Thank you very much. It's a privilege to be able to share some thoughts with you about where we ought to be going with our schools and what we ought to be doing. My topic is restructuring our schools.

I guess that perhaps the best place to start would be to admit that, in educational circles, the word "restructuring" has become one of those words which everybody just bandies about. Whatever anyone does today they are restructuring our schools.

In public education in America, whenever any new idea comes along, there are two simultaneous responses. One is, "It's impossible, it will never work." And the other is, "We've always been doing it, we're still doing it."

So let me say what I mean by "restructuring" in order to give some legitimacy to the concept. If it just means different things to different people, or if it's just a word that says, "Leave us alone, we're doing our job the way we always have," it doesn't mean anything.

Polish Up the System?
The reform movement has now maintained its life for more than six years, which is a very fascinating phenomenon. The American people and certainly our governors and our President have not lost interest.
When the movement came along, the notion was that, well, there are things wrong, but all that is required is that we do more of the things we have always done but a little better than before. Get a little better teacher, get a little better curriculum, a few more incentives, a little more time.

In other words, we essentially took the system that we now have for granted. We assumed it's a good system — that all we've got to do is polish it up. We thought of it as kind of a pendulum: It used to be a fine system, then it got all loose and we let kids take all these soft electives and we didn't test them and we promoted them automatically. So it needed tightening. There was a lot of truth to that, and the pendulum has now gone back to required courses and so on.

Now, given these two systems, a soft one or one that's tough, I prefer the tough one. However, if we look back historically, we did have a tough one in the '30s and early '40s — and we had a graduation rate from high school of about 20 percent. Chances are that if we make this one tough enough — especially if we don't give any assistance to kids to meet the new and tougher standards — we will have a tough system which does a lot for learning kids and pushes a lot of others out. And given the changes in our society and the world economy since the '30s, that's unacceptable.

Minor Operation or Major Surgery?

Now restructuring, it seems to me, goes beyond reform. It questions whether the current school structure, the way we run our business on a daily basis, can get the right results. And it seems that, from a strategic point of view, if you want to figure whether to perform a minor operation, major surgery, or a drastic overhaul on your business, it ultimately depends on how well or how poorly you're doing.

At least some of the talks this morning assumed that the major problem was at-risk children and minorities. That certainly is a huge problem, a very special problem, and needs all of the emphasis and special consideration which Brad Butler and Gene Maeroff and others provided this morning.

However, I think that we need to see that the school system is not merely failing to hold onto and succeed with kids who are minorities and at-risk. That whole notion makes us feel a little better, as though there's this group out here at risk and for the rest of us it's fine. The overwhelming majority of us are healthy and living a fine life, and over there there is some sickness and we've got to find a cure for that sickness. So we like to think.

Not so. Look at the results of the National Assessment of Educational Progress or look at the math/science international comparisons which came out two days ago.

I think it is quite reasonable to conclude that, even if we don't include the dropouts, we are educating — not to an intellectual level, but to a level of being able to function fairly well in the everyday world in different kinds of jobs — maybe 15 or 20 percent of the kids who graduate from high school. The high point is represented by those who can really enter college ready to begin college-level math/science or reading of technical material. Then you're down to about 5 percent who are what the National Assessment calls “adept.”

I urge those of you who haven't studied these figures to get them from the National Assessment because they give us very valuable information about how well or how poorly we are doing. Just to give one indication: a
If we wanted to have a system that screened kids out and let only a few of them through, we’ve got that. But we do not have in schools — as they are now organized — a system that intelligently thinks about kids in the same way that a good business would think about its workers and its managers — that is, in terms of how we get them to succeed and therefore make our company work.

And so I’d like to spend just a minute or two on the fundamental flaw in the system. The fundamental flaw is our assumption that the teachers are the workers who deliver knowledge to the kids. The system is not based on the idea that the student is a worker and that nobody can educate anybody else.

Socrates was right when he said that I’m not the teacher, I’m the midwife: You’re the one who has to get pregnant and do the laboring. I can help. I can make things better or worse. I’m the midwife, but I’m not the person who created the baby.

The Student Worker in the Classroom

The student has to listen, the student has to write, the student has to read, the student has to imagine. The student has to build things. The student has to discuss in groups. And as the student does all those things, all of which involve activities and work on the part of the student, that work ends up becoming knowledge, learning. There is a great expression I hear every day among teachers: “I taught them, but they didn’t learn.” What does that mean? Can you imagine a contractor saying, “I built it, but it’s not there anymore”? Teachers don’t

test of 17-year-olds who are still in high school and about to graduate asks them to write a letter, either a letter to the principal urging a change in some school regulation or a letter to the manager of a local supermarket to try to convince the manager that the student should get the job. Spelling doesn’t really count, and grammar doesn’t really count so long as someone can understand the letter. What counts is whether the person can give reasons for the request. That’s all, and once you give one reason it’s acceptable.

The percentage of students about to graduate from high school who are able to do that in the United States is 20 percent. Twenty.

If you look at the figures on how many students can figure out from a cafeteria menu what they’d have to pay for a sandwich and a bowl of soup, how many can look at a railroad timetable and figure out which train to take if they want to get to a certain place by a certain time, and so on, the figures are all very shocking. Many of the numbers are below 20 percent.

The Process Is Wrong

You have to reach the conclusion, when you see these figures, that either God only made 20 percent of us smart enough to write a simple letter and 4.9 percent of us smart enough to read a railroad timetable, or the whole process of schooling is wrong, that we’re somehow systematically doing certain things wrong.
say, "I tried to teach them, and I didn't succeed," but, "I taught them and they didn't learn."

Charles Handy, an Englishman, writes on management problems. I think he's done the best job of analyzing the situation. He says all right, if students are workers, what kind of a workplace is a classroom or school? What is it most like? It's not like a coal mine and it's not like a steel mill. It's most like an office.

So just imagine yourself organizing an office in the following way. You hire Al Shanker and say, "All right Al, sit down at this desk with 30 other people in this room doing the same work. You are never to talk to them, just do your own work."

"And there's your manager, she'll tell you what to do. After 45 minutes a bell will ring; stop doing what you're doing and move up to room 409. You'll have 30 other workers there doing a different kind of work. You'll be given a different kind of work by the new manager and you're to do that. And every 45 minutes you are going to be in a different room and you're going to be given different work, and you're going to have a different manager, and you'll have a different group of workers around you. But you must never talk to any of them."

Well, does anybody here have an office like that? If you're doing work and somebody gets something wrong in an office, the first thing you would say is, "Did you ask anyone who is sitting around you whether that was the way to do it?" What is considered normal intelligence in the workplace is considered cheating in school. You've got to do it by yourself or it doesn't count in school.

It takes some people more time to get into a job. But in school it's unfortunate if it takes you time. Every 40 minutes the bell rings and you have to turn to something else.

We know that people can't relate to many different managers with different expectations, different styles, different ways of doing things. Well, a different teacher every 45 minutes is a different manager, with different expectations, and different ways of doing things.

This system, according to Handy, the British management guru, makes a lot of sense — if you view the kid as an inanimate object, passing down an assembly line, being worked on by others, teachers, the real workers.

First the English teacher hammers English into him. Then forty minutes later he goes off to the math teacher who screws mathematics into him. What we have, essentially, is a factory model, with the kid being viewed not as a worker but as an inanimate object. Now that's what is wrong. And along with that assumption goes a whole bunch of practices that contribute further to the poor results of our schooling system.

"Learn at the Rate I'm Talking"

We all know from our own experience that given any task to do, everyone — our children, workers, everyone here — everyone will do it at a different rate. Some people do it in five seconds, some people will take five minutes, and some will take five hours. All will be different.

But the minute you organize a group whose learning is based largely on lecturing, everyone had better learn at the same rate that I'm talking. And that's the way a classroom is organized.
Which team do I talk to? The fastest or the slowest? Or the middle? In every classroom, one-third of the kids are bored to death and one-third don’t know what’s going on. And half of the ones in the middle are daydreaming anyway. So we’ve got a system where if you’re teaching 30 kids you’re lucky if five or six are paying any attention.

(Since you’ve been lectured at all day long, this is a good time for me to tell you an anecdote. There is “research” on the way audiences relate to the speaker. The first 10 minutes you can remember everything, the next 10 minutes your mind begins to wander. After that the majority of the people in the audience indulge their sexual fantasies. So, by this time I would expect that all of you are enjoying yourselves.)

We know that most adults can’t sit still for five hours a day. But we do this to six-, seven-, or eight-year-old kids. They cannot just learn by retaining words. Some people learn by looking at pictures; other people learn by doing things with their hands; others by reading or writing. But schools behave as if there is only one way of learning: by listening to teachers.

We also know if we manage any sort of business that if we want the workers to produce for us and with us, we do not humiliate them. Humiliation is not a powerful incentive to get people to do the right thing. But that’s what we do in a classroom when we call on a kid who doesn’t have the right answer. There he is standing in front of 25 of his peers, humiliated. How long does it take before he says, this is not for me. And he tells his peers, “Don’t think I’m dumb. I’m not even trying anymore.” He’s getting out of the game.

Asking the Right Questions

If the important thing is to get our student workers engaged, then it seems to me we have to question what we now do in school. And we have to view teachers, and the other adults in this setting, as managers who must essentially ask the same questions that any manager in any large institution asks: How do I get my workers to want to come to work every day? How do I get them to work and work well? How do I get them — because I’m never going to be able to afford the inspectors to watch them every minute — to take an interest in the quality of their work? How do I get them to take enough interest in the quality of their own work so that they will do it right? Those are exactly the questions that we need to be asking about how we motivate students.

One way to think about this is to consider the process one goes through with an architect. You need to do for a school what one would do if you were building a home. You’re building a home and you are sitting with an architect. The architect would say, “How do you live? What do you like? Do you like to have company? Do you have a lot of books? Do you like to listen to music?” And you would do a lot of talking. You could get five architects and they would come back, within a given price range, with different types of plans, all of which would be responsive to the kind of life you live. And then it would be your job to choose among them.

In that same way, I think what we need to do is set certain specifications and give them to educators. Not a master plan that says, this is the screw which is the magic bullet that answers everything. We haven’t found anything like that and I doubt that we ever will. What we need to do is to say to people, look, design a screw
which recognizes the fact that people learn at different rates. Design a screw that recognizes that people learn in different ways. Design it in such a way that people are not humiliated.

One of the things we know about workers in the workforce is that there are a lot of jobs out in this world that are boring. If you isolate a person who does a boring job you get pretty miserable work. But we find that if you put workers together in teams — even with boring work — and get them interested in their own human interactions in terms of doing the work better and perhaps competing with other teams, you get better quality work.

How can we get kids to work? All these kids hang out in gangs after school and many play sports. Why not use the team spirit to get kids to work with each other, to help each other, and to compete with other teams within that classroom, instead of saying that each one of them must never talk to anyone else? Schools fight against the natural team spirit of kids. The kids are passing notes back and forth — God forbid they should learn to write letters — so you ask the principal to move one kid to another room.

The list could be much longer. But one of the things that we need to do is to ask people to come forth with proposals that really show two things. First, that they understand something about how people learn. Second, that they understand something about what makes people become involved and interested in their own work. There’s a lot of theory about that in management and in business. I’m not saying that anybody has solved the problem, but it’s one you work at all the time in business. Yet it is not talked about very much in schools.

**Demographics and Teachers**

You have to restructure schools for another reason too. Given the demographics of the workforce in the United States, there is no way in which the schools are going to get 2.2 million people — that’s how many classroom teachers we have in our public schools — there is no way we’re going to get 2.2 million people of the caliber that we need.

We need 23 percent of all the college graduates each and every year for at least the next 11 years merely to maintain the present staffing ratio. That’s without new early childhood education programs or special services — that’s just to maintain the present rate.

Well, it’s easy to get the bottom 23 percent, but they won’t do us much good in teaching. Is there any way we can get that 23 percent from the top half of all college graduates in the country? It’s very unlikely that one industry can get about half of all the top talent in the country.

So what would happen if you, as business leaders, had a great product, a factory, and a first-rate workplace,
but you were missing 10,000 engineers to produce it? Well, you would understand, right away, that you could never find 10,000 engineers. You'd have to find a way of producing that product with the ordinary human beings who are around — some engineers and some other people.

But you would also design your institution to be able to produce what you needed with the people available. There is no point in designing an institution that is only fit to be run by people of a certain caliber when you can't get that many people of that caliber.

We are all agreed on how to run institutions so that we get our fair share of very, very good people and some who aren't quite there, and some others: by having them work in teams and groups and by developing organizational relationships we can manage the institution. Well, the demographics of this — the huge number of people we need — really means we have to get away from the isolated, self-contained classroom, and think about organizing our schools in the same way we think about other institutions.

There is no way of dealing with this issue in the ways we usually talk about. There is no way of massively raising the salaries of 2.2 million people. Just think of the mathematics of that. A $1,000 raise for each of them is $2.2 billion. That doesn't get you very far. And if you only raised the salaries, you still wouldn't attract an awful lot more people. How many people who know mathematics are there in our society? Industry and the military and others aren't about to shut down because teaching becomes more attractive. So it's not a static situation.

Three Fundamental Issues

It seems to me we need to agree on three issues.

First is salary. Obviously, we have to raise teachers' salaries. But, as I have tried to make clear, raising salaries alone is not enough.

Second is reduced class size. This is very important. A lot of the reason kids aren't learning to write is because teachers are reluctant to assign the 30 kids that they have each period, five periods a week, an essay. That's 150 papers. It is not fun correcting 150 papers, it's a lot of time. And if you're going to do any good you should spend time with each of the kids, talking about how they ought to redo it. That's how we learn to write. It can't be done in large classes.

But reducing class size means going out and hiring even more teachers when we just agreed that we can't even find the 23 percent. So to get more of them, districts would draw from lower parts of the talent pool. The trade-off we make when we hire more people is to hire people with poorer qualifications. That's a lousy trade-off.

Third, teachers ought to have more time to observe each other. Instead of teaching for five periods, they should teach four, let's say. But that also means hiring more teachers. You'd have to add 300,000 or 400,000 teachers to the workforce to give each teacher in America 40 minutes to be able to observe other teachers. Where are we going to get those people? Even if you found the money tomorrow, even if there were no budget crisis, demographically it's impossible.

All of this argues for the need to move away from self-contained classrooms. You need to move toward
teams of people where there are outstanding persons on each team. You need to get some of that huge bureaucracy that's out there away from central offices and into some of these teams. You need to look at what some restructured companies have done, of where management moves and apply the same kind of philosophy.

The System Isn't Working

The difference between at-risk kids and others is great, but school isn't good for any of them the way it is now structured, except for certain kids who sort of fit through the whole funnelling process. If you happen to fit all the zigs and zags and shapes and everything else and you get through, fine. But for the most part the edge successful kids have is the support and other things they get to overcome what the school doesn't give them. School makes it more difficult. The parent hires a tutor, the parent pushes, but even with that, most of our kids are not learning very much.

When middle-class kids don't learn very much — and the overwhelming majority of them don't — they still go to college. And they do high school-level work in college and they get a degree. Or they have connections; they've got somebody who says we need a driver in our place or we need a night watchman. They have connections so they get a job. That doesn't happen to under-class kids who don't have any of these connections. So not learning has different consequences for different groups, but few are learning very much in the first place.

A Different Kind of School

Now I want to share with you a picture of one school that I saw because it will give a picture of how a few simple changes can create a very different kind of school. I think it will also show that if you change a school along these lines you're much more likely to reach and hold onto the kids we were talking about this morning.

The school is in Cologne, Germany. It is an urban school. The school has a lot of Turkish and Moroccan kids, a lot of these "guest worker" kids who are not made welcome in Germany as citizens. Their families came there to do some work. The school has between 2,000 and 2,100 students. Now here's what is different about it. Here's a school that has thought about how kids learn and how teachers are able to maximize their impact. It goes something like this.

This school starts in fifth grade. Every kid in Germany is tested in the fourth grade and divided into categories. The gold goes to Gymnastum; then there is the Realschule if you're just below that; then at the bottom is the Haupt-shule. So they have three categories of schools depending upon how well the kids do on this examination in fourth grade.

This is a comprehensive school so it takes kids from all of these groups, except that if you were smart enough to get into Gymnastum your parents
are going to make sure that you go to Gymnasium school. Except for a handful of kids of doctrinaire egalitarians, this school is made up of kids in the bottom two tracks. In other words, they were told they’re not smart enough to go to college.

Now the nice thing about this school is that it’s made up of kids who were told that they are too dumb to end up going to college, but it produces a huge number of kids who pass the Abitur, the national examination in Germany, and they do go on to college and are successful.

It works like this: If I’m a teacher and this is my first day, I’m told to go down to such-and-such a room and meet the other six teachers on my team. The seven of us meet for two or three days before the kids come. Decisions that are usually made by bureaucrats with computers in their offices are instead made by teams of teachers.

The first thing we are given is a list of our 120 or 130 students, whatever it would be. It is up to the seven of us to decide on how to divide these students, how to group them.

Next, there are no bells in this school, so it’s up to us to decide whether we want to take a whole morning for mathematics and a whole afternoon for German so the kids can work without being interrupted every 40 minutes. If it turns out that a whole morning for mathematics is too long, the seven of us meet and change it. We have the flexibility as a group to play it according to what these students can do. It isn’t someone in the central system who determines that the stuff has to be dished out this way or that way. It’s all going to depend on us and our kids. We are going to be able to play it by ear — seven of us, not one at a time.

Continuity

We are also told that no substitute teachers are available when anybody is absent. A substitute teacher doesn’t know the kids; it’s a waste of money, the kids run rings around them, call them names and throw things. The reason you have seven teachers instead of six is because we have given you an extra teacher. If a teacher is absent, you figure out how to handle it.

We are then told that these kids are entering in the fifth grade and they are going to graduate at age 19. Seven of you teachers are going to be with these kids for all those years. You’re going to know them, you’re going to get to know their brothers and their sisters, and their mothers and their fathers. You are not going to take the attitude that you inherited them from some teacher who ruined them and you can’t wait to get rid of them next June.

This is not an assembly line where you are getting someone else’s mistake to come in front of you and you don’t give a damn about it because it’s going to move on 30 seconds later. When you look at yourselves in the mirror a few years from now you will know damn well that you bear a lot of responsibility for what has happened to these kids.

Furthermore, in this huge school of 2,000 or 2,100 kids there are only three administrators — one principal and two assistant principals. But under German law — not special to this school — every principal and every assistant principal must teach in the classroom for at least six hours a week.
Teams

Now what happens in the classroom? There is no teacher lecturing. The kids are at tables with six to eight a table and the kids get to pick their own team names. The young kids have Bumblebees and Turtles and the older kids have Bruce Springsteen. But essentially the teacher throws a problem out to the kids which the kids work on, competing with the other tables to come up with the answers or with different projects. And the whole thing is to teach kids that when you get out there in life there will be other people working next to you, and that together you can do it.

When a kid is absent, guess who calls the home? One of the other kids says, “Hey, there are only five of us here today, so we were worried because you weren’t here. Are you really sick? When are you coming back?” Peer pressure leads the kid to say I want to come to school. I want to do well because I want my peer group to do well.

Learning Problems

The kinds of questions that are thrown out to these tables are not just factual questions such as when did Columbus discover America. Our schools teach kids a lot of facts which, of course, they forget as soon as they leave. But this school also teaches creativity, imagination, and certain practical rules of how to get along. Let’s say you get a question out there like this: We don’t want you to look this up, but we want the best hypothesis from a table about when time zones first started, and according to when you think they started, who might have been for them and who might have been against them. Were there time zones in the time of Christ? Or Charlemagne? Or Bismarck? What would happen tomorrow if we abolished time zones? Who would be for it and against it? And then rely on some research.

Monitoring Teachers

Who takes care of monitoring poor performance on the part of teachers in this school? The other six members of the team. They’ve got to work damn hard. If I’m a member of this team, and we’re going to be with these kids for that many years, and I’m working with somebody who is creating negative behavior in some of these kids, who’s antagonizing them, who is just lazy, who’s going to make up the work? Who is going to pay the price? The rest of us.

So essentially, you have peer pressure and teams, you have group judgment on the part of adults and you have peer pressure to make sure that everybody shapes up, and it works.

Now I am not here to say this is the only way to do things. But I would like you to take a look at this model and a couple of others as well. If a kid is not learning well, his failure to learn is only seen by his friends at that table. He is not humiliated in front of the entire group. In that table
he is a lot more like the kid on your ball team who is not so good at hitting. What do you do with one of the kids on your team who is not so good? Well, you go out back and you practice hitting with him because you want him to be a more valuable member of the team, so instead of the humiliation process you get a mutual assistance process.

Parental Involvement

We talked about parental involvement this morning. That's the other thing we ought to build on. We ought to ask people to design schools where parents could be useful in the school. Now this is a school where parents can be useful. Parents cannot be useful while I'm lecturing, because if somebody else is in the room while I'm lecturing, at best they are a distraction, at worst they are witnesses to my problems.

However, in a school like this, where five kids at a time are trying to build something, read something, do something, parents can be sitting at those tables doing some of the same work in much the same way.

Think about the role of parents in a Boy Scout or Girl Scout troop. Where the kids have a common curriculum and where they're moving along, you can have volunteers coming in, you can have businessmen coming in, and they are not just coming in to watch a teacher lecture. Every one of these people from the outside can do something with a group of kids at a table. You are not just saying come on in because it's good public relations. At whatever level the parents are, they can come in and be involved.

Now I want to conclude with a question. It's difficult for some of our large urban schools with 100 to 250 teachers to start figuring out a system like this. If you get a committee that big you can be pretty sure the product isn't going to be that good. It's going to end up being some sort of referendum of a large group of people, and there would be no imagination to it. But break up these schools into sub-units, where seven, eight, nine, ten, eleven people are free to manage for a period of time. Hold them accountable, don't give them the freedom until they come up with the architect's design and tell you, here is how we're going to take into account the rate that kids learn. Here are the talents that we share among the teachers, and so forth.

Now the final point is, how do you get this moving? You don't need federal aid for this. I agree with Brad Butler very much; there are a lot of these things that could be done with the resources that are available right now. They have to do it by sitting down and thinking about what's wrong, by thinking about how our children are affected by what we are doing and how adults are affected. Are there different ways of doing it? Are there different models? That takes time, and it takes money, but not massive amounts of it.

Choice and Competition

I agree with the notion that we need competition. I am in favor of public school choice. But I do not think that school choice will bring much competition. I favor school choice because it's a good American value. I don't think people ought to be forced to do anything unless there is an urgent national or moral or other reason for it. And there is no big reason why this particular kid must go to this school just because the home is there. So I favor choice. But think about it. All of our cities have lost hundreds of thousands of kids in
recent years, and I don’t know that any of these cities gave a damn.

There is only one city in this country where the teachers in our school district call the kids in private schools and ask them what can we do to bring you back to public school. That’s Pittsburgh. There is no other city in the country. Pittsburgh has been doing it now for seven years, and nobody else has copied it.

The reason why there is not much incentive is that when you lose a kid to private school, you are only losing the kid and the money that it takes to educate that kid. So you have lost nothing. There is no profit; there’s no loss. Now a school may have lost because your school may be shut down and you may be inconvenienced by moving to some other school. But the school district has not lost, and the city has not lost.

If you are in a receiving district, what do you gain if you gain 30 kids and the money it takes to educate them? There is no profit; there’s no loss. There are a few marginal situations where that’s not the case, but for the most part it makes little difference. If you’ve got a class of 15 kids learning French right now and you get 15 more there is no cost to it.

I think that what we need to do is to put some real market incentives in the process. Doing new things is very difficult — you’re changing habits, earlier training, everything that you saw from the time you entered school.

It’s very difficult. This will not happen unless there are winners and losers — and unless we create a real market in that sense.

**Put Daddy in the Slow Group**

I think there are ways of doing it. And I think I will conclude with one more story that I heard the other day.

I was at an IBM meeting in Atlanta and the difference between the world of schools and the world of business came up. One IBM executive told the story about how he works very hard during the day, then he usually stays at work late, and when he comes home he brings home a briefcase full of stuff to do there. He said his wife usually doesn’t want to serve home cooking to herself and his daughter so his wife takes his daughter out to dinner almost every evening.

One night his daughter asked his wife why isn’t Daddy ever here and why is it that whenever we get home he’s there working and never talks to us? The wife said to the daughter, “Well look, Daddy works very, very hard at work and he just can’t get all the work done in time and so he stays later, and he still doesn’t get it done in time so he takes it home with him.”

So the daughter asked the wife, “Why don’t they put Daddy in the slow group?”

That’s the world of schools. That’s the present structure, and it isn’t working.