could begin to fill that need -- and we at the NAM know that a world-class workforce is critical to U.S. economic vitality in global markets. That's why I'm here to commend this process to build partnerships and structures to identify the skills required in a world-class workforce.

This effort is timely. The technology and information age has given us new tools -- and new challenges -- to make work more productive. Yet the majority of America's workforce -- despite excellent strides in the past few years -- is designed and our labor force educated for the mass-production, segmented-work models of the past.

The world's leading companies, however, are bolstering productivity growth by creating "high-performance work organizations" that focus on continuous improvement of work processes. In such workplaces, highly skilled people use effective training, teamwork, technology and information tools to achieve major strides in product innovation, quality, customer responsiveness and time-to-market. Employees in such work organizations are involved decision-makers. Management layers disappear and bureaucracy decreases. Front-line employees' skills increase as they assume many tasks formerly reserved for managers.

"High-performance work organizations" structured this way require a highly skilled workforce. They must be equipped with basic skills and have content knowledge. In high-performance workplaces, employees in virtually every job function must be able to make wise decisions, use technology and manage information adeptly, communicate effectively and work in teams toward common goals -- and do so at levels of competency benchmarked to world standards of excellence.

Based on what we've learned in the context of our project about high performance skills, I underscore the NAM's support for this initiative to design and set national, voluntary industry-based efforts to identify needed employee competencies and skill standards. Such efforts are the underpinning of the high performance workplace and are crucial to a world-class workforce.

We do have some concerns, however, about the current language in Title IV of S.846. I would like to share them with you and hope the committee can clarify some of these issues and rework the language appropriately so that this measure can receive good business support.

This effort must be industry-led. And although others are needed to make this a team effort with other constituencies, a clear signal must be sent to business that it is in the forefront of this effort. Without that signal, voluntary standards cannot

work. Industry must use these standards. It must create them and be in control. Without that, a hollow, false-bottomed structure will be created that will not be used. Other countries have faced similar problems and faced failure when voluntary standards are not industry-led. To come to the party, we must organize it. Therefore, we recommend --

- that the chair of the board as described in Title IV be an industry-based individual for the first term.
- that the board itself be composed of a majority of representatives from business and industry trade associations and that workers, both union and non-union, be included. We also suggest that one-half of the education component be composed of representatives from community-type colleges.
- that the functions of the board be defined so it is clear that its job is only to define the industry clusters and set the criteria and processes for how industry standards should be developed. At no time should it set standards. All activities of the board should be totally non-binding and voluntary. All promulgation of standards must come from industry clusters. The board should endorse only that proper criteria and processes have been followed. The board should oversee the process, help keep chaos out of the system, but never mandate.
- that all certificates of mastery be issued by the industry clusters in partnership with community colleges.
- that any system to "periodically revise and update skill

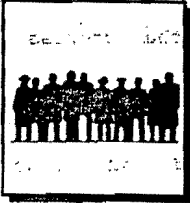
standards and assessment and certification systems" be clearly understood and industry-led.

• that a sunset provision be included and that this process require congressional reauthorization in three to five years. This is a grand experiment. If it doesn't work, let's end it and try something else.

• finally, we understand there is amended language on the civil-rights section of Title IV. I have looked at it but am not a lawyer. It seems to say that businesses cannot rely on a skill standard, assessment or certification system in any civil-rights proceeding. The reality is that small business will rely on it. This language, as well as that pertaining to "methods for validating the fairness," unnecessarily burdens Title IV, which has as its major focus the development of a voluntary national system of skill standards and certifications. It is in no one's interest to revisit the many controversial issues debated during the passage of the Civil Rights Act. The principles of that act -- no more, no less -- should be applicable to Title IV to the extent that provisions relating to civil rights issues go further, those provisions should be stricken.

Voluntary skill standards could benefit all U.S. industries and workforces. They could change the way we understand work and give U.S. workers great new opportunities. They can encourage more companies, large and small, to create "high-performance workplaces"

to increase company productivity and enhance the competitiveness of all industry. They can increase opportunity, create clear career path options and motivate students who will know they are pursuing skills through education and job training that are needed in the workforce. We at the NAM are optimistic that the Congress can respond to our concerns, as well as to our hopes, that appropriate industry-led voluntary standards -- our new common language of jobs -- can help us all move to high performance and lead the world economy in manufacturing productivity and performance. I will be pleased to answer any questions the committee may have.



Workforce Readiness: How To Meet Our Greatest Competitive Challenges

**A Report to the Members of the
National Association of Manufacturers
December 1992**

National Association of Manufacturers



*This report was prepared under a partnership agreement between
the U.S. Department of Labor and the National Association of Manufacturers.*

Preface

The National Association of Manufacturers (NAM) believes that America's economic well-being and competitive posture in the world is tied to how well it manages its human resources. For American manufacturers, remaining competitive in global markets will depend increasingly on the skills and knowledge of the nation's work force. The task is impressive. The new American workplace will look vastly different. Changing demographics—fewer entrants into the work force, an aging population, increased immigration, growing ethnic and cultural diversity—combined with the increased complexity of the workplace have made training and education of all American workers a critical necessity. Quality-driven changes with empowered teams that flatten hierarchies and provide greater autonomy for the work force, have translated into highly skilled workers who are responsible for their own productivity. This is essential to manufacturing success.

Our major trade competitors provide more and higher quality worker training and basic education than the U.S. In other countries, training and education on the job is seen as a permanent on-going need—a continuous learning environment is the norm, not the exception. On the whole, young Americans have lower academic capabilities than those in many other industrialized countries. More than ever, the U.S. work force is in direct competition to those in other industrialized nations. The less our workers are able to compete, the more our industrial competitiveness and living standard will fall.

Clearly, in the long run, we have no choice but to improve the education system. This is absolutely vital to our nation's success. Yet, people at work today will comprise a majority of the work force over most of the next two decades. Therefore, their training will have the greatest effect on current national competitiveness. Improving our schools and training displaced and hard-to-serve unemployed has been the focal point for the national debate on these issues. Only recently have policymakers turned their attention to the training and education needs of employed workers.

From the beginning, we believed this was an important place for the NAM to focus its work force readiness efforts—a place where we could have a special impact. High performance work creates challenges for employers trying to make a transition from traditional mass production to new work systems. In response to these challenges, we have made a commitment to help American manufacturers develop policies and practices that will facilitate and encourage this transition, through updating and upgrading the skills of current workers. The following report discusses the results of our current efforts to assist companies in meeting specific challenges to achieving high performance workplaces in America's manufacturing sector. We will continue to move ahead vigorously as we learn more about the changing American workplace.

A final word: One of the strongest impressions we took from the project was an intense and overwhelming pride that employers have in making fundamental changes in how work and organizations are structured. To a significant extent, workers also felt a personal pride in their willingness to work hard and to learn. If given the right training, they believed, American workers were second to none. We agree.

Jerry J. Jasinowski

Jerry Jasinowski
President

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I. Executive Summary

Creating high performance workplaces with the goal of improving the quality of products and services demands a much more highly skilled and empowered work force than we currently have. Updating and upgrading the skills of current workers combined with reorganizing work systems to achieve globally competitive levels of productivity is a fundamental challenge facing corporate America in the 1990s and beyond. To help manufacturers achieve high performance workplaces, information and technical assistance is needed to motivate senior management to action and provide them with proven strategies for getting started and sustaining progress.

A. Purpose

In light of these needs, the National Association of Manufacturers and the U.S. Department of Labor formed a public/private partnership to encourage small, medium and large manufacturers to create high performance work environments. Launched in November 1991, this joint project, "A Partnership in Work Force Readiness", set out to develop and implement an effective strategy to provide a continuing source of information and technical assistance targeted to CEOs and other senior executives.

The project conducted a series of focus groups designed to assess workplace attitudes and work force needs from CEO and worker perspectives and two pilot workshops designed to provide technical assistance responsive to those defined needs. This report describes efforts to date, key findings and next steps toward implementing the goal of the project.

B. Themes

The following cross-cutting themes emerged from the focus groups and workshops:

- CEOs are rethinking the processes around which work is organized and incorporating the principles of total quality systems. Some are just getting started, while others are well along the way. CEOs demonstrate substantial knowledge of the new total quality management methods. They view the use of teams and empowering front line workers as key elements in restructuring work toward increased efficiency and productivity.
- CEOs agree that U.S. manufacturers are changing, but perhaps at half the speed necessary to remain competitive. The "re-culturing" necessary for high performance is a very slow process, often impeded more by management, especially first-line supervisors, than by worker resistance.

- Management articulates a sense of optimism about their ability to compete and prosper in the future. Workers, however, feel powerless to control their economic futures, do not feel secure in their jobs, and are generally apprehensive about the future. They know that promises of lifetime employment are no longer possible.
- There is a disconnection between employer and worker perceptions about the benefits of creating a high performance workplace. Trust, based on honest and open communication, emerges as a key pre-condition for quality efforts to work over the long run.
- CEOs recognize the importance of training, especially occupation-specific skills training to match improving technology, but are generally cautious about general education programs. CEOs are less clear on the importance of training in higher order skills such as critical thinking and problem-solving to support restructuring of work through empowered workteams. Thus, less attention is being paid to the type of training and education needed to ensure the success of empowerment. Yet, workers see the value of all training as a way to ensure job security and company loyalty.
- CEOs believe that there must be a fundamental shift in the way in which the public views manufacturing and manufacturing jobs in order for them to attract and retain the talent they need to support quality improvements.

C. Key Elements for Success

The focus groups and workshops conducted to date demonstrate that the key elements for success in creating a high performance workplace include the following:

- Motivated, committed and sustained leadership at the top, and all levels of management including first-line supervisors, must be fostered.
- Enhanced communication geared toward achieving the mutual trust and shared goals between workers and management is needed to support empowerment. A clear, positive response to the worker's question—"what's in it for me?"—is critical.
- Increased investment in training is needed to permit changed work systems and product quality improvements to provide their ultimate benefits to the company and the worker. Training must be related to business goals, technological changes and work restructuring in order to succeed.
- Business, labor and government must work together to improve the schools, support the changes taking place in manufacturing, encourage innovation and avoid unnecessary government costs/burdens to business.

Enthusiasm and optimism about getting started or improving current efforts characterized the perceptions of CEOs at both the focus groups and workshops. However, technical assistance and information-sharing networks are needed to support such efforts. Project efforts to date suggest that creating opportunities for CEO-to-CEO exchanges of information and technical assistance and encouraging significant expansion of these exchanges nationwide provide the best vehicles for helping companies make these changes.

D. Next Steps

Keeping pace with technological changes, the reorganization of work and training and education are inextricably linked to achieving productivity, quality and flexibility in the workplace. Regaining and retaining global competitiveness in the manufacturing sector are dependent on companies successfully creating high performance work environments based on these three ingredients.

The project will continue refining its strategy for developing and implementing a continuous source of information and technical assistance to help CEOs meet these challenges. More focus groups and workshops will be held in 1993 to refine the models developed to date.

The workshops—used as a vehicle for providing CEO-to-CEO technical assistance—must continue to tackle the cross-cutting issues and strategies concerning:

- The improvement of communication between workers and management.
- The continuous development and upgrading of worker skills.
- The empowerment of front-line workers to use those enhanced skills.
- The total commitment to quality in all products and processes needed to achieve sustainable benefits.

Findings to date will be used to refine approaches to these topics. Additional focus groups will be tailored to further the research base around which technical assistance is designed for delivery through these workshops. And, finally, this technical assistance program will be institutionalized for nationwide dissemination.

II. Project Overview

American industry's commitment to improving the quality of our products and services demands a highly skilled and empowered work force. Updating and upgrading the skills of current workers is a fundamental challenge facing corporate America in the 1990s and beyond. Assisting manufacturers with this challenge spawned the development of a partnership project between the National Association of Manufacturers (NAM) and the U.S. Department of Labor (USDOL). Herein, we briefly describe the needs and provide an overview of the project. The remainder of this report documents project findings and next steps, and concludes with some final thoughts.

A. The Needs

More than half the manufacturers surveyed by the NAM in 1991 reported major worker skills deficiencies in basic math, reading and problem-solving. Twenty-five percent said they couldn't upgrade product quality because their workers lacked the needed skills to utilize new technologies. Thirty percent said they couldn't reorganize work activities because workers couldn't learn new jobs. This lack of basic skills is not only jeopardizing workers' opportunities for employment mobility and success, but also seriously damaging technological advancement, productivity and quality improvements within American companies.

Training and Changing Work Systems

Though businesses spend more than \$30 billion a year on education and training programs, most American companies have underinvested in workplace education for years compared to our key competitors around the world. According to the American Society for Training and Development, only one out of fourteen American workers has received any formal training from an employer. Furthermore, the investment is uneven with larger amounts going to professionals and managers rather than front-line workers.

Much more needs to be done. U.S. companies must expand their efforts to ensure that workers have the necessary skills and education to perform quality work, keep pace with changing technologies and enable America to remain competitive as we move into the next century.

Some of today's most competitive manufacturing companies, such as Motorola, Inc. and Xerox Corporation, have automated, high-wage and quality-conscious plants with a decentralized management system. Many smaller, less recognizable companies are taking similar dramatic steps. The days of factory workers performing only menial, repetitive tasks are in the past for these firms. Companies in the service industry, too, such as Federal Express, are challenging workers more than ever to help achieve ambitious corporate quality goals.

Workers in these high performance workplaces must be able to communicate with each other, work in teams, write a memo and run a meeting. They must know more sophisticated math to operate, reprogram and make repairs to computers and robots. The workers of tomorrow need to be empowered with higher skills, greater flexibility and risk-taking abilities to actually stop a production line, solve problems and make decisions.

Companies will have to get more involved if they want to win in the global marketplace of the 1990s and beyond. Clearly, one of the most important ways corporate America can contribute to strengthening our manufacturing and our economy's future is to dedicate themselves to strengthening the skills and education of the American work force.

B. The Project

In light of these needs, the National Association of Manufacturers and the U.S. Department of Labor formed a private/public partnership to encourage small, medium and large manufacturers to create high performance work environments. This joint project, "A Partnership in Work Force Readiness", was launched in November 1991. Its purpose is to develop and implement an effective strategy to ensure employers a continuing source of information and technical assistance to achieve worker readiness and high performance workplaces.

The project charter signed by the President of the NAM and the Secretary of Labor further established the following specific goal, objectives and approach to guide project efforts and to motivate CEO participation in project activities.

Goal

"To encourage small, medium and large manufacturers to create a high performance work environment by investing in the education and training of their human resources and empowering them to make decisions that will make the manufacturers more globally competitive."

Objectives

"To assess workplace attitudes and work force needs through a series of focus groups in geographically dispersed areas, with CEOs and employees of manufacturing firms."

"To design and deliver pilot workshops for CEOs from the manufacturing sector to showcase innovative training and educational programs, and new ways of organizing work."

Approach

This project targeted its efforts toward soliciting the views and addressing the needs of CEOs as expressed by CEOs, making its approach unique among similar projects. This approach was based on the philosophy that CEOs are the only ones within the corporate structure who can truly bring about the fundamental changes needed to enhance quality, productivity, worker readiness and work systems. Additionally, very little was available in the literature that systematically documents the views of CEOs on these important topics. Hence, focus groups and workshops were aimed at this target audience.

Findings from the focus group research drove the workshop design and content. Responsiveness to manufacturing CEOs' needs, concerns and respective starting points was of paramount importance to designing a workshop that would capture their attention, motivate them to action and provide them with the ideas and tools to begin tackling these critical issues for themselves.

III. Focus Group Research and Findings

Fourteen (14) focus groups—ten (10) with employers, two (2) with union workers, and two (2) with non-union workers—were conducted in ten (10) different locations around the country during March and April 1992. Cities selected spanned a broad range of regional perspectives and included:

<i>Atlanta, GA</i>	<i>Denver, CO</i>
<i>Austin, TX</i>	<i>Los Angeles, CA</i>
<i>Boston, MA</i>	<i>Reading, PA</i>
<i>Chicago, IL</i>	<i>Raleigh, NC</i>
<i>Cleveland, OH</i>	<i>Seattle, WA</i>

The focus group research was designed to:

- Explore core attitudes of both management and workers which helped or hindered the creation of high performance work environments.
- Assess the level of worker training and education, and restructuring of work that is currently ongoing, including the practices used by companies to implement changes.
- Identify those linkages or resources in the public and private sectors that can be used to foster training and education, worker empowerment and work reorganization.

Four key cross-cutting themes emerged from both worker and CEO focus groups—to increase productivity and remain competitive, manufacturing must:

- Improve communication between workers and management.
- Find ways to continually develop and upgrade worker skills.
- Empower front-line workers to use those enhanced skills.
- Make a total commitment to quality in all of its products and processes.

The eleven key findings from which these themes emerged are presented on the following pages.

The focus group report, "Work Force Readiness, A Manufacturing Perspective, June 1992," provides detailed findings and conclusions, and recaps all methodological details. This report is available through the NAM and the Office of Work-Based Learning, USDOL.

Objectives

Themes

Eleven Key Findings

All CEO groups articulated a sense of optimism about their ability to compete and prosper in the future. There was a clear sense that U.S. manufacturing companies had been tested over the last decade and that those who had survived by achieving a customer-driven/high quality focus and moving to an organization which involved empowered workers would remain competitive. CEOs felt that they had in most instances "turned the corner" and were very optimistic about the U.S. manufacturing sector in general. The optimism that was evidenced by most employers in all the CEO groups, however, was not found in the worker groups. In contrast, workers did not feel empowered. Although many had seniority in their companies, unless they were highly skilled and trained, they not only did not perceive themselves as secure in their jobs but also felt powerless to control their economic futures. They, unlike the CEOs, generally were very apprehensive about the future.

Work Force Stability, Not Lifetime Employment

There was a clear consensus that work force stability is critical to high levels of productivity, but no one felt that promises of lifetime employment were possible. This represents a fundamental attitude change. The fact that workers do not have a presumption of lifelong employment appears to be a critical factor in designing company policy in order to motivate, to encourage risk taking, to reward innovation, to induce loyalty and to create a corporate culture in which high performance on the factory floor continues.

School Systems Have Failed

All groups felt that the school systems are providing neither adequate basic skills nor an adequate understanding of business and the necessary work ethic. All CEO groups realized that they would have to bear the costs of remedial education and training as part of doing business in the U.S. And most recognized the need for CEO/business advocacy in the community for education reform. All groups felt that unless something radical is done, the schools will continue to fail to produce educated, employable workers.

Employers Moving Toward Work Restructuring

All executives agreed there is the need to rethink the processes around which work is organized and to incorporate the principles of total quality systems. They argued that training is an important, but not necessarily sufficient, component of this effort. Most of the executives described ongoing efforts that varied from the relatively basic to the sophisticated. The firms are being motivated to change by both increased competition and by pressure from customers along the supply chain.

All Agree on Benefits of Teams, Empowerment and Work Restructuring

There is a clear consensus among CEOs and workers that teams, empowerment and work restructuring lead to increased efficiency and productivity and strengthen a company's competitive edge.

Commitment to the Top

All groups agreed that fundamental change necessary to create a high performance workplace demands leadership from the top. Without a strong commitment from the CEOs, middle managers and first-line supervisors, no sustainable change is possible.

Eleven Key Findings (cont.)

Manufacturers Are Getting Smaller

All CEO groups agreed that U.S. manufacturers are changing, but at perhaps half the speed necessary to remain competitive. The "re-culturing" necessary for high performance is a very slow process, often impeded more by management—especially first-line supervisors—than by worker resistance.

CEOs Look to Peers

CEOs reported that customers and market competition forced them to reorganize work and offer more training, and that they were often guided by the "success stories" of other companies in planning their own programs. CEOs felt that company-to-company sharing is a very important source of technical assistance for small and medium sized companies and is provided by large companies with a commitment to quality.

Training Is the Highest Investment

Workers were anxious to receive training and saw increasing skills, including cross training, as a way to ensure job security and company loyalty. They were particularly interested when training was directly linked in their job, to career enhancement and to recognized certificates of training.

While acknowledging the importance of training, CEOs were cost-conscious about general education programs. They saw the immediate benefit of occupation-specific skills training to match improving technology—capital investment often drove training investment—and using teams as a means to improve skill levels. Many employers felt that, while reorganization of the workplace brought increased productivity, the productivity gains soon "hit the wall." Only an increased investment in training would permit them to break this barrier, and continue to deliver the advantages the workplace reorganization would bring to the company.

Communication/People Skills Are Critical

Both CEOs and workers saw better communication as essential to achieving the mutual trust necessary for high-performance work environments. Empowerment is based on knowledge recognition and shared goals—and a clear positive response to the question of "what's in it for me?" This is particularly true when lifelong company attachment is not possible and, therefore, insecurity becomes a permanent phenomenon among workers. While CEOs felt they were adequately communicating the ideas behind empowerment, most workers felt they were not. Many workers said that despite their CEO's attempts at regular communication, the CEO's communication abilities could be improved.

Strengthening Manufacturing Should Be National Policy

All groups felt that more must be done to support U.S. manufacturing. Business, labor and government should work together to improve the schools, support the changes taking place in manufacturing, encourage innovation and avoid unnecessary government costs/burdens to business. Workers were less hostile to the idea of government participation in the schools and in providing funding sources for worker education and training programs, while the CEOs felt that the federal government's role should be limited.

IV. Executive Forums (Workshops)

Two pilot workshops were held: one in Atlanta, GA at the Ritz-Carlton hotel during July 1992; and one in Chicago, IL at Motorola University, Schaumburg, during September 1992. The principal objectives for these workshops were:

- To motivate participants to invest in human resources development and organization of work needs, in an effort to create a high performance work environment that contributes to becoming more globally competitive.
- To demonstrate, by the example of CEOs who had mounted successful efforts, that the challenge can be met.
- To provide participants with innovative strategies and tools that can help them make it happen.

The four cross-cutting themes from the focus group research formed the central focus for each workshop design. The model workshop design (see Page 12) combines the key segments of both pilots which will form the basis for future workshops. Most importantly, the success of the pilot workshops hinged on the following three elements.

A. Plenary Sessions Featuring CEO Success Stories

The companies whose success stories were presented in the plenary sessions, with follow-up discussions during the breakout sessions, included:

Motorola, Inc., Schaumburg, IL (Atlanta & Chicago)

The Dana Victor Corp., Chicago, IL (Chicago)

The Plumley Company, Paris, TN (Atlanta)

The Will-Burt Company, Orville, OH (Atlanta & Chicago)

Collins & Aikman, Dalton, GA (Atlanta & Chicago)

"Great insight into real world problems and successes."

"Our attention was keenly focused on human resources development as our primary opportunity for investment in our business. The presenters were authentic, knowledgeable and real-world."

"Opened my eyes to obstacles I had not considered."

In each location, one local CEO with a corporate success story was invited to speak, with the other three being drawn from selected known high performance workplace companies based elsewhere. A balance was sought in terms of featuring small, medium and large companies.

These inspiring hands-on stories, from companies that faced challenges and succeeded, helped participants to see and feel the importance of quality, productivity and worker readiness to their competitiveness in the global marketplace. Furthermore, this peer-to-peer exchange—CEOs talking to CEOs—provided believable answers to real questions and obstacles that made sense to the participants.

The presenters had been there, had struggled and had proof positive of the rewarding results for their respective companies. Their experiences highlighted the fact that each company's road will be unique, trial and error will be the norm, and time, patience and perseverance will be needed to succeed.

CEO-to-CEO "training/informing" through presentation of corporate success stories and breakout group follow-up discussions worked well to motivate others to commit to learning more about why it is critical to become a high performance workplace and to develop commitment to act, and to figure out how to do it. Follow-up, however, will be needed to determine long-term impact.

B. Breakout Sessions Featuring Interactive Discussions and Activities

The CEO success story presenters facilitated breakout sessions from which the participants could choose two to attend. These included **Fostering Worker Empowerment, Making the Workplace a Learning Enterprise, Meeting the Quality Challenge** and **Enhancing Communication**. While the plenary sessions provided a broad view of how they each achieved quality, productivity and worker readiness, each presenter focused their breakout session on the specific tools and strategies used to achieve goals concerned with that particular topic.

With smaller groups, these sessions afforded the opportunity for participants to engage in experiential activities, lively interactive discussions with facilitators and fellow participants and targeted questions and answers. Herein, CEO participants shared their specific problems, learned about specific strategies and identified affordable resources to assist them in their respective efforts.

C. Plenary Session with an Empowered Work Team

The session on the empowered work team, "Heatwave" from Motorola, Inc., presented by the workers, was a significant "eye opener" for CEOs in terms of the return on investment when workers are empowered. This presentation demonstrated the real monetary and human benefits of restructuring work using empowered work teams.

The discussion of how they became a team, how they work together as a team and how they have achieved productivity improvements as a team, helped participants understand exactly how work is done in a team management environment. Further, it showed CEOs that there is really nothing to fear in giving up traditional styles of management, just much to gain. One of the most lively and intense question and answer segments of both pilot workshops ensued following their presentation.

"The presentations were excellent. Different companies at different levels who took different approaches."

"Excellent presentation. Got several ideas on how to change my plant and develop people."

"Although I am fearful, I realize the importance of empowerment. I will act as a result."

PLENARY SESSIONS	What the Research Tells Us ■ Why change?—U.S. productivity compared to other nations. ■ Linkage between productivity, profits and high performance workplaces. ■ How spending only \$385 per worker annually for training and education hurts us competitively. Creating an Empowered Work Place—A National Perspective ■ How work will get done and be managed in the 21st Century. ■ How can leadership create a culture open to change? ■ Changing the corporate culture through vision and values. Four Corporate Success Stories ■ New work systems and increased productivity, quality and profits. ■ People, our ultimate resource and the need for continuous learning. ■ Building a strong sense of ownership among workers for quality efforts to succeed. An Empowered Work Team ■ What is an empowered work team? What can it do for me? ■ Taking "ownership" of the day-to-day operations. ■ The human and monetary benefits for workers and employers.
BREAKOUT SESSIONS	Fostering Worker Empowerment ■ What's in it for your business?—decreased re-work, turnover and sick days; improved morale; greater work force flexibility; increased productivity, sales, profits and market share. ■ Examining the disconnect between CEOs' and workers' perceptions. ■ What's in it for workers? — enhanced job satisfaction, job security and the prospect of greater responsibility and compensation. Making the Workplace a Learning Enterprise ■ The "make" vs. "buy" dilemma in human resources. ■ Training for what?—the importance of front-end analyses. ■ Integrating training into your organizational fabric. Meeting the Quality Challenge ■ CEOs as change agents; managers and front-line workers as change drivers. ■ Quality goes beyond boundaries — creating both internal and external culture change. ■ "Hitting the wall" — when quality and productivity gains stall. Enhancing Communication ■ Communication is listening as well as talking — "My door is always open" is not enough. ■ In communication, actions speak louder than words. ■ Communication is uncomfortable — share most the information you want to share least.
CLOSING PLENARY	Next Steps ■ Action planning ■ Resources ■ Building CEO networks

Several key lessons learned emerged from project activities to date. These will guide the project into the future as we conduct more focus groups and workshops. First, we present a series of lessons learned that concern key considerations for bringing workers into the corporate change strategy. Without this, changing to new work systems will surely fail. Secondly, we present our learnings about the project itself.

A. Key Considerations for Helping Companies Change

Change, particularly rapid and recurring change in a crisis driven atmosphere, is always very difficult to manage to accomplish any organizations' goals. We found this to be borne out in our focus group discussions with workers and affirmed in our focus groups and workshops with employers. When peoples' workplaces, work routine, job security, income, inter-personal relations, self-esteem and much more are not only subject to, but often the object of such change—as in the case of moving toward higher performing manufacturing organizations—the difficulty in achieving the objectives of change are compounded.

In general, workers in our four focus groups recognized that rapid change is happening and will affect their lives whether they like it or not. They recognize that competition is tougher than ever for their companies. They generally realize their personal economic security depends on their skills, ability to adapt to changing workplace demands and the fortune of their current employer. They do not believe their employers are doing all they need to do to succeed in this environment and to harness the positive energy of their work force in that endeavor. There is definitely a disconnect between worker and employer perceptions.

To increase the contribution of workers to corporate change objectives, and to reduce the resistance to it, the following observations are important for management to recognize and incorporate as they develop a strategy for becoming a high performance work organization. The project must help employers to consider these very carefully and must provide strategies and tools to do so.

Workers do not see their current employer as a "lifetime" employer, as they believe their parents did. Volatility is a major factor in their work life and multiple employers is what most expect. Therefore, any strategy designed to improve performance that requires workers to undergo change, will produce more insecurity and require a much greater effort to overcome that impediment. Arguments based on long-term phenomena will be much less compelling than they may have been to these workers' parents. Arguments, on the other hand, that relate to new marketable skill acquisition for example, may be much more compelling than in the past.

Recognizing Needed Changes

Implementing Change Strategies

Increasing Insecurity

Buying into Change

Given the above, there is more of a direct demand by workers to be clearly shown by employers: "What is in it for me?" If we are not in a nearly permanent relationship, change is much more threatening to "me" and the need to show "me" what I will be getting out of it is critical to "my" buying into the change agenda. Employers need direct, simple, believable and compelling answers. They need to deal with issues like job security, seniority, reward for effort, gain sharing and wage levels.

Unless the "answers" are believable and sufficient to motivate, real change in the workplace will be hard to achieve. Turnover among the best workers, absenteeism, productivity decline and greater rigidity, for example, could all result from paying too little attention to the answer given to workers who ask: "What is in it for me?"

Fostering Trust

Trust between workers and employers emerges as a key pre-condition to a high performance workplace. That trust requires a level of direct and honest communication that most workers found seriously lacking in their companies. And, most of the employer participants shared that view—though many are working to improve it.

Mutual respect, based on open communication about everything—from company conditions and production plans to management encouragement and reward for worker initiative was considered important. Workers felt employers have a long way to go in making the company spirit a "We" and not an "Us" versus "Them" situation. But, the broad-based desire for such a relationship coupled with the common sense and pride of the workers gives room for optimism that we can move in this direction.

Differing Perceptions

Many workers find a disconnection between the "quality" rhetoric and even cheerleading of top management and the real message as translated by first-line supervisors on the factory floor. Often a sincere CEO's message is stymied by a frightened "foreman" or "production supervisor." Training and orienting "foremen" must be an early mission in any corporate plan to become a high performance workplace.

Conflicting Directions

In this organizational environment, worker attitudes are pushed in two conflicting directions:

- First, workers are more apt to seek out opportunities to enhance their skills and broaden their knowledge to improve their value to their current employer and become more marketable if they lose their job.
- Second, workers are more apt to become "insecure" and often discourage or interfere with peer or subordinate training that could in any conceivable way make such trainees competitors.

In summary, the focus groups and workshops suggest the following regarding training:

- First, training will only be worth the time and effort if workers see it is of value to them, either in their current job or with their current employer, or if they see it as having proximate value to a potential employer if they were soon in the job market.
- Second, anything that management can do to make the value the company attaches to training clearer to workers will increase the "take-up rate" in training (e.g., on-site, on work time, linked to pay increases) and the same holds for making it something that clearly gives them greater external marketability (e.g., a portable certificate or skill in the area of high local demand). The reverse is also true—off-site, off-work time, voluntary, non-pay linked, general education will often be seen to have little value.
- Third, training for literacy or remediation is difficult because of the stigma attached to it, but if re-designated and re-designed, it can be made more attractive. This makes "remediation," which workers say is much more necessary than the data indicates, even more difficult to deliver.

B. Key Considerations for Project Continuation

As the project unfolded, the use of NAM's network of state and employer associations and councils to stimulate CEO interest and involvement in the focus groups and workshops helped to broaden the base of information on best practices of high performance work environments. As more CEOs were contacted about the project, more was learned about high performance workplace initiatives among manufacturers, and more interest in the project was generated. The ripple effect was in full force.

This expanding network of manufacturers made aware of and expressing interest in the project led to an expansion of the cadre of corporations with success stories participating in the project. The project not only served to plant seeds, but also to help expand a network of those who will spur each other on, thereby creating deeper penetration and a multiplier effect nationwide. Future project efforts will need to focus on continuing to expand these networks.

CEOs demonstrated considerable enthusiasm and openness in discussing the real problems they face in maintaining or regaining their competitiveness in the marketplace. Additionally, CEOs demonstrated substantial knowledge of new management methods including total quality management principles and practices. This was true even of those who had not yet undertaken any major changes to restructure work or implement continuous learning programs. Project efforts will continue to tap this foundation.

Valuing Training

Expanding Networks

Enhancing Technical Assistance

The project demonstrated that there is more activity in the manufacturing sector than the project team originally thought, particularly with regard to the reorganization of work toward high performance work environments. Enthusiasm and optimism about getting started or improving current efforts characterized the response of CEOs; however, technical assistance and networks to help them with the "how to's" for accomplishing the changes were noted needs. The project also demonstrated that less attention is being paid to the training and education needed to support reorganization. Future workshops will need to focus more on these needs.

Finally, the technical assistance offered via the workshops must further help CEOs with their change strategies. Development of additional tools to help CEOs overcome potential obstacles concerning increasing insecurity, buying into change, fostering trust, differing perceptions, conflicting directions and valuing training will be explored.

VI. Next Steps

The project team now plans to undertake additional focus groups and workshops to further the goals of the partnership. Lessons learned will drive all future work.

Specifically, the project will conduct four more focus groups of employers and workers from the same corporation to delve more deeply into empowerment, communication and reorganization of work issues in terms of the following:

- Specific practices that work and don't work in terms of team empowerment and development
- Persuasive strategies for overcoming obstacles to change
- Incentives for workers
- What training and education is reaching the front-line worker
- Regional differences
- Perception differences in communication (what employers think is being communicated as contrasted with what workers perceive)

Focus groups will be held in Portland, OR and St. Louis, MO in February and March 1993.

The project will also hold six more workshops based on lessons learned from the two pilots and what will be learned from the additional focus groups. These workshops will be held from April to October 1993 in: Cleveland, OH; Austin, TX; Los Angeles, CA; Rochester, NY; Hartford, CT; and Louisville, KY.

Lastly, the project plans to conduct a follow-up workshop in November 1993 bringing back CEOs from various regions of the country that participated to:

- Determine what affect the project had on helping CEOs in their training and reorganization of work efforts.
- Further develop the network of CEOs working on these quality improvement issues.
- Gain additional insights into how to motivate CEOs toward action and how to provide them with the technical assistance needed.

Based on the results of these additional focus groups and workshops, the project will work towards the institutionalization of this program to provide CEO's with a continuing source of information and technical assistance. Through these efforts, the project will fine-tune the workshop design for nationwide dissemination tailored to regional differences. The project will continue to target CEO/senior executive participation, to secure local success stories and to further expand the networks of CEO-to-CEO transfer of best practices in creating a high performance workplace. The findings to date strongly suggest that the need exists.

More Focus Groups

More Workshops

Follow-up

Institutionalization

Conclusion

For an increasing number of manufacturers, education and training is becoming an integral part of a competitive strategy—it's a key to continued growth. Well-trained, motivated workers who can produce high quality goods and services at low cost help enhance industrial productivity and competitiveness and keep America's living standards high. In today's international economy, workers must be prepared to change the way they do their jobs and employers must change the way they organize their work. If not, the benefits from a rapidly evolving technology will be lost. In the best, healthiest, most competitive firms, training is linked directly to productivity, quality and flexibility.

The employer's investment could be wasted if only training is provided without a clear business decision to reorganize work. Training in a vacuum is counterproductive—it must be related to business goals and use technology that can improve the quality of on-the-job training. It is our commitment to help our member companies and others—particularly small and medium-sized companies—adopt useful models for educating and training their current work force—and changing the way they work. Our companies that have adopted various forms of this model have found their workers can achieve levels of productivity and quality equal to and better than the rest of the industrialized world.

Having been "to the brink", CEOs and senior managers feel that the goal is not just to remain competitive but to regain America's pre-eminence in certain sectors. This could be accomplished within a global context (i.e., with plants off-shore, if necessary), but their message is clear: U.S. manufacturing can and must compete. The critical question remains: Can companies change fast enough?

Although they are far from Pollyanish, the CEOs see a real and immediate need to educate the public on the "good news in manufacturing." Much as the workshop success stories proved so catalytic, NAM's manufacturing campaign can create that same sense of hope and excitement among target audiences, including policy-makers and elected officials. The CEO's believe that there must be a fundamental shift in how the public views manufacturing and manufacturing jobs in order for them to be able to attract and retain the next generation of talented and motivated business leaders, managers and workers.

NAM and the USDOL can both do a great deal to heighten public awareness and to spotlight positive stories about manufacturing—from new ventures to turn-arounds. While the workshops and networks that they create will encourage the sharing of strategies company-to-company, a national awareness campaign undertaken by the NAM, will benefit all manufacturing—and, in turn, the national economy.

The Work Force Readiness Project Team

Chairman KILDEE. Thank you, Mr. Baroody. Dr. Sackett.

Mr. SACKETT. I am Paul Sackett, an industrial and organizational psychologist representing the American Psychological Association [APA]. I am currently President of APA's Division 14, the Society for Industrial and Organizational Psychology. I appreciate the opportunity to testify before the subcommittee today.

APA is a scientific and professional organization representing over 114,000 psychologists who work as researchers, educators, and practitioners in a variety of settings, including education and industry.

Psychologists have expertise in the identification of job-related skills, the development of standards, and the construction and use of assessment instruments like those referenced in this legislation.

APA offers strong support for this proposed legislation which seeks to establish national skills standards. While supporting the legislation, we have three issues we would like to address. First, we are concerned about the proposed makeup of the national skills standard board. We believe that it is critical that the board include assessment and measurement specialists. Second, we believe that skill standards and assessments should be evaluated in accordance with the document, the Standards for Educational and Psychological Tests, issued by APA and allied organizations.

Third, the bill offers effectiveness, reliability, validity and fairness as criteria the skill assessment should meet. We have concerns about ambiguity in the meaning of the terms "fairness" and "effectiveness." I would like to elaborate on each of these three points.

Our first concern is the makeup of the National Skill Standards Board. Title IV calls for the proposed board to include involvement of business, labor, educational and civil rights communities. However, the board charges to stimulate the development and adoption of a voluntary national system of skill standards and certification calls for expertise in assessment in job analysis and skill standards and development. APA believes it is imperative that experts in psychology and psychometrics be included on the board if it is expected to develop, review, and evaluate skill standards and assessment systems.

APA is deeply concerned that the composition of the board as presently described in this legislation does not recognize the importance of scientific and technical expertise in these areas. Title II of the Educate America Act does recognize the importance of such expertise in creating the National Education Standards and Improvement Council, ensuring that experts in measurement acknowledged assessment be appointed. We strongly believe that the skill standards and assessments require similar levels of technical expertise as that already recognized for the educational components of the legislation.

Our second point is to call attention to professional standards related to assessment. APA, the American Educational Research Association, and the National Council on Measurement in Education have issued a document titled Standards for Educational and Psychological Testing which address the development, validation and use of all forms of tests and assessments in education and employment settings.

These standards have been referenced in Federal laws and Supreme Court decisions that concern assessment and are essential professional guidelines. We urge that skills assessments as well as educational assessments to be developed under this initiative be evaluated along the technical properties outlined in these standards.

Our third concern is with section 403(b)(2)(C) which states that the development of assessment systems should, quote, include methods for verifying the effectiveness and validity, reliability, and fairness of the assessment and certification systems.

We recommend striking the word "fairness" as there are many opinions as to the meaning of the term and as to the methods by which it can be evaluated. To some, the term "fairness" refers to what we would call "procedural fairness" and refers to issues like equity in access to the preparation for the assessment, equity in the conditions under which the assessments are conducted, and avoidance of culturally-loaded language in the instructions for and content of the assessment instruments.

To others, the term "fairness" refers to various forms of what we would call "outcome fairness," including mandating equal certification rates for all subgroups. We caution against mandating equality of outcomes in the form of comparable certification rates from majority and minority groups, and in particular, against any suggestion that such outcomes are to be achieved through score adjustment by subgroup. The Civil Rights Act of 1991 prohibits employers from using such score adjustments and it does not seem prudent to propose procedures that are at odds with existing civil rights legislation.

In addition, we believe that a most crucial issue is to insure that the assessment methods used provide an accurate picture of job-related individual achievement. If we acknowledge our inequities in opportunities in our society, we must acknowledge that these will be reflected in the outcomes of our assessments. A reliable and valid system of assessment offers a mechanism for identifying deficiencies and monitoring improvements in levels of achievement over time.

We also recommend either striking the term "effectiveness" or clearly defining it. Professional and technical standards clearly define reliability and validity. However, effectiveness is simply a term largely open for interpretation in this context of certification assessment.

In closing, APA encourages the development of voluntary national skill standards. We support the development and use of assessments that are psychometrically sound and represent the skills required for high performance workplaces today and in the future. We stand ready to offer our technical expertise for this effort. We would be pleased to answer any questions the committee may have. Thank you.

Chairman KILDEE. Thank you very much.

[The prepared statement of Mr. Sackett follows:]

Paul R. Sackett, Ph.D.

I am Paul Sackett, Ph.D., an industrial and organizational psychologist representing the American Psychological Association (APA). I am currently president of APA's Division 14, the Society for Industrial and Organizational Psychology, Inc. (SIOP). I would like to thank Chairman Kildee for this opportunity to testify before this Subcommittee today.

APA is a scientific and professional organization representing over 114,000 psychologists who work as researchers, educators, and practitioners in a variety of settings including education and industry. Psychologists in several of APA's Divisions have direct expertise in the analysis of jobs, the identification of job-related skills, the development of standards, the design of educational programs, and the construction and use of assessment instruments similar to the certification assessments referenced in this legislation.

APA offers strong support for this proposed legislation which seeks to establish national skill standards, but more importantly recognizes the need to develop and maintain the quality of the nation's human capital in order to foster a high performance workforce and our nation's global competitiveness. As a nation we have long ago recognized the importance of technological advances and economic incentives for businesses to remain competitive. However, we have all too often been willing to overlook the important contributions of the individual worker to organizational and national goals.

Title IV of Goals 2000: The Educate America Act of 1993 is truly ambitious in seeking to reinvigorate America's economic competitiveness and produce a high

performance workforce. Such an effort to establish high national skill standards across broad occupational clusters can move our nation toward one common typology or classification system for describing occupational skills and requirements. However, to be truly effective in some of the proposed applications, high standards must reflect the actual requirements of today's occupations as well as those of tomorrow. Broad industry-based skill standards alone may not provide the level of precision required to adequately predict or describe job performance in today's changing work environments. We must recognize that skill standards and resulting assessments cannot completely replace specialized and sophisticated selection, training, and evaluation systems required for specific occupations, work environments and organizations. The development of a certification system must not prevent employers from using company-specific selection systems, or from setting high skill level requirements as needed.

The National Skill Standards Board

Title IV calls for the proposed National Skill Standards Board to include involvement of business, labor, educational and civil rights communities.

However, the Board's charges to stimulate the development and adoption of a voluntary national system of skill standards and certification calls for expertise in assessment, job analysis, skill standards development and organizational behavior. APA believes that it is imperative that experts in industrial and organizational psychology and psychometrics be included on the Board if it is expected to develop,

review, and evaluate skill standards and assessment systems. Pitfalls that were encountered with some education reform initiatives by not enlisting experts from the beginning could be avoided in this important endeavor.

If skill standards are the foundation of a high performance workforce, then job analysis is the cornerstone on which this initiative, and similar efforts must rest. The psychological technology of job analysis is essential for both identifying the types and levels of knowledge, skills, and abilities required for job performance, and grouping jobs in terms of these similar requirements. Since such data will eventually be used for several high stakes purposes such as developing skill standards, assessment systems, and certificates of mastery, we strongly urge the Committee to ensure considerable resources and expertise are devoted to these early tasks.

Numerous other complex and technical applications proposed in this legislation such as the design and evaluation of valid and reliable assessment systems, the specification of appropriate levels of skill mastery, and the evaluation of industry-based programs for training and assessment require applications grounded in behavioral science research. Experts in industrial-organizational psychology and psychometrics can provide the needed technical expertise that will be crucial at the front end of these initiatives.

Measurement specialists are particularly important to this system. As Linda Morra from the General Accounting Office (GAO) testified to the Senate Labor and Human Resources Committee last Friday, these skill standards and

certification programs require a tremendous maintenance effort to maintain the state-of-the-art. This means ongoing revision of skill standards and often an annual revision of certification assessments.

APA is deeply concerned that the composition of the National Skills Board, as presently described in this legislation, does not recognize the importance of scientific and technical expertise in these areas. Title II of the Educate America Act recognizes the importance of such expertise in creating the National Education Standards and Improvement Council (NESIC), ensuring that experts in measurement and assessment be appointed. We strongly believe that skill standards and assessments require similar levels of technical expertise as that already recognized for the educational components of this legislation.

Assessment

The American Psychological Association (APA), American Educational Research Association (AERA), and National Council on Measurement in Education (NCME) have issued Standards for Educational and Psychological Testing which address the development, validation, and use of all forms of tests and assessments in education and employment settings. These standards have been referenced in federal laws and Supreme Court decisions that concern assessment and are essential professional guidelines that address the technical properties of assessments, including validity and reliability. We urge that skills assessments, as well as educational assessments, to be developed under this initiative, be

evaluated along technical properties outlined in these standards. APA's Division 14's Principles for the Validation and Use of Personnel Selection Procedures and Uniform Guidelines for Employment Selection Procedures (Equal Employment Opportunity Commission) should also be considered relevant to the development and use of skills assessments.

To hold such important national assessments to any lesser standards would undermine the importance of validity and reliability for such assessments.

Although there are claims that these standards apply only to objective paper and pencil tests it should be noted that the authors of the Standards state they apply to tests, performance tasks (e.g., performance assessments), questionnaires, and structured behavioral samples, and that "they may also be usefully applied in varying degrees to the entire range of assessment techniques (p. 4)." In concurring with the judgement of the Supreme Court in Watson v. Fort Worth Bank and Trust (1988), Justices Blackmun, Brennan, and Marshall cited an amicus curiae brief submitted by APA adding "a variety of methods are available for establishing the link between these (subjective) selection processes and job performance, just as they are for objective-selection devices (p.8)."

A wide variety of valid and useful assessment instruments is currently used in educational and employment settings; among these are performance assessments, cognitive ability tests, behavioral observations, etc. The choice of specific assessment instruments should be driven by the intended purpose of the assessment and the requirement that the instruments have acceptable levels of

validity and reliability. We do not believe that specific types of assessments should be mandated in advance of such information, as stated in Section 403 (b) (2) (B). Instead, we recommend an approach that would urge that developers of proposed systems of assessment and certification explore the use of a variety of assessment and evaluation techniques.

Fairness

We understand that several versions of amendments to Title IV have been circulating in the past week or so and would like to note that our specific comments address a May 13 mark-up. In the following comments we also address the issue of fairness in a general sense.

Referring to section 403 (b) (2) (C):

includes methods for verifying the effectiveness and validity, reliability, and fairness of the assessment and certification system for its intended purposes and methods for certifying that the assessment and certification system is consistent with relevant, nationally recognized professional and technical standards for assessment and certification.

We recommend striking the word "fairness," as there are many opinions as to the meaning of the term and as to the methods by which it can be evaluated. To some the term refers to what we will call "procedural fairness," and refers to issues like equity in access to preparation for the assessment, equity in the conditions under

which the assessments are conducted, and avoidance of culturally loaded language in the instructions for and content of the assessment instruments. To others the term "fairness" refers to various forms of what we would call "outcome fairness," which includes mandating equal certification rates for all subgroups.

The 1978 Uniform Guidelines for Employment Selection Procedures, for example, acknowledge that fairness is "a developing concept," and endorse one particular psychometric model for evaluating fairness. This model, which compares group differences on a selection device with group differences in job performance, places extensive technical demands on employers, and these guidelines acknowledge that such fairness analyses will not be technically feasible in many settings. Recognizing that fairness is a matter of social values, and not a technical term, the APA/AERA/NCME Standards for Educational and Psychological Testing do not use the term "fairness."

We caution against mandating equality of outcomes in the form of comparable certification rates for all groups, and in particular against any suggestion that such outcomes are to be achieved through score adjustment by subgroup. The Civil Rights Act of 1991 prohibits employers from using such score adjustments, and it does not seem prudent to propose procedures that are at odds with existing civil rights legislation. In addition, we believe that a most crucial issue is to insure that the assessment methods used provide an accurate picture of job-related individual achievement. If we acknowledge that there are inequities in opportunity in our society, we must acknowledge that these will be reflected in the

outcomes of our assessments. A reliable and valid system of assessments offers a mechanism for identifying deficiencies and for monitoring improvement in levels of achievement over time.

We also recommend either striking the term 'effectiveness' or clearly defining it. Our technical and professional standards and principles clearly define reliability and validity and appropriate purposes and uses for assessment. However, effectiveness is simply a term that is largely open for interpretation in this context of certification assessment.

In closing, APA encourages the development of voluntary national skill standards. We support the development and use of assessments that are psychometrically sound and represent the skills required for high-performance workplaces today and in the future. We stand ready to offer our technical expertise for this effort. I will be pleased to answer any questions the committee may have.

Chairman KILDEE. Thank all of you for your testimony. We will begin some questions.

Now, the national skill standards board proposed by Secretary Reich, Title IV of this bill, would devise certain occupational standards. The question I would like to have answered is how specific and how generic would those be? What type of skills would be developed for a particular industry? For example, we have the health care industry, pharmaceuticals, textiles, auto, electronics, would they limit themselves to setting certain skills for certain industry clusters? How specific would they get and would they address the idea of some certain generic work skills?

Mr. TUCKER. Mr. Chairman, I would propose that you think about a skill standards system for the United States consisting of three tiers. The first tier would essentially represent that level and kind of skill which everybody in the society is meant to achieve in common before they go their separate ways. In effect, that tier of standard setting would be the focus of the national council established in Title II of this Act.

The second tier would be the tier that would be set by this panel. And I would propose—

Chairman KILDEE. The first would be more generic.

Mr. TUCKER. It would not only be generic but it would, in essence, serve as the foundation, the common foundation that everybody in the society had before they, as I say, went their separate ways.

Chairman KILDEE. Okay. I want to follow this because in your testimony you constantly referred to this as a component of a system.

Mr. TUCKER. Correct. That is right. Now, in the second tier, I would suggest that would be set by this panel that we are here discussing. And that tier essentially would be a set of skill standards for people who had met the first set, were not going at least immediately to a 4-year college for a baccalaureate degree and wished to enter the workforce for most of the jobs in the economy.

I would propose that this tier consist of not more than 20 standards, not more than 20 standards.

Obviously if that were the case, they would have to be very broad, that is not individual—certainly not individual jobs or occupations, probably not individual industries, but very broad industry groups. If you were going to encompass virtually the whole economy with only 20 standards, they would have to be broad. They would be of the kind that Sheryl was just talking about earlier.

Now, you recall that she talked about three standards for electronics but she also said that those standards were not particular to electronics, if you remember.

So that would require, in essence, that electronics set a standard for itself but that it be in very close communication with the other 19 standard setting bodies. Because they would have to be in common. I will get back to that in a moment.

Now, what that would mean obviously if there are only 20 standards is they would be very broad encompassing many jobs. It is clear that for many of the tasks in our society below the baccalaureate level you need more specialized training than that.

I don't think that next level of training ought to be the proper purview of the national skill standards board or any federally established body. Any occupational group, industry group, or even a single firm may wish to build a standard on top of these broad standards that I just described: For operators of particular kinds of laser measurement devices, for example, or very specialized welding or you can imagine many others.

The advantage of having a system like this is that you can get very broad mobility for workers in the society because the standards are broad. They aren't tied down to a particular defined occupation or job when that job may not exist 6 months from now, 18 months from now, or 24 months from now. That is why the AEA built the kind of standards that it is building.

On the other hand, what it does is provide a target to shoot at for individuals that will serve the economy and themselves well and it provides a very high foundation on which individual firms, industries, and associations can then build specialized skill sets if they want to and need to. So we get the best of specialization and the best of breadth and mobility.

Now, if you had a system like that and you think about these as outcome standards, right, define what you are shooting at, not how you get there. Then you can have the same standards for everybody, whether you are a dislocated worker, whether you are in your Federal job training program, whether you are a kid just starting out in a technical program or an apprenticeship program. They are the same standards.

What the system is telling you is if you want a job in the electronics industry to all the employers in the electronics industry all over the country that subscribe to this standard, here is what you have to shoot at. It is not just saying that to a young kid or a dislocated worker, but it is also saying that to the community college or to the high school. If you want to be in the business of helping people to develop skills to get into this industry, here is the standard you have to shoot at.

So the standard has got nothing to do with how old you are and the standard has got nothing to do with which institution is preparing you for it. It is an outcome standard. And it is the same for everybody.

Chairman KILDEE. Then you would have one level in this system—I know you and Dr. Reich both keep stressing the word "system," singular.

Mr. TUCKER. One.

Chairman KILDEE. And various parts—various elements are components, a little bit redundant there, but are components of that. On one level you would have some generic skills; another level you would have some industrial skills. When you say 20, you mean 20 industries or 20 sets of skills?

Ms. FIELDS-TYLER. I would like to address that point a little bit more in depth than what I think Marc was hinting at.

I don't know necessarily that the number is 20, but I think that there will be a number probably greater than 10 and less than 50 that we can look at as the aggregate sort of the fundamental roles that are the next step beyond high school or—it is beyond entry-level but it is really work ready in some very general but yet spe-

sific ways for the world to work. For instance, in the occupations we described, manufacturing specialists could cut across lots of different industries. That would be one example, for instance, of one of 20 or one of 30 that could cut across lots of different roles, a lot of different industries.

Another may be something like administration and information services which would be preparing someone to go in an administrative function in a company. Perhaps my industry, for instance, would want to build on that general vocational qualification, if you will; the next thing you would get after you got your basic qualification that would make you a little more specialized but not terribly specialized in terms of industry specific.

We might want to build on that, what it would take to become a manager, for instance. Because you would be building on the kind of skills that you need as a good administrator if you were going to move up and become a project manager. That might mean additional education. It might mean just general workplace acquisition of skills. It could mean all kinds of different things.

I think, again, the point is that if we can get to the point where we, again, envision this as a very broad national system where we have various occupations that are bridging the gap between what someone does when they leave high school, if you will, and what they really need to do when they are fully occupationally trained, or if you want to think of it in terms of dislocated workers, what you do when you leave the workforce from one job that has gone away versus what you need to be prepared for going to another occupation. That is what these general vocational qualifications or general vocational credentials might serve as.

I think there is a lot of work that needs to be done to imagine how this might play out, but I think it is very important that the system be designed with this kind of vision in mind because it is really at this point that the whole system starts to work together.

Mr. TUCKER. I was, in my prepared testimony, and in my opening remarks pleading with you not to set a rigid structure in place in the subdivisions of the work of this board, and to delegate all the standard setting functions to those subdivisions, and it is precisely these kinds of considerations that lead me in that direction.

Sheryl's group started out with an industry definition of the standard, and they decided on a set of very broad generic roles which cut across, not only across their own industry but many others. I think there is an enormous job to be done, to think about what the right categories are, and then to make sure that whatever they are, they fit together. That is crucial.

Chairman KILDEE. Speaking of fitting together, and I will finish right here, you have the generic skills and you have the industry skills. How will those plug into the traditional apprenticeship programs that lead a person to some of the skills that have been licensed and where you had a long-standing apprenticeship program, electrician. How would they tie into that at some point?

Mr. TUCKER. There is a lot of concern, as I know you know, among those organizations that are operating registered apprenticeship programs as to how the administration's proposal is going to affect them.

One possibility that has been discussed of course is that by law it won't, that is to say whatever the law is that you write on apprenticeship programs, youth apprenticeship programs contains a provision that says that will not in any way affect registered apprenticeship programs. That is one possible outcome that they just stay the way they are irrespective of the rest of the way the system develops.

There are obviously other alternatives. I don't have a particular view on that. I think that what is crucial is that the country as a whole develop a system by which kids, first of all, have a high level of academic attainment by the age of 16 or thereabouts and then a substantial proportion of them then go into programs of combined academics and structured on-the-job training that terminates in meeting one of the standards that this board is going to set.

I think of that as an apprenticeship program. You can call it whatever you like but it is the root that most advanced developed countries are now using to get people up to a high level of skill qualification.

Chairman KILDEE. Just a quick summary then. Title II and Title IV in this bill could be passed to the traditional apprenticeship programs that already exist in this country.

Mr. TUCKER. They may and that is not necessarily the case. It is a matter of what you choose. I don't think the answer to that would seriously affect the design of the system as a whole.

Chairman KILDEE. They could be passed?

Mr. TUCKER. Correct.

Chairman KILDEE. Mr. Goodling?

Mr. GOODLING. No questions.

Chairman KILDEE. Mr. Gunderson.

Mr. GUNDERSON. Thank you, Mr. Chairman, and thank you all for your testimony. I am tempted to put you all into a room and lock the door and say come back to us with agreed-upon language and then we will solve this problem. Frankly, if you think you could do it, I really would like to encourage the six of you to see if you could put that together.

This board befuddles me. It befuddles me because as I listen to you two answer Mr. Kildee's questions I am really concerned how we get a board that is going to serve that kind of mission when you are going to get presidential appointments and you are going to get Bob Dole appointments and George Mitchell appointments and Tom Foley appointments and Bob Michel appointments.

I mean, it is all going to be political and then we are going to give this board this mission which says now don't be political, be cooperative and be broad based and forward looking, and I don't know how it gets done. I mean, it is like asking for mission impossible and I am willing to give up on Republican appointments if we can give up on Democratic appointments and we can figure out how we get a board that is supposed to do what this board is supposed to do and anybody who has got—let me give you an example. I would like a couple of you to address.

You obviously know and you have articulated the issue and the concern about business and industry sense of ownership. But let's take the eight representatives from presently organized labor. If we

Take your electronics industry, am I correct that something like 90 percent of the electronics industry is not organized?

Ms. FIELDS-TYLER. Yes.

Mr. GUNDERSON. So in that whole field we are clearly going to have distorted representation from the panel. I am not against organized labor at all being on this panel, but I am very concerned that, as you just articulated, Mr. Tucker, we don't end up with a policy in political payoff to representatives' registered apprenticeship programs who want to protect their apprenticeship programs when what we are supposed to be doing is, frankly, defining skills standards for all new kinds of industries for the 21st century, not protecting the construction trades of the 1950s.

Now, how do we do this? Any ideas? What do we do here?

Mr. TUCKER. Well, you would think it is impossible to do this except if you look at a number of other countries they have found a way to do it, often dealing with antagonism. My own view of this, if we cannot work together to create a board that will work together then there isn't much hope for any country. Because there are a whole lot of us who think if each of us end up going our own separate ways irrespective of what anybody else does we won't have an economy to worry about in another 10 or 20 years. I think it is a question of our political capacity to find a way to work with one another.

Mr. GUNDERSON. I agree with that.

Mr. TUCKER. On these issues, and I don't know, I am reasonably confident for some strange reason that this can be done, that once the board is formed and people have a task to do, that they will do it. And you know Mr. Baroody says if this didn't work in 3 to 5 years, try something else. I don't know a better answer than that one.

Mr. GUNDERSON. Go ahead.

Ms. PIESERT. I can point to the experience we already had with the two projects we are working on with the Department of Education which has representatives from the hospital industry, from unions, from education, and really in many ways, to our surprise, the process is going very well, because we want for our members what employers want. We want to meet their expectations. We want people to be employable, to have these skills and we—this group when we sat and we talked about the health care industry, there is a very unified group behind the theme of we are really here talking about patient care, better patient care, quality workforce, quality services, and how to—what kind of skills do we need to get there; how do we get this industry moving into the next century? So I think there has been a lot of agreement on—

Mr. GUNDERSON. Let me ask you, do you insist that all eight people from labor side must be from organized labor?

Ms. PIESERT. I guess that is our position, that is right, yes.

Mr. GUNDERSON. I mean, all right. What do we do? With the electronics industry. I mean, I don't want a management appointee in the name of a worker any more than you do, but at the same time I don't want to preclude from membership in this board the very people which are the emerging industries. How do we solve that problem?

Ms. PIESERT. Well, I think maybe labor does want to be a full and equal partner. I think many of the industries that have experience in the apprenticeship programs do have a lot to offer; have been through the process.

Mr. GUNDERSON. Okay. What about requiring that of the eight representatives from business and industry. You must have representatives from both unionized and nonunionized shops and then you have the same requirement from the eight representatives from the workers that they must be from both organized and not organized, so we will see to it that there are people on both sides of that equation that work with organized entities. I mean, is that okay? I mean, can you buy off on that?

Ms. PIESERT. Well, we are open to further discussion on it, I am sure.

Mr. GUNDERSON. That is a good answer.

Mr. BAROODY. If I could just comment. First, of course, we would endorse that. We already have. It was in my opening statement.

I think that the question you raise about the political nature of the board, is a serious one. We have thought about it a lot at NAM and we have looked at it two ways. One is we have what we think are serious and to us very substantial points about the change in the composition of the board. We believe very strongly that if it is going to be credible to American industry, it has to be led by American industry and, yes, that means a majority of the members of the board should be from industry. That is the first point, but it is almost less important in my view than the second point we also make.

To guard against the concerns you have raised, we think it is definitely important that the Congress think very carefully about the functions of the board and that those functions be quite constrained, quite limited, to identifying industry, includes centers, and to ensuring that the process of the development of skill standards is a legitimate process and that is about the limit of it as far as we are concerned.

I don't object to the discussion that went before about the desire to establish a system. I don't want to get into a semantic argument here, but if it is a system that we are trying to establish, we would urge that it be understood to be a pluralistic system rather than one that is centrally dictated and dominated by a board or by the Federal Government.

We are trying to develop some information, if we can, we would be eager to share it with the committee, about attempts to do similar things in other countries which have been, because they were too dominated by a central authority, the government, simply failed because industry wouldn't buy into them, and if I can develop that information and we are making work of it, I would be happy to share it with the committee.

Ms. FIELDS-TYLER. Could I make one comment to that point?

Chairman KILDEE. Certainly.

Ms. FIELDS-TYLER. In our industry, we have had a lot of experience with big systems on the technology side and they found a metaphor that is helping us think through the role of this board. This board should not act like a mainframe computer with dumb terminals leading into it from a lot of different points of view. This

board should be like a network server with lots of very smart, maybe even smarter, groups working together to input to the network to create one common language with every stakeholder represented, but again one system.

It is a very important image to hold in mind and it is not one that we do very well, frankly, in our government, is to try to hold that tension of bringing the pluralism together in one system but also keeping the distinctive parts. I think that image for us, we keep going back to that network server mode. It is absolutely essential that the server be there and that it is absolutely top notch in terms of its technology capacity, in terms of its information capacity, and its dissemination and communication role, but it is not—it does not replace all the constituent parts. It brings it all together and makes it a system and I think for us that is helping us think through this board concept.

Mr. TUCKER. One last word on this subject.

Chairman KILDEE. Yes.

Mr. TUCKER. I think the suggestion made by two of these panelists that the chairman be from the ranks of the employers, I hope this committee seriously considers that suggestion. I think that is—that may be the key to unlocking this puzzle.

Chairman KILDEE. One more question.

Mr. GUNDERSON. Thank you, Mr. Chairman.

Listening to you all, I think it is really important and I want to see if anybody disagrees with this. Let's assume, and I think we all agree on what the general authority of the board is, but let's assume to make—to execute that we change the selection and makeup of the board so that, very frankly, the President would name all 28 members, that we would require that no more than, say, 50 or 60 percent of those could be from one party so we guarantee a bipartisan makeup. We would require that both the business representatives and the labor representatives be from—reflective of unionized and nonunionized organizations, that the chairman of the board initially come from the business perspective, that at least half of the representatives from education come from community colleges and that we do have the sunset provision.

Now, if we made all of those changes is there anybody that would disagree with those?

Ms. FIELDS-TYLER. No.

Mr. TUCKER. No.

Mr. GUNDERSON. Good. I will quit while I am ahead.

Chairman KILDEE. Some may have used the Fifth Amendment. Mrs. Unsold? Ms. Woolsey?

Ms. WOOLSEY. I have so many questions it would take years. I am from a high-tech background. I was a human resources member of AEA for years. In fact, I have trained for the AEA in the North Bank. One of my major concerns is staying current. I used the big occupational dictionary as a human resources consultant over the years. My fear is we will have something like that and it won't be current by the time we get this together. So do you think that if we get our heads together and we can agree that we are going on the right path we can do this and keep it current?

Ms. FIELDS-TYLER. Representative Woolsey, I think you have hit the nail on the head. For our industry, this is absolutely the

bottom-line factor, is whether or not these credentials, these standards, are going to remain valid and current over time. That means that we need to be constantly pushing ourselves to move as far out on the wave front of innovation in the way that we think about this as we can.

We are never going to be done. It is going to be a continuous improvement model. You don't set standards and then 5 years later look at them again and decide you were right the first time. Every year, every quarter, whatever we decide is the appropriate sort of mode of updating, is what we need to do and that may be different depending on the occupation.

There are some occupations that are undergoing tremendous change. Others that are fairly stable right now, but may be changing over time, and I think that this sort of mode of continuous improvement is absolutely critical.

In our own model, we are working very hard to get standards established in 1 year. A lot of our trading partners nationally take up to 2 years to do what we are trying to do basically in 10 months.

Our point back to them and our point to ourselves is if we can't do it this fast and we can't do it well this quickly, then we shouldn't be doing it because that is how quickly we are going to have to move to keep them updated as well. I think it is a very important point.

Mr. BAROODY. Ms. Woolsey, the point you have raised is just another one of the reasons why we are so concerned that the system, if you will, be pluralistic, that it not be too heavily dominated by a single entity, the board, because that is antithetical to keeping the standards flexible and current.

You have rightly suggested that that has to be a very high priority. What our members learn as they reorganize their workforce is that the premium has to be put on flexibility and too centralized a control of this operation is at war with that flexibility and at war with your objective of keeping us current.

Ms. WOOLSEY. On the other hand, though, if we have it so flexible with not enough structure we will duplicate all over the country and we will be missing some professions and duplicating others. We have to be really careful, or we won't be talking in the same language.

Mr. BAROODY. I think we have to make sure we have just enough structure and that is what part of this discussion is all about. I wouldn't disagree.

Ms. WOOLSEY. Yes?

Mr. TUCKER. If I might comment on that point, your question is the reason I come to this idea of a three-tier structure of standards because if we have a small number, call it 20, call it 25, 15, of basic standards beyond the high school standard, and then the specialization, in effect, comes on top of that and you don't have this standards group involved at all in setting the three tiers of standards, then you get what Mr. Baroody wants at the third tier level. You can have an enormous variety of changing standards at the third tier level. You don't have to come back at any central body to do that. If you have the second tier in place and you only have 20 and they are pretty general, then you don't get yourself in the box constantly of being out of date all the time.

In my view that is the way to get it, the answer to your question. If you get at it by saying this board will only operate in a fairly general and vague way and you can have lots and lots and lots of different kinds of standards approved by it, some perhaps in conflict with others, then I think you have, in fact, a Tower of Babel. You don't have a system at all. It is the three-tier system that is the key, I believe, to answering your question, which is the right question.

Chairman KILDEE. Mr. Valdes-Pages?

Mr. VALDES-PAGES. Thank you. At our college we found we have to review our curriculum and our standards every quarter. It seems like overkill but we find that minor changes over a long period of time become major changes and it is a lot easier to incorporate minor changes into the curriculum quarterly than make major changes every 2 or 3 years. It is a valid point. We do it at a small college. I don't know how you incorporate that into a national standard.

Ms. WOOLSEY. By being more general I believe.

I have another major concern and one of the things I want you to know is that I see this board and this effort as being a true partnership between education, labor, industry, and government. So given that the national skills standards board reflects this partnership and that there is ethnic, gender, and geographic diversity, will this be enough, in your opinion, to ensure that the standards and assessments that we develop will be bias free, that we just won't have good testers that are successful through this process? That is going to be the challenge, folks.

Chairman KILDEE. Dr. Sackett, maybe you would like to address that. I know you have been concerned with this area.

Mr. SACKETT. Sure. APA is pleased to see that proposed legislation does put into place some technical requirements for these assessments to ensure that they are reliable and valid, meaning they measure what they purport to measure. When we move to something as important as this, it is crucial that a portable credential that someone takes with them from place to place, from setting to setting truly be an accurate and clear statement of the person's level of skill, level of competence. So to mandate in the legislation that any assessment system to be developed be evaluated, be documented as reliable and valid in accordance with professional standards that our associations and other associations have put into place is very important.

Similarly, I see that the legislation makes reference to existing civil rights legislation and to the extent that we say nothing in this bill is contrary to existing civil rights legislation, the Civil Rights Act of 1991 contains a provision should there be any adverse impact in any procedure used by employers for making employment decisions, that employer must be in a position to show that that assessment is, quote, job related and consistent with business necessity. So we have mechanisms for monitoring the success of these systems and for ensuring that the systems do not inappropriately discriminate.

Ms. WOOLSEY. And that is why your argument is to be included on the board?

Mr. SACKETT. Correct.

Ms. WOOLSEY. Thank you.

Chairman KILDEE. Mr. Goodling, then Mr. Miller.

Mr. GOODLING. Just a couple observations and one question.

One of the fears I think I heard expressed numerous times here is that the board could be so politically put together that it would paralyze the whole effort. I think my colleague, Mr. Gunderson, pretty well summarized all the things we need to do and in looking at your testimony, it looks like you have perhaps more questions than answers, which leads me to my question, and not to you but probably to the committee, why must we be trying to rush this through if we have so much to think about and so many concerns?

The legislation originally was supposed to be a fast track bid in relationship to school reform, and I am not quite sure how this got on that fast track program, but listening to your testimony and reading your testimony, I don't believe it would be very wise if we move in that direction.

I would ask, Mr. Sackett, if you might expand on your use of the word "fairness" in this legislation.

Mr. SACKETT. All right. Our concern about the use of the term "fairness" is simply that it is terribly ambiguous. It means many, many different things to many people. As I indicated in the formal testimony, to some people "fairness" means the procedures you develop for administering your assessments be fair, open access, available to all, equal access to preparation, to coaching, et cetera.

To others, the term "fairness" connotes a requirement of equality of outcome, mainly as we indicated some notion that all subgroups of interest in our society must, by mandate, be certified at equal rates. So when some people see the term "fairness," they read into it the suggestion that what is being called for is mandating equal certification rates, which is directly contrary to the provisions in section 106 of the Civil Rights Act of 1991 which prohibits employers from using any system which involves adjustment of scores on any kind of test or assessment in order to achieve equal outcomes.

So to the extent the common theme we hear here is credibility with employers being critical for this work. For employers to find this credible, it has got to be a system that doesn't cause any conflicts with the civil rights legislation with which the employers need to work.

Hence, our recommendation is that this ambiguous term "fairness" with its possible connotations that fairness be achieved through mechanical adjustment of scores to achieve equal certification rates be dropped from the legislation. A statement to the effect that the legislation would require compliance with existing civil rights legislation would eliminate the ambiguity. People understand clearly what is required then.

Mr. GOODLING. Thank you. That is all I have at this time, Mr. Chairman.

Chairman KILDEE. Thank you. Mr. Goodling also serves on the Foreign Affairs Committee and he has to go over and hear the Secretary of State over there so he has to leave at this time.

Mr. Miller.

Mr. MILLER of California. Thank you, Mr. Chairman. I have a number of questions, too, and if I don't get through them in this round, I would like to come back for a second round.

The most revolutionary idea here this morning, Mr. Tucker, is the suggestion that the front end of this bill will produce children who have a capacity to learn. I hope that will happen because it will make this section of it easier for employers.

I am somewhat in agreement with what Mr. Gunderson said about this board. I think this board is put together the way we have done business in the past. I am not convinced that is the way this ought to be done.

This program has been important to the Secretary of Labor and to the President of the United States in their discussions both prior to the election and since the election. They ought to take responsibility for it. One of the best things we can do is to affix responsibility for this Board at a very important level, whether they are secretarial appointments and/or presidential appointments. Let's move on. As Mr. Baroody suggested, 5 years from now when the sunset time comes and either there will be an accounting and either there will or won't be success. That is the way we ought to do business.

We can fight long and hard over this board. I agree with you, Ms. Fields-Tyler, that the board isn't the issue here. To me the issue is the committees, the cluster groups. I am not quite sure what these terms are, but the corresponding groups that will be discussing their industries or cross industries and the standards and skills. The board should be a facilitator. We ought to have people working on these clusters within the industries and with employers and employees and working out what they are going to need.

The suggestion of the heavy involvement of the community college is a very important suggestion. We are spending so much time on the compositions of these committees that we are never going to quite get to the core subject matter here.

The board should be important, but I don't think it is the end game. My concern with the first bill was that the board was doing everything. They were inviting people to "participate," but the board was going to do this initiative. I am thinking much more along the lines that the board ought to be delegating this, whether it is to 20 or 10 clusters, I prefer a limited number because I think that forces people to think broad scale. If you have to fit all your constituent groups even, if you want to be political, into 10 categories as opposed to 50, you are going to have to be a little bit more creative.

A number of things that this panel has said, Mr. Chairman, have been terribly important. The term used in a couple of your written testimonies is the notion that the Federal Government is a "catalyst." Again, I think that is beginning to happen in the most recent drafts of the bill. The board and the Federal Government are shifting from doing this to becoming more of a catalyst with the involvement of specific committees.

Mr. Baroody, when you say that the issue is that this be employer-led, I question whether we are using terminology from the past. When people and this administration points to what they think are

successful companies, such as Saturn, they are really talking about what are serious joint ventures between employees and employers who are involved in the future of that entity and how to ensure its success.

Mr. BAROODY. Absolutely, but things have changed an awful lot and in the best workplaces the old adversaryism and the old dichotomies are gone or diluted, but it is still a question of leadership. We are not here telling you what we think we knew from the past. We are not here telling you as the National Association of Manufacturers what we think is in some narrowly defined interest of ours to push on you. We are telling you what we think we are learning from the partnership we have undertaken with the Department of Labor over the last 2 years, in which partnership we are very careful, insisting upon ourselves that we consulted with workers as well as managers, with workers as well as CEOs, with workers both in union settings and nonunion settings. And what we learned from talking to our members is analogous to this question we raise about the composition of the board. While it is definingly important that frontline workers buy into this process in order to make it work, they tell us that they will not buy into the process unless they believe that management up to and especially including the CEO have themselves bought into it, and so if you write that dynamic large, unless this board is industry-led and therefore credible in industry, we simply don't believe, again, in Mr. Tucker's phrase, that industry will determine anything but that they should have stayed in bed.

In short, the standards that may emerge from them, no matter how technically good, may be ignored because, like it or not, and I share some of your frustration about the fact that we are focusing so much on the structure of the board, but the reason is if it is not structured properly, we believe it may fail and may fail because it is not structured properly.

We believe very strongly that it must be industry-led or it simply is not going to be in tune with the real needs of industry around the country or credible to industry leaders.

Mr. MILLER of California. Thank you. If you want to allow the others to respond, fine.

Chairman KILDEE. Yes. You may finish any response to the question and the 5-minute rule doesn't apply to that.

Ms. FIELDS-TYLER. I want to say something just kind of anecdotal about this industry leadership question. I think this is more perceptual in the end than substance, but I think the perception is everything going in.

When we tried to put on the ground our coalition within industry to do this, we had to bring together an industry that is, frankly, made up of a bunch of cowboy entrepreneurs. They are the last group of people who want to sit together at a table and try to define across a whole industry as diverse and as sort of dynamic as the electronics industry, the high-tech industry in this country. The only way that we could get them to do it is if we promised this is some way that industry could do for ourselves something that no one else could do for us, by convening the stakeholders for ourselves we could do something for our workforce, for us as employers, and also for the country that could be of great importance to

the overall competitiveness of our economy and to the overall importance, frankly, of the competitiveness of our industry as we compete globally.

Our goal as an association is to make this country the location of choice for high-value-added jobs. When any company, no matter where they are located, looks where in the world do I want to locate high-value-added, high skill, high wage jobs, they are going to look to this country because we have by far a world-class workforce that can do the job that needs to be done. I think if we go into that with that overall goal and think about what it is that pragmatically has to get us there, I think that is where we come up with the industry leadership position. Also the fact that industry has to be at the table with everyone, has to lead a board where everybody has a stake and has a full voting participation.

Mr. TUCKER. Congressman Miller, I hope that we don't polarize this issue of controlling the board versus a decentralized system in which all of the control is in these subunits, whatever they are called.

My own view, just to restate what I said before, but I feel strongly about it, is that the country is best served by an intermediate position. I agreed with you, it makes no sense at all to have this 24-member board setting all the standards, period, full stop. There has got to be a lot more involvement than that. But I would hope again, I think if each one of these groups ends up chunking up the universe without conversation with the others, if each one of these groups invents its own validation standard, if each one of these groups ends up thinking about what an exam looks like very differently, we will wind up with a vulcanized system.

Mr. MILLER of California. I think that would be the purposes of the board, to keep that from happening, but the board can't make up 20 standards.

Mr. TUCKER. It is somewhat more of a catalyst. The board has got to provide some framework, some structure within which these groups work. I wanted to be sure there was some agreement on that point.

Chairman KILDEE. Mr. Strickland.

Mr. STRICKLAND. Thank you, Mr. Chairman.

Dr. Sackett, perhaps because I am a psychologist I have a lot of sympathy with your point of view. I was sitting here wondering, though, is it necessary for a psychologist or a psychometrician to be a part of the board or can the board have access to individuals with such expertise and I think what I would like for you to do for us in just a minute or two, if you could, is to explain to us what some of the negative outcomes could be if these assessment techniques were not to be valid and reliable. What are the negative outcomes that we could expect?

Mr. SACKETT. Well, the key negative outcome if we put into place a system that was not reliable and valid would be that the errors or mistakes or misclassifications made by the assessments would simply have far greater stakes.

Today, if an individual employer puts together an assessment system which is unreliable and invalid and a job applicant is erroneously turned away from one point of view, the damage is comparatively light. That individual can simply go down the street to

the next employer and seek employment. To the extent that we put together a commonly and widely used system, mistakes, errors, misclassifications have far greater consequences. That is the fundamental rationale behind our call for ensuring that there is scientific and technical expertise involved throughout this system of standard setting and the development of assessment systems.

With regard to your question about membership on the board itself, to us the critical feature is the insurance that people with scientific and technical expertise be heavily involved from the beginning and throughout the process. An alternative mechanism to membership on the board such as the provision for a technical advisory committee, I think would meet our needs. Key feature, we cannot set aside or ignore the measurement issues until farther down the road. They have got to be designed into the system or systems that are developed from the beginning.

Mr. STRICKLAND. Thank you. And I would agree with you. I think that if this is not done that we could be creating a national monster here that would just have the most adverse consequences. Yes?

Ms. FIELDS-TYLER. I want to add one point from the employer viewpoint. Of course, of course employers could not use any assessment tools that would have adverse impacts that are not clearly job related, so again there is already protection in current civil rights law. I must tell you we are going about our study, especially on the assessment piece, very guardedly because this is a very, very complex issue. We are drawing upon lots of expertise from the industrial and organizational psychology community as well as from other countries which are already far beyond us in dealing with these issues. So on the employer side we have equal interests that these assessments not have bias in a way that does not—that they do not have—I can't think of the key technical terms here—but at any rate, the goal is that it clearly aligns with current civil rights law and we are not further exposed as employers than through these assessment tools.

Mr. STRICKLAND. Thank you, Mr. Chairman.

Chairman KILDEE. I think I will go back to Mr. Miller for another round of questions at this point. Ms. Woolsey, I am sorry.

Ms. WOOLSEY. Thank you. I was kind of a little bit disturbed about any chance that we will get into some kind of conflict about who chairs this committee. It says in the draft of the bill that the committee chair will be elected by the majority of the board itself and there may be somebody on that board that is the perfect person to facilitate this and for us to pick or choose who that person would represent I think could be the beginning of the end of this whole process, so I would like us to be very neutral on that and let the board pick their own chair.

Chairman KILDEE. Mr. Miller.

Mr. MILLER of California. Thank you, Mr. Chairman.

Can we go back to the issue of what the board does after the committees come up with their recommendations, and what the role of the board ought to be? I think it has ranged from endorsement or certification to just accepting those recommendations.

What is the most valuable role that this board could play at the end of this process in terms of credibility of the standards? Should there be that tension between these groups and the Board? If these

groups have not thought creatively and broadly and futuristically, should the board send them back to the drawing board?

Mr. TUCKER. I don't see an alternative to that, if you are, in fact, going to have a system. If the pieces are going to fit together, it seems to me approval or endorsement by the board as a whole is essential.

If you have the kind of large delegation that you have talked about and I think the members of this board largely agree with, the board is likely to be rather circumspect in its judgment that something isn't right and needs to be changed.

But if there is no such review at the end, then I think the forces operating are almost certain to produce a nonsystem at the end because there will be no—there will be no incentive, in effect, for each of these operating bodies to pay any attention whatsoever to the instructions, if you will, that they get from the board at the outset. Some tension would be useful.

Mr. BAROODY. Mr. Miller, as I have testified, I would caution against reposing with the board itself too excessive an authority to endorse or to send back to the drawing board, if you will, the product of the industry clusters themselves.

I think that the board's appropriate role is to identify the industry clusters and then to establish at the outset what are the criteria we use for judging process and legitimacy as a result but not get into the standard-setting outcomes themselves. I would be very concerned that if the board saw that as its role, the board would—well, would act inappropriately and in ways that, among other things, would undermine the credibility among industry themselves of the outcome of the process. And it would threaten to become over-politicized, a concern that has been expressed from others on the panel.

Mr. MILLER of California. We are in neither a fish nor fowl situation because there is nothing in current law that would prevent the American Electronics Association or some component of the AMA from doing this today. Essentially, that is what you are doing with the grant from the Department of Labor; is that correct?

Ms. FIELDS-TYLER. That is correct.

Mr. MILLER of California. The charge is very similar to the charge that is in this legislation. It doesn't have all of the appointments and stamps of approval, or hurdles, but that is what you are doing. The board couldn't keep the industry from using the standard if the industry wanted to.

By the same token, what is it worth to the industry or to the country to have a certified standard or a board-approved standard? That is what I mean by the tension. It is not to give a veto one way or the other, but is it worth something in the international arena to have this certified standard? How much is it worth to having an AEA-certified standard?

Mr. BAROODY. I would simply say I think it would be worth a lot to have the AEA continue what it is doing and have other industry sectors take up the similar undertakings, and that, I think, is what the board is intended and designed properly to catalyze.

But if the board goes much beyond that, I am concerned that the board—well, at a minimum it is understated that 3 to 5 years from now, when Congress looks at what it has wrought, it will look with

some disappointment on the fact that it has wrought something that industry—that is not followed. That is what we are primarily encouraging you to guard against. And too active and too dominant a role of the board itself will yield that result, we fear.

Mr. MILLER of California. No, I agree. Clearly, one, the board should exist. Two, the board should set the criteria which they want these panels to follow. Then the panels ought to go to work.

The presumption would be that if the panels are made up of the enlightened forces within an industry, they would come up with something that is in their best interests and the country's best interests.

The only question I raise is what is it worth to then have that certified? This simply says that the board shall certify. It doesn't set out the basis on which it can decertify them or send them back. It simply says the board shall certify standards—or have the power to certify standards that are proposed.

Mr. BAROODY. I guess that is the concern, is that having the power to certify also implies the power not to certify.

Mr. MILLER of California. I am a suspicious man.

Let me ask you something else on the criteria. A number of you mentioned the portability of these skills, should you get them. I don't see that anywhere in this legislation as it is set forth. But I assume you believe that is important: that a worker ought to be able to move across industry, across State lines, depending on whether the economy is healthy or not. So that should be in this legislation. Maybe I am missing it, but I simply don't see it.

Ms. FIELDS-TYLER, what you are doing now within AEA? How different is that from what you would expect, assuming that this is a properly defined cluster or committee? I can only think of these candy bars, Clusters, the more I think of that.

How different is what would happen here from what you are doing?

Ms. FIELDS-TYLER. Actually, I mean we have designed our vision of this going in, assuming that, if not this board, some entity will convene various industries with common interests to get to the point that we think we need to get to as a country.

Just as a concrete example—

Mr. MILLER of California. But they are not going to make you start over from scratch, are they?

Ms. FIELDS-TYLER. I sure hope not because we are going to have a very compelling product at the end of the year that is going to help us understand how this all could work.

For instance, in the manufacturing specialist area—and we are right now in the beginning. Thursday and Friday is our first set of focus groups with workers and supervisors, people actually doing these jobs. It is how our standards is going to be formulated, so it is worker-driven in that regard.

But, at any rate, what we expect to find is that there is a whole set of competencies to be a manufacturing specialist that transfer very easily across a lot of different industries. There may be a few that are specific to the high-tech industry that have to do with high-tech equipments and processes, maybe with the levels of tolerance in the manufacturing environment that we deal with, maybe because of the particular function of our industry in the economy

The Title IV was important, and we really wanted to have this special hearing just on this.

I have been to many a hearing where—I have never been to a real bad hearing, but I have been to some that weren't as good as others. This is certainly one of the better hearings I have attended in my 17 years here in Washington, and we will keep the record open for an additional 2 weeks for any additional testimony. And thank you very much.

[Whereupon, at 11:45 a.m., the subcommittee was adjourned.]

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