



**Marc Tucker, President, National Center on Education and the Economy, and  
Co-Chairman, New Commission on the Skills of the  
American Workforce, 4-19-07**

**Dr. David Lemberg:** Our first guest is Marc Tucker, President of the National Center on Education and the Economy and Co-Chairman of the New Commission on the Skills of the American Work Force. *Tough Choices OR Tough Times* is the Commission's recently published report. The Commission calls for a total shake-up in how America educates its people. The Commission was organized by the National Center on Education and the Economy, a leader in the movement for standards-based school reform in the United States.

Marc Tucker authored the 1986 Carnegie Report, *A Nation Prepared: Teachers For the 21<sup>st</sup> Century*, which called for a restructuring of America's schools, based on standards. He is the co-author of *Thinking for a Living: Education And The Wealth Of Nations*, selected by *Business Week* as one of the ten best business books of 1992. Welcome, Marc Tucker.

**Marc Tucker:** Thank you.

**Lemberg:** Marc, thank you for being with us on SCIENCE AND SOCIETY today and congratulations on *Tough Choices OR Tough Times*. This is a wonderful publication. Can we start by talking about some of the key issues that are facing the American workforce?

**Tucker:** Let me start a couple of steps behind the goal line. This report is the product of two years of research all over the globe on the dynamics of the global economy and how it's going to affect education requirements here in the United States. We did a similar report 17 years ago and what we discovered then was that the low-skilled people in the United States were, for the first time, competing with low-skilled people on the other side of the globe.

And we had two choices. We thought then we could either lower our wages to compete with the offshore sources of low-skilled labor or we could leave that work largely to less developed countries, which would require setting much higher standards for the bottom half of the distribution of students in the United States.

The reason we did this study is because in the intervening 17 years, some very important things had happened. Perhaps the most important is that a number of very poor countries, in particular, India and China, are now producing very large numbers relative to the United States of very highly skilled and well educated young people coming on to the global labor market. This might not have been terribly important news if these kids had no way of competing with ours, but the

fact is that in those intervening 17 years, the Internet had gone from being a research tool to a backbone of our international communications system.

And so, those young people, very highly educated and technically skilled on the other side of the world, willing to sell their labor for far less than our educated people, are now instantly available to employers all over the globe without leaving their countries of origin. That's a whole new ballpark for the United States. And so, it turns out that we're now in the position where we are competing directly. Our low-skilled people are competing directly with low-skilled people elsewhere who are willing to work for much less. The same thing is true of our intermediate-skilled people. And surprise of surprises, very highly skilled people, as well. If we don't respond to that in an appropriate way, it will drive wages down at every skill level. And the standard of living in the United States will fall.

So, we asked ourselves what we might do about this? And in particular, we asked ourselves who might, in this circumstance, be willing to pay high wages if they can get highly skilled people for low wages? And the answer that we came up with was very simple. Companies that are in the business of making products or services that are very attractive to people all over the globe and can be obtained from only that company, they will be willing to pay very high wages because they will have the margins to do that. And they will have no choice because the kinds of people that you need to create and to render those services or to build those products charge a lot for their services. They are rare and in high demand.

So, if we want to have an economy that is capable of maintaining our standard of living, we have to have one company after another in one industry after another that is built on that model, built to provide one state of the art, highly attractive, in fact, indispensable product or service after another. And in order to do that, we're going to have to have a population which is not only very highly skilled, according to conventional measures of skill, but we're going to have the most creative and have to have the most creative and innovative workforce in the world. That's the challenge we face.

**Lemberg:** And so, it's a big challenge. And, of course, practically every day, the American student falls further behind his global competitors.

**Tucker:** Well, we did an exhaustive study of how we compared other countries, in terms of the education requirement that I just laid out. And it is actually a fairly depressing picture. We have the most expensive elementary and secondary education system on the face of the globe. We have performance, however, which is in the basement on all three of the most widely accepted measures of international education. Competence among young people graduating from high school and going into the workforce, we place consistently from the middle to the bottom on all of those measures. Other countries place above us. So, we have an enormous task to even come close to matching the best performance in the world. And the answer will not be money. We're already among one of the very biggest spenders.

**Lemberg:** Marc, before we move on, could we talk about the ideal profile for successful American workers?

**Tucker:** Yes. What we need coming out of our schools are students, and therefore, workers, who have a really sound grasp, a deep grasp of multiple subjects, who in particular have a strong conceptual grasp of those subjects, who have a fairly high competence in mathematics, science and, in particular, technology. We will have to be technology leaders in innumerable fields to be successful. But students who also have the capacity to think in very creative and innovative ways about what they have learned and their applications in a very broad range of activities.

This is a prescription not only for much better education by conventional measures, but a very different kind of education for most of our students than we've had in the past. And there will have to be, in my view, a lot more hands-on learning. There is going to have to be a lot more room for the creativity of the student to display itself on our tests and examinations. This is actually a key point because what our commission has proposed is a radical overhaul of the American education system, which is highly performance-oriented, that is, at every point of the game, emphasizes the efficient use of resources to produce the highest possible performance.

And one of the dangers of a system like that is succeeding in that and find out that you're pointed at the wrong performance targets. The commission felt very strongly that the kinds of tests and examinations that are being used in the United States today for accountability tests by the States are not up to that task. They measure a much too narrow range of performances and so, make it almost certain that we will not get the kind of performance we need, no matter how hard we work at it. We need very high quality tests and examinations that are capable of going much further than machine-scored multiple choice tests can go in giving us a picture of the kind of performance we're after.

**Lemberg:** Marc, thank you. So, could we look at how to accomplish these goals to achieve a radical overhaul? Could you talk about first principles?

**Tucker:** Sure. In the first place, a word about how we got at this. Our recommendations didn't come full-blown from our imagination. We spent two years looking at how the highest performing countries in the world educate their kids. And in particular, at the features of their education systems, that seemed to account for that performance. So, our recommendations are based on that research and they begin with a very simple point, which is that we're looking for students coming out of our schools, as I said a moment ago, who have a really deep knowledge of multiple subjects, who have a firm conceptual grasp of those subjects, who can apply them in sophisticated ways to a wide range of problems, who are creative and innovative.

I haven't met anybody yet who thinks that you can produce students like that unless their teachers have those qualities. If their teachers are going to have those qualities, we have to recognize that those are the very qualities that our best firms are looking for in the people they hire. So, we're going to be competing with firms that are hiring from the top third of the distribution of kids going into college. So, we have to find a way to recruit our teachers from the top third of kids going into college. That was, in effect, our very first principle.

Second, we looked at how students progress through the system in other countries and there is a stark difference. In our country, our kids are marked through the system, based on the amount of time they've spent in any given institution, elementary, middle, high school, college and so on, two-year programs, four-year programs. In the countries that we studied in the main, what you find is that you don't move on until you can show that you're ready to do the work required at the next level. You have to meet, in other words, a performance standard to move through the system.

In the countries that stand at the top of the lead tables, we've found a number that are taking most of their high school graduates and putting them in what we would call college, ready to do what we think of as college-ready work. Not at the age of 18, which is what we aspire to, but at the age of 16. So, we said, as a first principle, if we are out to design a world-class system, we can't do less well than they do at that. So, we took that as a design criteria. And we said we want to design a system in which at least 60 percent of our kids will be ready for college and can go on to college when they're 16, and 95 percent of our kids are ready to do college-level work by the time they leave high school.

Now, that actually leads to the third principle. I told you earlier we are the second highest spending country in the world in elementary and secondary education and one of the worst performing. What that says is we haven't failed at this because we've been unwilling to spend enough money. We've failed because we don't have the right system. It turns out that if we are able to create a system in which 60 percent of our kids can go on to college at 16, we're going to save an awful lot of money. And we're going to save it in the junior and senior years of high school that these kids will not have to hang around in because they're ready to move on. And we will also save an enormous amount of money in the cost of remedial courses that we're now teaching in our higher education institutions.

It is a first principle of successful business these days that you build quality in from the beginning. You don't try and fix shoddy work at the end. We have a system that produces an enormous amount of shoddy work at the end. So, the third principle, basically, is we program how we spend a fair amount of the money that we are spending on public education, so we build quality in from the beginning, rather than trying to fix our mistakes at the end. So, we take a third of the money that we would save through this redesign of the system. We produced an investment fund of about 58 billion dollars this way. We took a third of that and we invested it in high-quality, early childhood education for all four-year-olds and all low-income three-year-olds.

This is crucially important because the low-income kids who are entering our kindergartens now have half the vocabulary of the other kids. And the researchers have shown, I think quite conclusively, that it is simply impossible for those kids to catch up, no matter what we do. We cannot let that continue to happen. It's now clear, by the way, that those children who are coming in from low-income families typically have smaller brain sizes than the kids who don't suffer from those problems. And it confirms the view, I think, beyond a shadow of a doubt, that our first obligation is to ensure that the kids coming into our kindergartens are ready to do kindergarten level work. It may sound funny, but that is precisely the situation.

We take the second third and we invest it in getting most of our teachers from the top third of the distribution of kids coming into college. In the sample or prototypical teacher pay system that we devised, a four-step career ladder, teachers would come in at the bottom of a four-step ladder, beginning their teaching career at what is now the median level of teachers' pay in the United States, rather than the beginning level. And on average in the United States, would wind up with salaries between \$95,000 and \$110,000, depending on whether they worked a regular school year or a full year. These numbers would be much higher in high-cost states like New York, New Jersey, and Connecticut and lower in states like Louisiana, Mississippi, and Arkansas. That would obviously, I hope it's obvious by itself, make an enormous difference.

We would invest the last third in topping up a new finance scheme for American schools. We would abandon the local finance of education in the United States. It seemed to our commission that there was no way that we could ever attain the top ranks of education nations, if you will, as long as we allowed our wealthiest people to congregate in their own school districts, producing very low tax rates, but very high education budgets, enabling them to get the very best teachers and the very best of everything else that's available, leaving second best to everyone else. That simply won't work.

So, we are proposing a system in which the states directly fund the schools' out of state revenues and each student would bring to that school the same standard amount of money in that state, no matter where that student came from and irrespective, obviously, of the wealth of his or her parents. To that, would be added an increment if the student was coming from a low-income family, another if the student was coming from a family where English was not the primary language spoken at home. There'd be another increment for mildly disabled students and another increment for severely disabled students.

And in that way, we could produce a system, in which the kids who came with the most difficult to solve problems to school would be going to schools that could stay open from early in the morning until late at night, could add many, many days a year to the school year, could provide these kids with diagnostic services that they desperately need, as well as tutors and mentors and other kinds of specialized helpers that would enable them to succeed against very high standards.

You have to put that together with what I said earlier about early childhood education and having high quality teachers available to these students to see why we are convinced that if we did this, we would be able to take kids even from very low income families and bring them up to the standards I was talking about before, that is to say, ready for college without remediation by the age of 16.

We have some other ideas. We would get our school districts out of the business of actually running schools and we would have them contract with third party organizations, typically partnerships of teachers, to run our schools on performance contracts. If the kids learn and they learn faster than expected, the school gets a real reward. And if they learn slower than expected, somebody else gets the contract. There are other ideas, but you can see the general drift.

**Lemberg:** Marc, thank you very much. *Tough Choices OR Tough Times* presents a brilliant analysis and offers a much needed paradigm shift. I'm wondering about the implementation. What is the second phase?

**Tucker:** Well, we're working very hard on that now. We are looking for four to six states that have the good luck to have political leadership that is willing to take significant risks to greatly improve the education of kids in their states and the resolve to go forward. We are looking for significant resources to help them over a period of five to ten years, to help them implement these ideas. We're putting together a technical assistance service to help them do that.

And we're going from state to state right now, talking to as many people as will talk to us. These visits are sponsored by governors, lieutenant governors, legislators, chief state school officers, businesspeople, foundations in those states. And the response that we're getting is really quite extraordinary. When we have a chance to tell people what we see coming for the United States, how far behind we are, what's at stake if we don't succeed, we find people from every walk of life who are ready to take some very different directions than we've taken before.

**Lemberg:** Marc, thank you for a terrific conversation on an extremely important topic.

**Tucker:** You are very welcome.

**Lemberg:** Our guest is Marc Tucker, President of the National Center on Education and the Economy and Co-Chairman of the New Commission on the Skills of American Workforce. *Tough Choices OR Tough Times* is the Commission's recently published report. Thanks for being with us on SCIENCE AND SOCIETY.