

THE ALBERT SHANKER INSTITUTE

From Best Research to What Works: Performance-Based Compensation in Public Education

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Greetings:

[Eugenia Kemble](#)

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[Milton Goldberg](#)

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[Edward Lawler](#)

Director, Center for Effective Organizations
University of Southern California Marshall School of Business

[Lewis Solmon](#)

President
Teacher Advancement Program Foundation

*Transcript by:
Federal News Service
Washington, D.C.*

MS. KEMBLE: Welcome. I'm just going to say a few words about the institute and this forum series. For those of you who knew Al Shanker – and if you didn't know him, those of you who know about him – one of his trademark characteristics was that he loved good discussion on tough issues. And he liked to argue about whether the research was sufficient to lead him and the organization he was leading in a specific direction.

I noticed that many of you who haven't been to one of these forums before came in and asked if you could sit at the table. Please do. We had the room set up to encourage discussion. And we do want to make sure that you all feel free to get in to this, and get into it frankly. If you have tough points or if you want to attack somebody, feel free. Al always did that and – (laughter) – we want to carry on in that tradition.

As many of you also probably know, Al was not at all knee-jerk about the issues he chose to deal with and the ways in which he took them on. In general, we've tried to select issues where we think there is a real departure between what research tells us and what may be happening in practice. And so the purpose of these is to try to shed light on what should be done. I would also say – and Milt, our board member here, has been to a number of these – that we've also sometimes picked issues where there really isn't very much research at all that says anything, where the policy world is just charging forward anyway. And in those cases we've tried to point out that research doesn't have a whole lot to say. So, here we are. Milt Goldberg, our moderator, I'm going to introduce briefly.

Milt's claim to fame, at least the one that I know best, is that he was the executive director of the National Commission on Excellence in Education when it came forward with the famous report, "A Nation at Risk" in 1983. (And when Rick Kahlenberg's book – Rick Kahlenberg is here – when his book on Al comes out, you all will know more about it too. The American Federation of Teachers, and Al in particular, were very involved in saying that was an important report that we had to take seriously.) Subsequently, Milt also served as the director of the Office of Research for the U.S. Department of Education, where he helped develop the national goals that were adopted by the bipartisan 1989 Education Summit. He currently serves on a number of boards: The National Center for Adult Literacy – I don't know why the Albert Shanker Institute is last on this list – but certainly the Albert Shanker Institute where I would say he was one of our founding board members; also the national Center for Research on Evaluation, Standards, and Student Testing; the National Board for Professional Teaching Standards; and the George Lucas Educational Foundation.

Milt does a great job moderating these forums. He's done it for us before, and he will take care of introducing the speakers and handling the discussion. Thanks, Milt.

MILTON GOLDBERG: Thanks Genie. The reason Albert Shanker was last – it's in alphabetical order going the other way. I'm dyslexic – (laughter) – so that's why.

I want to welcome you all as well. The institute's forums have been quite remarkable because they do reflect Albert Shanker's general sense of discussion and the need for even confrontation around certain issues. I should say about "A Nation at Risk," a lot of people in education did not like the report. Yet, ten years after it came out, Albert Shanker, in his *New*

York Times column, said that on its 10th anniversary he had decided to reread it, and his conclusion was that we had got it just right. Those were his words. And it was a remarkably well laid out column and we appreciated his support, and he was frankly a good colleague and friend.

Today's meeting is on performance-based pay. You know that this is one of the more controversial issues in American education. I thought maybe that's why they picked 6/6/06 as the day to hold this meeting, because of the satanic – (laughter) – anyway, no, I don't think that is the case at all. I pointed out to some of our friends here on the panel that today's *Washington Post* has an article which says that the local teachers union in Washington, D.C. is going to vote on a new contract today, which includes a pilot for performance-based pay in 10 D.C. schools. It will provide bonuses for increased student performance and for additional training, and so on. So, it is a coincidence but it is also a sign of the times that a lot of this discussion is taking place.

When we did "A Nation at Risk" it was called merit pay, which is a term that I think has lost some of its luster. But what may be surprising to some of you is that there are hundreds of school districts around the country that are now experimenting or considering experimenting with performance-based pay. And there are as many as 30 states that have some legislation or regulations talking to this issue.

So with that, what I would like – the ground rules are these by the way: Our two speakers, who are both preeminent in this field, are going to take about 20 minutes each. After each one speaks you'll have about 15 minutes to ask questions, to make points, essentially to provide the kind of debate and argument that Genie described. We will then move on to the next speaker and do the same thing. The one thing I ask of you is you please use the microphone. Push it; there's a red button that goes on when it is on. And identify yourself when you speak because this is all going to be taped. So we want you to use the microphone and identify yourselves. And, with that, we'll move forward.

Our first presenter is going to be Edward Lawler. Ed is distinguished professor of business at the University of Southern California's Marshall School of Business, probably well known to many of you as the founder and director of the USC Center for Effective Organizations, which is one of the nation's premier management research organizations. He has done an enormous amount of work in the whole area of human resource management. He's received awards in the area and is the author or co-author of – I hate to say it – 35 books, but there you are. So with that, Ed Lawler.

ED LAWLER: Thank you. Thank you. It's interesting to lead off this with a discussion about research-based debates and discussion. Probably no topic in work organization has been more heavily researched than pay systems of one kind or another: reward systems; merit pay systems; bonus plans, etc., etc. There is indeed an enormous, enormous amount of research on the effects of pay systems on behavior in complex organizations. It provides, I think, some pretty clear guidelines as to when systems have a positive effect and when they have a negative effect. In fact, you could write a whole book on it. In fact, I have – (laughter) – I've written several.

Just the issue of merit pay, which Milton mentioned, produced a book about six years ago that found 3,000 research studies evaluating the impact of merit pay systems in work

organizations. And I can report that the results were overwhelming negative. The systems were not shown to have positive impacts, on balance, in virtually any setting. In this case, they used the more restrictive definition of merit pay, meaning a salary increase based on a subjective appraisal by a boss looking at a subordinate's performance. We could talk about why that is, but I think it is relatively predictable that those systems would be failures, almost without question.

My interest is in long-term research. When I started studying pay systems in the early 1960s, just across the river in Virginia, I studied the effect of pay systems on the managers of ABC liquor stores in Northern Virginia – slight positive impact, not very much, pretty predictable. Most recently – a little bit of a side note, particularly relevant to the “Nation at Risk” issue is that I just completed, with Jim O’Toole, my co-author, a 30-year update on a 1973 book he did called *Work in America*, which Elliot Richardson, then-secretary of Health, Education, and Welfare, commissioned to look at the state of the American workplace and how people were being affected in terms of their health and well being as a result of the workplace. And one of the strongest conclusions that came out of it – looking back some 30 years and saying, where are we today – is that many of the things that were said about the educational system then and its impact on America’s industrial competitiveness are even more true today – that if we are a nation at risk today from an economic point of view, its very much because of the skills of the workforce and their inability to compete globally in many industries.

All too often I think we find ourselves trying to protect the bad jobs and keep them from leaving the country, when we should be focusing on creating good jobs based on a skilled, knowledgeable workforce that can compete on a global basis in software programming, engineering, science, etc., etc. We very strongly emphasize that the future of the American workplace depends greatly on the skills that come out of our school systems. Not so much the universities (which are actually doing a pretty good job, maybe too good a job because they are often training foreign passport holders who are going back to their countries, taking work with them), but the K-12 systems, many of which are failing to produce the kind of skill sets that lead to a good university education. A small aside – that will be out next month, actually.

When I think about reward systems and try to determine what impact they are having, I really look at four different areas. The first one, of course, is attraction: Who do they attract to work for an organization? The evidence there is pretty clear. Their ability to attract numbers certainly depends upon the market and where you are in the market. Obviously, if you are high in the market as an organization, you compete effectively. If you are low, you compete poorly for talent. But of course it is more subtle than that. The kind of pay you offer – the kind of package you offer – as well as the amount you offer influences who’s attracted. So, for example, if you offer a lot of bonus pay or variable pay, you may attract a different person than if you offer a guaranteed, seniority-driven, relatively stable type of pay package. What’s right, of course, depends on the organization and what you are trying to build and what kind of people you want to attract. It also influences the values of the people who join the organization. If you are a below-market payer, you are probably going to attract people who are not as focused on money and what it can buy as if you are an above-market payer. If you’re a Wall Street hedge-fund operator, you’re probably going to attract a different personality and somebody with different value systems than if you are an educational system attracting people into teaching.

The second point of course, once you move beyond attraction, is retention. And again, the market is relevant here. You attract, to some degree, to the degree that you are at or above market. You lose people if you are below market. But, of course, the more subtle question there is, who are you retaining? Are you retaining the individuals you want – the contributors, the high-value people – or are you just attracting people based on seniority? They've been there longer, they make more money, and therefore they are more likely to stay. The problem with seniority, in particular, as a determinant of pay is that often you end up with a seniority-based system retaining your least effective employees, because the more effective ones' market value was probably growing faster than their seniority and they had the option to leave and go to other employment.

If you give everybody an increase, the poorer performers often get above the market and are retained because they essentially have no options that equal what they are making where they are. So obviously, even in terms of retention, there is an argument for trying to move pay faster to higher levels for outstanding performers – i.e. people who have a higher market value – than for poorer performers. Of course doing that, as we'll see, arguably depends on your ability to identify who those people are, what their market value is, and have a pay system that allows you to manage their position in the market relative to their performance. If you could do it, though, it gives you a huge gain because you could then attract and retain the best performers.

Skills are a third possible issue in reward systems. There is no question that offering additional pay for the acquisition of skills will lead people to acquire additional skills. One of the most dramatic examples of this is a corporation – United Technology up in Connecticut; really a global firm with over 50,000 employees that heavily rewards all its employees for getting an advanced degree, or any degree for that matter. It gives them time off, it pays tuition, and it gives them \$20,000 or more of company stock when they complete their degree. Why do they do that? They argue that it creates a learning culture and an organization that is focused on learning. They admit that many people get the degree in order to leave; it is a mobility degree for some people. They will pay for a degree in home economics even though they are a technology firm. They'll pay for an agriculture degree, etc.

So there are all kinds of positions on it, and there's no question that if you reward people for learning, they will learn. They will get degrees, they will take courses, etc. But again, the issue of course is how do you measure knowledge acquisition? In the case of United Technology, it's like many school systems: They simply say, if you've got the degree, we are going to reward you. That's a fairly blunt instrument in terms of being sure that your employees have the skills that they need in order to perform their job duties and promote themselves – develop themselves in ways that are helpful for the organization's long-term effectiveness. United Technologies knows that, but it's looking to create a culture, a culture of learning, and defends their system, supports their system very strongly on that basis.

Most other organizations are much more limited in their objectives. They are looking for people to develop skills and knowledge that are immediately applicable or at least potentially applicable to their work setting, so they limit what degrees they will pay for. SAS for example, a software firm down in North Carolina, will pay for and reward people for certain kinds of technical degrees but they will not do it for an MBA. Why not an MBA? Because they see

MBAs as a mobile group of people and the MBA as a mobile career device. They want to retain people; they want people who are committed to SAS long term and who will develop. Of course it's not just courses that people need; it may be something they could learn in other areas, and course passing may not be the best way to certify somebody as having skills. There are tests, there are on-the-job demonstrations of performance, which in many ways are far superior if your target is training and developing somebody to do a specific task that the organization needs and that is central to its effectiveness.

So just quickly, to summarize on skills, no question that rewards will take people in a variety of ways in terms of the skills they acquire; the issue is, from an organizational point of view, what are you trying to do? Where are you trying to direct people's learning? And of course, can you measure learning and what has happened? Again it's pretty obvious that seniority is a poor proxy for learning.

Let's look at the more difficult issue, which is, to my mind, performance and whether and how you can reward performance. There's no question that performance systems that have certain characteristics drive behavior. I'll list those characteristics in a moment, but the press carries lost of articles about how performance-based pay systems drive behaviors. The current articles *du jour* are on the repricing of stock options or the back-dating of stock options. What's going on there of course is pay for performance; just a little bit of a twist to be sure that the pay takes precedence over the performance or at least, quote, "accurately reflects what the CEO thinks his performance is." Why isn't that his or her? I think they're all "hises" so far, at least the ones that are likely to be uncovered.

Not surprisingly, we see numerous cases where particularly large gains in stock and other executive comp vehicles produce behavior that is illegal or unethical. We had the Enron case, of course, which was heavily driven by stock options and the gains there. An interesting study came out the other day, showing that if you take all the corruption cases that are hot in the corporate world and look at the executives who have been indicted, almost all of them have extensive stock option packages or stock ownership packages that far exceeded the norm for their industry – a clear indication that if you put enough money out there, people will do almost anything – some people will do almost anything to get it.

So, does money motivate behavior? Yes. Does that mean you should use it to motivate behavior? Well, not necessarily, in my mind. There are other things that motivate behavior and there are some situations where it is extremely difficult to structure a system which primarily motivates the kind of positive behavior that you want. Let's just take a moment to look at what a system needs to have as characteristics in order to motivate behavior.

First of all, a reward has to be important to the people. That is, they have to value it. That usually means there has to be a fairly large amount of pay at risk and that the people themselves desire the money. What's enough? Well, there's a lot of research around that issue. There is no precise answer, but it's pretty clear that it's more than the 2 or 3 percent that is often at risk in merit pay systems. It's much more likely that 9 or 10 percent or even 15 or 20 percent of pay needs to be at risk in order for it to be important enough for most people to get excited about and change their behavior. An important qualifier there of course is that if it's seen as a truly

performance-based reward that has some recognition value associated with it, a relatively small amount of money may be quite meaningful to people because it confirms something about themselves; it carries a sense of status and a sense of recognition that is far beyond the monetary value of the reward.

If you are talking just about monetary value, however, we are talking about more than most merit pay systems deliver in a low-inflation environment. I understand, since I'm in Washington, that we can count on what the Fed says, and they say we are going to have a low inflation world for the next – forever I guess. So we're not going to be back to the era of 10 percent increases and 10 percent, 8 percent inflation where you really could actually do merit pay if you wanted to. Nobody did of course. Instead of giving some people zero and some people 20 percent, the average just moved up to 8 or 9 percent and the range stayed 2 or 3 percent above and below that new higher operating number because of the change in inflation.

So, okay, quickly then – or repeating: In order for money to be a motivator it has to be important to people, for one reason or another. The second piece, though, is really the most difficult piece in order to make money a motivator, and that is there has to be some kind of line of sight. That is, an individual has to see how their behavior influences the size and the amount of their reward. A lot of people call it line of sight; I think it's more correctly called line of influence. That is, do I see that what I do in the classroom and in my job has an influence on the amount of money that I make? Creating that link is a complex and very difficult process, in my mind. It obviously takes measures – the right kinds of measures – that are either highly creditable or very objective, and often it takes both of those.

It takes very objective, creditable measures – and here's a key point – inclusive of the major behaviors that you want someone to demonstrate. Many reward systems end up being dysfunctional because they pick an obvious easy-to-measure behavior, reward that heavily, and as a result, other behaviors drop out of the person's repertoire that are important but are not measured. So you end up getting what you pay for and being in a very dysfunctional situation. I could tell you hundreds of stories from the corporate world where incentive plans of one kind or another have had a very negative effect, even though they succeeded in increasing the behaviors that they were intended to increase.

A lot of this relates to an issue in schools as well, and that is whether the measures focus primarily on individual behavior, group behavior, or organizational behavior and performance. In the United States, we are obsessed with individual accountability. If you look at our national values, if you look at our reward systems, much more than any other country in the world, with the possible exception of Australia, we like to reward and punish individuals. The problem with that, when it comes to pay systems and complex organizations, is that you may not be able to get good measures of individual performance. You may only be able to get the kind of measure you need by going to a collective group. It may not be a whole organization, it may not be a whole school, but it may be more than just the performance of an individual class or an individual in an independent contributor role, an administrator, etc.

This is a tough issue, and I notice in the research, certainly on education, that the ball seems to go back and forth between rewarding the school for the school's improved

performance, where everybody gets the same thing or mostly the same thing, and rewarding the teacher for how their classroom performs. But, if we do that, what do we measure: absolute performance, gains in performance, etc.? These are all a bunch of very complicated issues. In any case, whatever you're measuring or however you're measuring it, the key issue of course is communication, which ties in to trust.

Can you communicate to the people receiving the rewards what the deal is – what's being measured – and will they trust that it will be fairly and reasonably measured? A lot of that depends on the skills of the supervisor. If you look at most pay systems, when they fail there's usually a manager to blame. The manager has got the wrong measures; the manager has done a poor job of communicating; the manager is not trusted, particularly if it's an individual, subjectively measured performance management system. Frankly, most supervisors are not up to the task. They don't do a good job of making it clear of what they are looking for in behavior; they don't do a good job of assessing the individual and communicating that assessment; and ultimately, they don't do a good job of explaining to the individual how this assessment of their performance has led to a bonus or a merit increase. That line of sight is simply not there. And as a result, of course, there is no motivation.

Those of you that have worked in the private sector have probably realized that every corporation does an individual performance review. It's almost one of the few universal practices in American business. And almost universally, they are failures. That doesn't discourage people from doing them. Because of this obsession with individual accountability and measurement, we continue to do them, but the failure rate is tremendous.

One of the most highly publicized practices in that area over the last decade is the GE forced-distribution approach, which some of you may have read about. Jack Welch talks about it all the time as a crowning achievement in his days at GE. My personal impression is that it's an admission of total failure. It's like grading on the curve. You grade on the curve because you can't discipline your people to do a good enough job of actually evaluating people relative to some standard. So what you end up doing is punishing people who happen to have good co-workers, because they are going to end up lower in the distribution, and rewarding people who are with poorer co-workers, because they are going to be at the top of distribution, arbitrarily. And I don't think that is something you should be proud of. Maybe that's just my bias, but it's the way I look at it.

Okay, let me just quickly summarize what I think the key issues are and then we'll have a few minutes for questions. The key issues, I think, in rewarding performance, again, are do you reward the individual? Do you reward a group or a collection? Do you use bonuses or salary increases? You probably already have assumed from what I said, I very much believe in bonuses; that the problem with salary increases is they reward people forever for something they did many, many years ago, and they often retain the wrong people, they decrease tremendously your flexibility in terms of rewarding people for skill acquisition or outstanding performance and, particularly in a low-inflation environment, they are highly dysfunctional.

And then, finally, if you are going to reward performance, I think the key issue is how does that fit with rewarding for skills? I don't see those two as competing but as complementary.

The challenge is to calibrate it rightly, so that you've got a reward for people with an outstanding level of performance at what they're doing currently and keeping their skills current and acquiring new skills, so that they will continue to be able to perform at an outstanding level. So I happen to be a big believer in paying for skill acquisition, as long as it can be demonstrated that that skill actually has been acquired. I happen to think, at least in the educational environment, that's one of the most obvious applications of paying for performance; that is, paying people for skills, not seniority, and probably not class completion but more for demonstrated workplace skills. I know there's a national certification credential and some of that activity seems to me to be very much on target for that whole skill acquisition area.

Thank you.

MR. GOLDBERG: Thank you, Ed. And now we are going to have about 15 minutes of questions or comments regarding Ed's remarks. And, remember, you'll need to identify yourself and use the button for the microphone.

Yes?

MS. PESKE: My name is Heather Peske from the Education Trust. I appreciated your comments, Professor Lawler. Thank you. I'm just curious; have you done any work on whether individuals will forgo performance pay or incentives in the form of money for other types of incentives? That is, for example, if you have a boss whom you see as highly effective and supportive of your work, would you be willing to take less pay than transferring to work with someone else?

MR. LAWLER: Oh, absolutely. If you look at the research – I mean, really simplified, what people get excited about at work is some combination of interpersonal relationships, work content, and rewards. And, of course, among those extrinsic rewards are not just – not just money, but various kinds of recognition. It could be formal recognition or informal recognition. And then there are just huge individual differences in how people value those different areas. Some people will take jobs that pay less because they love the content. It's something that they just love to do. Teachers, I think, often fall in that area. Does that mean that money won't motivate them? Well, it may – but just not to the degree that it will motivate somebody who is getting their MBA and counting on \$120,000 starting pay and wants to head to Wall Street.

People make all kinds of trade-offs, and we really don't know a whole lot about why people develop different values and different orientations, why some people are more obsessed with making money and some people are more happy to join the Peace Corps and go overseas. There seem to be an interminable number of articles about how generation change affects this and so forth and so on, and certainly there are generational differences, but probably more important are just individual differences within generations. There are just enormous value differences among people in terms of why they work, what excites them at work, and how you can motivate them.

Now, there's a certain homogenization that goes on, as I've probably inferred, in different corporations and different sectors, because people who go to one company – to take an area

where I am most familiar – do differ systematically from people who go to other companies. And part of that’s the function of the brand of that organization as an employer. You can pick out certain companies: If you want really interesting, challenging work in this area, you go to, let’s say, Google. If you just want to make money, you’d probably go somewhere else, and so on. So organizations, to some degree, end up with a self-selected group of employees who value the kinds of rewards that the particular organization focuses on in its reward system. So part of the issue is creating a reward system that matches your business or your organization and that attracts and retains the right people for the motivators that you have available in that environment.

MR. GLODBERG: Joan? Identify yourself.

MS. SNOWDEN: Oh, Joan Snowden from the American Federation of Teachers. I too appreciate your concise and interesting discussion here. And it strikes me that we could probably make a grid with your criteria and put across it 10 or 12 current proposals, or even some enacted proposals, like in Florida say versus Minnesota, for pay for performance, and we can probably do a pretty damn good prediction of which will survive and –

MR. LAWLER: What their impact will be? Yeah.

MS. SNOWDEN: – which won’t. But there are two criteria that strike me as particularly interesting in the public sphere, and one is this issue of significance in terms of money. And that seems to be a real difficult point in terms of getting real money on the table. I’m sure TAP will deal with – Lew will talk a little bit about that.

But the other one had to do with the issue of corruption of systems. And it’s interesting because most of the pay-for-performance systems highlight test scores, not teacher instruction, and test scores are much more subject to corruption than instructional practices, if we could identify and accurately measure excellent practice. I wonder if you would like to comment on that.

MR. LAWLER: Yes. I have occasionally read articles – I was reading one this morning – that certainly suggest that even with a relatively small amounts of rewards that are available in the education sector, that there has been some fudging or fraud involved in test scores. It’s predictable, I think. The only thing that surprises me is the relatively small amounts of money involved and the fact that, in some of the corruption cases, it apparently has been a reward not to the individual even but to the school, which suggests that maybe there’s some competitiveness going on there more than the actual, tangible reward – that is, I want to be in a school that has won one of these rewards and gets the recognition of being an improved school or an outstanding school more than I can now buy a PC for two more students, or whatever the financial rewards are. But again, predictable – predictable that this would happen.

I have no idea in what percentage of the cases that happens or whether it’s sufficiently likely to happen that it should eliminate those kinds of systems, but it’s certainly a pretty predictable outcome – though an unfortunate one – from a reward system which seems at least to be targeted at the right point. You know, it’s things like that, the fact that, quote, “objective”

metrics often lead to strange results that lead so many organizations to come back to a judgment of the individual made by a supervisor rather than a metric that's based on a test. Another comparable thing would be paying a sales person for revenue generated, rather than for how their boss appraises their performance and so forth. And inevitably when you use those, quote, "objective" measures, you end up with some pretty bizarre outcomes: windfalls, shortfalls, and fraud, basically, that don't look right to the eye but are objective in the sense that they were based on a test- or revenue-generated objective dollar amount.

MR. GOLDBERG: Ruth.

MS. WATTENBERG: Ruth Wattenberg; AFT. Two questions: One, can you talk about the kinds of measures that do work in complex organizations, that in effect are alternatives to using something like just a test score? And then, secondly, in your research, do you think there has been any negative effect associated with workplaces in which there is no way to be recognized other than through seniority and not courses taken? That is, here I am, I'm working so hard, I'm trying so hard and there's no way I can be seen as anything different than the person next door to me.

MR. LAWLER: Well, I think there is no – to the first question, there is no simple answer. It very much depends on the situation. Certainly, some companies have improved the individual performance appraisal by making a pretty large investment in training and developing supervisors to do it and by giving them better instruments, if you will – technology. Much of it has gone online now and that has increased the speed with which you can gather data. It increases the public nature of the appraisals in a way that's pretty positive, I think. So there is some positive movement going on there. But I still have to come back to the – you really do have to look at the situation. Sometimes you're best just going to a profit sharing plan or a stock ownership plan or something that rewards everybody pretty equally and doesn't try to get down to the individual level.

I'm sorry, the second question was the –

MS. WATTENBERG: Is there a negative effect to being – (cross talk)?

MR. LAWLER: I think the negative effect is some combination of culture and failure to retain the right people. The fear is – this doesn't always happen, because a leader can overcome this – but if you combine the lack of any formal recognition or reward for outstanding performance with a leadership style that is, let's say, not very sensitive to the culture and the norms and the identity of the organization, you can end up in an organization where particularly good performers just don't want to be. They don't feel that it's a positive work environment where their efforts are recognized and, as a result, they may drop – their performance may drop or they may exit. They may just depart looking for someplace that better fits their values and better fits their organizational needs. In the case of schools, that could be a different education environment; it could be going to the corporate world – any number of places.

But I think that's the major – to me the major danger is attraction and retention of talented individuals who have some achievement motives and want to be recognized and want to

feel like this is a place that values performance and values me and what I do. That may be driven out, certainly, as well as, gee, I can make more money there as somewhere else as well, but it could be more the psychological need than the financial need.

Q: I have a question. You've done a lot of work, Ed, with human resource managers. I'm going to draw an analog between human resource managers and school principals. Are there particular attributes of these managers that make it more likely that performance-based plans will work better or not? In other words, what can we say about the role of the leader in these plans?

MR. LAWLER: I think the role of a leader is critical but the leader should not be the HR executive. All of our research says that if the HR function in an organization is the champion of the system, it's a non-starter. That is, it has to be championed by the line management or the business management of the organization. If it's their tool, they see it as a way to communicate with the workforce what the organization is about – what it values, what kind of careers are available there. Then it tends to be a positive situation. If it's an HR function, which it often is in corporations, saying you ought to do this, and if you don't blah, blah, blah, bad things will happen, etc., etc., it becomes a perfunctory, often dysfunctional thing that people are doing only to get the HR executive off of their backs. So it just does not have a positive effect.

I think we're starting to see that change, broadly speaking, in American industry because increasingly we're in a country that only competes based on human capital. I mean, we've shifted from a country that competed globally based on technology, hardware, capital investment, and some natural resources, to a country that's increasingly trying to compete based on our human capital. As more and more executives are seeing that, more and more are saying we've got to be good at that because that's our key resource these days. But it's a slow change – very slow.

MR. GOLDBERG: Yes.

MS. BROWN: Cindy Brown; Center for American Progress. How would you adjust your comments if you were talking about principals and evaluating them? You really wouldn't want to evaluate principals as a collective or a group, yet teachers may not see the principal's role in evaluating them as fair if they too weren't going to be evaluated. And since we're talking about pay-for-performance, shouldn't at least some element of their pay reward be based on student performance or the success of their school (which is likely to be, at least in part, measured by student achievement gains)?

MR. LAWLER: Once you get to principal, you're in a classic managerial role, if you will. Sure, education management differs from business in some ways, but in many ways it's pretty similar. In business today, these people are typically rewarded based on two things: the results of their business unit (which would be a collective measure in the sense that it would be how that unit performs), and secondarily, on how they achieved those results. That's been a pretty major shift in business over the last couple decades. It used to be the typical corporation would say, I don't care how you get the results, just get them and we'll reward you. Today more and more are saying, there are certain ways that we think are the right ways to get the results, so

we're going to look both at how you got the results and what the results are, and your pay is going to depend on both.

There's more and more focus on competency-based systems, skill-development-based systems for managers – saying here's a leadership style; here's a way of dealing with people; here's some communication skills we want you to have. You need to have these, you need to demonstrate these, and you need to produce the right results. Now the question, of course, is whether the people below that person are also measured on those same business unit- or schoolwide criteria that the principal or business unit manager is rewarded on. Sometimes they are and sometimes they aren't.

The problem with aggregates of course is – I go back to my line of sight argument. The strongest line of sight is when you hold somebody accountable for their individual behavior, you have good measures of those behaviors, and the person has a reasonable chance to demonstrate those behaviors. Now, I solely can determine what my rewards will be. The Mary Kay cosmetic salesperson who is out knocking on doors has a great line of sight. He – there's very few – *she* can know every day what she has made, and can knock on more doors and make more money – great individual pay-for-performance. But it doesn't collectively add up to anything, in the sense that you probably don't want her or him to be rewarded based on what that area's total sales were (unless maybe you think that they can train each other, support each other, make some tradeoffs). But it's pretty much an individual job. And that's the issue in the classroom, I think. How do you define the work environment in a school? Is it a teacher with a classroom, or is it a learning institution where you want teachers supporting each other, working together as a team? And if you do, if you want more of the latter, you either have to reward teamwork at the individual level –

(Audio break, tape change.)

Q: – areas in the economy where there's not pay-for-performance. And the suggestion is that in the private sector, pay-for-performance is used across the board. That doesn't strike me as necessarily true, and I'm wondering whether you have data on the percentage of workers who received substantial bonuses based on their performance. I mean, I realize that corporate America is obsessed with these evaluations, but how often do they actually translate into substantially different compensation packages?

MR. LAWLER: Well, that's not an easy question to answer. Probably it's not education; it's public sector employment versus private sector employment, which today differs significantly in union representation, right? So, remember, we're now down to about 8 percent of the private sector is in a union. So 8 percent don't typically have pay-for-performance. The union sector is typically not pay-for-performance except perhaps collective pay-for-performance. There are gain-sharing plans and bonus plans that have been negotiated cooperatively with the unions, but they're relatively rare.

The other, let's say, 90 percent of the private sector – 92 percent of the private sector – probably have pay-for-performance but of various kinds, the most popular being individual incentives. When we do surveys of large corporations, they particularly say that they have

individual incentives for essentially 100 percent of employees. So I think it's pretty pervasive. Increasingly, employees own stock in the private sector; about 40 percent of the U.S. workforce owns stock in the companies they work for. We're pretty heavily leveraged around some kind of incentive pay for most of the private sector, but clearly not for the public sector. And, of course, I think that influences somebody who goes to work in each of those two sectors.

Now, a lot of those people – maybe following up on your point, and here I don't have a number – are in a merit pay system where – like I am – where if I have a really great year I get 5 percent, and if I have a really bad year I get 3 percent or maybe 2 percent. And that's probably not going to change my behavior significantly at this point in my life. So I'm not motivated by incentive pay. I don't think there's – what percentage of the private sector workforce is in a similar position, I don't know. I mean, more than 20 percent; less than 80 percent.

This year, the typical merit pay system I think has a budget of 3.8 percent. That's the number I saw most recently, and that usually means a range of – realistic range – 90 percent of the population would be covered between 2 and 6 percent or 2 and 7 percent, something like that. Not a huge amount. The only thing that makes a merit pay increase valuable, of course, is that you keep getting it. As long as you're there, it's still part of your pay. So in that sense, if you think ahead, it really is pretty valuable.

MR. GOLDBERG: Genie, you had a question?

MS. KEMBLE: I had a couple of questions. First of all, I wonder if you could talk a little bit more about measurement. It would seem to me that this could vary greatly depending on what it is that's being produced, and certainly that's something we worry about in education. You talked about the line of sight and also the perception employees would have of fairness and justice, so I guess one part of this would be is what can you say about measurements that are fair, relative to the sorts of the things that are being measured, and at what point is there some kind of a falloff in terms of employees' sense of justice about the kinds of measures being used? Presumably these managers are going to have some criteria and use them.

And then the second is really more a comment on education. There may be disagreements in education about what constitutes skill development because it's highly politicized. So you could have a situation in a school system, for example, if one school was using E.D. Hirsch's core curriculum and the teachers were being trained in a very defined way, or around a set of subjects that were clear, where the skill development would result – I'm assuming this now – but just say in one case the skill development would result in higher student performance and in another case you have a disparate situation and teachers are learning all kinds of things, they are learning what they were told to learn, but it doesn't result in anything in terms of performance. So I guess my comment really has to do with the loosey-gooseyness of what's really being looked at as skill development.

MR. LAWLER: I think both of those questions come back in some ways to the issue of what kind of leadership you have and what kind of culture and environment you want to create in a school. What's your philosophy of education? What's your perception of the role of the teacher? What kind of interdependence do you want among the teachers responsible for different

subjects or different classes? And, you know, if you look at all the experience with reward systems, it should be a derivative of those earlier questions, not a driver of them.

So, yes, if you have one philosophy of education and you want to run a school in one way, you want a reward system that supports that, not one that is out of alignment with how you evaluate the performance of the individual, how you evaluate the performance of the school, what kind of cooperation do you want among the people – the teachers, the administrators, etc. – in that school. And without that as a starting point, it's very hard to say that one reward system is a better fit than another.

I think what most schools have now seems to be kind of a neutral reward system, and that doesn't do much. It doesn't particularly attract or drive a philosophy of education; it just sort of hopes that it gets a few people to show up and stay with the system. And you might have higher aspirations for the reward systems and think you can get a better return on your investment, but you've got to know what that return is – what are you looking for? And then you can go the next step and say, okay, how should we shape the reward system, given this is what we want the returns to be?

MR. GOLDBERG: We have –

MR. LAWLER: That's sort of a non-answer but I think it's the only realistic one.

Q: I think it also means shying from what research tells you.

MR. GOLDBERG: There's time for one more comment.

MR. LAWLER: Well, I think if you look at the what-works issue, is –

MR. GOLDBERG: Less time for one more question.

(Laughter.)

MR. LAWLER: It's like most research. If you look at any area of research and social sciences – and I've been around enough to look at a lot of them – there is sort of a first question: Does it work? And the answer is either yes or no. If the answer is yes, then almost always, well, under what conditions and when and where and what's the best way to apply it, and so forth. And you pretty quickly move down from one big question to about 35 or 40 or hundreds of little questions that you need to deal with to really have a useful result that can guide somebody in a particular situation as to what they should do.

MR. GOLDBERG: One more. Go ahead.

MR. ROBINSON: I guess this is a medium-sized question. I'm Steve Robison. I'm an Albert Einstein fellow in the office of Senator Obama. My question is about the transition. If, in answer to Heather's question, there's people who are motivated in different ways, and we've selected for decades for a cadre of people for whom performance pay might not be a motivator.

MR. LAWLER: Yeah, you can expect turnover.

MR. ROBINSON: Right. And then you're asking for a system where you're using performance pay as a recruitment tool. You're going to have a different group of people. And I'm wondering how this transition works because for one group of people the performance pay is not motivating, but they still soak up the money, and for the other group of people, the performance pay might be insufficient.

MR. LAWLER: Yeah.

MR. ROBINSON: Does that in some way suggest how this has to be structured to be workable so that it isn't so little that people won't be recruiting who you want, and yet enough so that people might be motivated who weren't motivated by that in the past?

MR. LAWLER: When I've seen that kind of change happen in organizations – a significant change in the reward system generally, pay systems specifically – it typically results in turnover and some period of culture change, which is reasonably disruptive. People who are there and are happy with the way things are typically resist and sometimes succeed in preventing the new system from being effective and being adopted; if they aren't, they often exit and look for other situations.

And it does take a while for the labor market to respond to the new system and people to be aware that, yes, it's a different world now; maybe it fits me better than the old world so I ought to get onboard. So there's a delay to some degree in the transition process. It's not an easy transition to make. Usually there are obviously some closeted favorable people who are there and they respond to the proposal, if it's a reasonable proposal, so it's not like 100 percent of the people are going to resist it.

But particularly in large bureaucracies, as one person told me years ago, who working at that point for AT&T – some people may remember AT&T; they used to provide telephone service to us – (laughter) – he said, you know, I've been here a long time and I've seen a lot of change programs come along and I'm still here. And I said, well, what's the secret to your survival? And he says, well, I found that those people who advocate the change usually get fired when the change fails and those people who resist the change usually get fired when the change is going on. If you just sit in the middle, you survive. (Laughter.) It's quite a piece of wisdom I thought if you want to be a bureaucratic survivor.

MR. GOLDBERG: That should be the last point on this part.

We're going to move on now to Lew Solmon, who I'm sure is known to most of you. Lew is the president of the Teacher Advancement Program Foundation, known as TAP, and he's a member of the board of trustees of the Milken Family Foundation, where he served as executive vice president for education. He was also dean of the University of California at Los Angeles and the author of many books and articles on the issue before us today, and probably one of the leading spokesperson around this issue in the country.

Lew.

LEWIS SOLMON: Thanks, Milt. I must say it's a pleasure to be there. When I was a dean of the Education School at UCLA in the late '80s, we found a little money so that I could invite visiting scholars in residence for a week or so. And I had a not-too-reform-minded faculty who were very interested in having the head of a union to come and tell them that everything was all right. And the first person I invited was Albert Shanker. And he really shook up and stimulated our faculty and it was really one of the best things that I ever did at UCLA. So I'm very pleased to be here.

Let me say that we rely upon research – relied upon research as we developed and continued to refine our Teacher Advancement Program, which I'll discuss very quickly in a minute. But until recently, there was very little research on merit pay in education, especially if you define research the way the Institute for Education Sciences defines it. You can't randomly assign schools or districts to participate in performance pay plans.

The summary, though, of the research on performance pay is it's never worked; indeed, it's rarely survived. A couple of experiments in, I think, places like Douglas County have continued for exceptionally long periods of time, but in most cases – actually what somebody said to me was that as soon as they distribute the first set of bonuses the program blows up. So, that's the research that we've relied on. But what we've done is asked, why have performance pay plans failed? And I'll talk about that in a minute.

Our research came from talking not just to teachers, which seems to be the way people do it, but talking to people who considered teaching careers and rejected those. And so it's not just what teachers want but what – if we're aiming to attract, retain, motivate and develop a high-quality teaching force, we've got to ask who we don't have in the program, and also observing differences between the private sector and education. And my boss is a businessman and I'm an economist, and our sense is that performance pay is pretty pervasive in the private sector; maybe research shows none.

I can't resist, though – I think I was very nicely quiet when the question period came up, so I just want to make a couple of comments – (laughter) – to show you all my prejudices before we start. We heard the, I mean there were a lot of comments just casually made: obsession with reward and punishment of individuals in America more than any other country. I would just ask where the strongest economy in the world has been and is. So I'm not sure that that's necessarily a bad thing.

Secondly, if we incentivize certain behaviors, that's what we get, to the exclusion of other behaviors. I would observe that, in education, we have been so worried about effective and attitudinal development that we get pictures like this, which are flat. I have millions of other ones but Joan asked me not to show my 150 slides. But when we compare our achievement levels internationally over time, we're not doing very well. I think what we want is an obsession with one behavior, an obsession with student learning for a change. In California there was a very nice, good friend, John Vasconcellos, in the legislature. Some of you may know him. He passed

a law that said every person in California's self-esteem should go up. We spent a lot of time in education doing that.

The other thing is, we're talking the potential of corrupting the – corruption of the outcome measure and test scores. Well, it's interesting that for so many years we've heard about the corruption of the other merit pay measure; namely judgment of principals – judgment by principals on teachers. So if that's corrupted and test scores are corrupted, I guess we just can't do performance pay. Well, we think that if you do it right, neither one of those are going to be corrupted. The reason I have this chart up is to show that that's where we start. We start with the fact that the achievement gap is wide, that learning has not increased over time, and that's the problem we're trying to solve.

Now, the line of sight issue is very interesting. Jim Coleman – most of you know the Coleman Report and all of that in the '60s – basically said that the line of sight for teachers is not there, that it was all family basically, and research more recently has shown that teacher qualifications, teacher effectiveness, is almost as important in student achievement as home and family. And so that's a very important thing.

When we look at the first slide, compared it to this, we say teachers do make a difference in student achievement. And as a matter of fact, some of Rick Hanushek's work shows the magnitude of the teacher-quality effect: 10 times the size of class reduction – the effect of class reduction. But what means is that five years of good teachers for low-achieving kids, assuming other people had average teachers, could actually reduce that achievement gap.

Teachers matter. Teachers are in the line of sight. The role of the teachers is – according to the research that we read – unchallengeable at this point. We need good teachers. Okay. So, the Teacher Advancement Program is – the goal is to increase student achievement by maximizing teacher quality by comprehensive reform.

The first question that we ask is, why don't people choose teaching? There are many wonderful, excellent people in teaching, just not enough. Now, one challenge, which we'll hear, is salary is not competitive and so that makes the training not worth it. I would like to focus on the next four.

What other profession do you start with a title and a job description, work 30 successful years, and retire with the same title and the same job description? What other, I mean, Ed was talking about university professors being a self-contained business of one kind or another. There are really very few careers where supervisors really don't get a chance to see how effective you are or not, where there's a divine right of the closed door I say, you know. In my office, I walk in; if people are having a meeting I say, what are you doing? Not because I'm checking up on them; because I want to keep up with what's happening in my office. But here – even if you're an excellent teacher and somebody wants to figure out how you're teaching long division, they don't walk in.

I also say few opportunities to get better at what you do. Now you say, well, look at all the professional development that goes on, right? Ninety-eight percent of people take

professional development every year, teachers; about 96 percent say it's not very useful. It's based on fads, there's no follow-up, we don't know whether it's applied in their classrooms. So there isn't really much of an opportunity to get better at what you need to get better at. And then everyone with the same experience and credits gets the same thing. And there are other things you can see on that list.

Based on that, we developed TAP with four elements of reform. One we call multiple career path, and what that does is enable you to move up a career ladder from inductee to career teacher to mentor teacher to master teacher, each with more qualifications required, more responsibilities, more authority and significantly more pay. They say career ladders never worked. Sure. You took the best teachers, gave them more work and a plaque. We give a master teacher – we would like to see, depending on funds available, \$10,000 or more as a stipend every year. But they work much harder for that.

It also helps with the second point – instructionally focused accountability – because one of the responsibilities of mentor and master teachers is to work with other teachers to evaluate them, to share that evaluation responsibility with the principal, and when they identify areas where teachers could become better, work with them in ongoing applied professional growth to help them get better.

In other words, our teachers – every teacher in a TAP school is evaluated at least four times a year by trained, certified evaluators who are mentor and master teachers, and the principal. They have to pass a test in order to become a certified evaluator. So the people are evaluated by different people more than one time, according to a clearly and fairly defined set of rubrics based on research, Charlotte Danielson, national board, INTASC – a whole bunch of things. So they're evaluated. Very few people ever get a five on a one-to-five scale because we believe everybody can get better.

So, when one identifies areas where they can get better, teachers – we adjust the schedule in the school. They meet at least for 90 minutes a week in groups of five to eight teachers – either by grade level or subject level – led by master and mentor teachers, looking at student data and the evaluations that they were given in their classrooms – identify their needs, their specific needs, not some fad that you can go to a class at the university – looking at their needs, what are their kids not learning, and working on that to help them get better.

Now, a lot of professional development takes place at universities. How could a university course, a professor, help a teacher with the specific needs that they have? They wouldn't know that. They haven't been in elementary school for, I don't know, ever. So, this is real professional development in our program.

And the performance-based compensation comes along – and I'll talk a little bit more about this in a minute – but not because we think teachers need motivation to make students learn. It's not like teachers have a whole bag of tricks that if only they were given performance pay they would bring them out and do something. Actually, the objective to performance pay or evaluation is primarily because teachers recognize that if they were evaluated or paid on

performance, they wouldn't do very well because they don't know enough. Not their fault; they're not trained well in ed schools and they're not trained well in professional development.

Performance pay focuses teachers on student achievement, focuses teachers on pedagogy, requires – our program requires a lot more work, and it's only fair and respectful to reward teachers when that extra work is successful. And that's the philosophy of our program.

To some TAP is a professional development program that makes successful hard work pay off; to others it's a performance pay program that provides a great deal of support to teachers. But the message is you can't implement performance pay in a vacuum. And that's why we think that performance pay has really never worked, particularly in education.

We asked the question – I don't know whether this is called research or not, but why performance pay plans in education have failed. First of all because they're imposed on teachers; secondly, they do not provide mechanisms for poorly performing teachers to get better. And we're even seeing some of those programs, unfortunately, in some fairly publicized state efforts recently. I mean, what – I won't mention the states, but basically what a lot of them are saying is we'll give bonuses to X percent of the teachers, and that's the end of the program. So if you're not good this year, you're probably not going to be good next year. So why would anybody favor that? There's no way of getting better if you don't get the bonus the first year. Teachers are not prepared. The fear of bias, nepotism; they don't trust the principal.

Well, we've got multiple, certified, etc., evaluators, a clear set of rubrics. They practice on the rubrics for a year without any consequences and only in the second year does performance pay take place. The evaluation is often thought of as not fair. You can't look at student scores. You can look at improvement, but you can't look just at level. A lot of work – and again, in a lot of these programs that failed, they're fighting over \$500. Again, that's not worth it. In some places like Cincinnati, actually teachers lost money, and that's not going to work. And this business of the top 10 percent, that's – that could engender or cause a competition. When you're working together in cluster groups and when anybody who meets a criteria can get rewarded, that causes or results in collegiality. And the fear that the program will not be sustainable is always that, but I always bring up the point nobody asks whether class size reduction will be sustainable.

So our message is that performance pay is not enough. It has to be supported by strong, transparent and fair evaluation, professional development. Teachers are willing to be evaluated if they're prepared for it, and bonuses keep them willing to do the extra work. In our program we've had – I guess you couldn't read that – I think very good results for early stages. New sources of funds have developed. We've been able to leverage the foundation's contribution growth from one state to 13 plus D.C.

We've actually reversed the flow of teachers. You all know the farm system. You start out, you graduate, you get a credential and you start out in the high-need schools because that's the only place you can get a job. What happens is you spend the first three to five years figuring out what to do. By the time you know the ropes, you've built up enough seniority to move to a more, quote, “desirable” school. So that's what I call the farm system. We've actually reversed that. We're seeing people from higher socioeconomic status schools moving to lower

socioeconomic status TAP schools, saying I can do this; why shouldn't I get rewarded for it? So, that's a good thing. Principals report it's easier to hire good teachers, lower turnover. We are beating control schools. We're doing better in AYP.

The support for TAP elements by teachers is increasing. The least supported one I have to say is performance pay. One of the problems that we have is by the time we get the data we issue the checks in the next – in the fall of the next year, whereas we do the survey on what you liked about the program in the spring before. So if we could ever get either the survey and the checks coordinated, we might get a better result there.

The other thing is that teachers – the sociology or the whatever, the psychology, whatever, of teaching is to say I don't care about money because I want – I'm in teaching to help kids learn. And what I always bring up is doctors are in medicine to cure disease or to prevent disease and they make a lot of money, and some lawyers are in business to create justice and yet they make money; I don't see why teachers could have good objectives, good goals and still make money if they're successful at it.

Collegiality is very strong. We're now a technical-assistance program for No Child Left Behind in South Carolina. Minnesota passed a big performance pay plan, as did Texas recently, and the first five schools to reopen in New Orleans are TAP schools. So we're very pleased with what's going on.

What's interesting is – I was asked what we've learned from this – what we've learned from five years of doing TAP, and I made a list of – it's a pretty long list but I think it's pretty interesting.

First is that you don't mess with the salary schedule, at least at the start. One of the things that we've observed in the Minnesota thing that I just listed was that one of the requirements to do what they Q-COMP is to modify the salary schedule – in other words, to build the raises that you earn from performance into the salary schedule, and I think that that's caused a much slower-than-anticipated uptake in the Q-COMP money. I think that's been a surprise but not a surprise if you understand how Zach was saying the salary schedule is.

Another one is to have multiple measures of performance. We can debate which is more corrupt – testing or teacher evaluations – but teachers feel much more comfortable if you've got more than one – if you've got them both.

The next thing is that TAP entails more work, as does good teaching. Therefore it's got to be phased in slowly. You can't go in and do all of this at once, number one. But secondly, if you've got something like the new Texas plan or the Minnesota plan – and those are the good ones rather than some of the other ones that I didn't mention – I think writing the regulations in the legislation is very, very important. You can't say, we're going to provide X amount of dollars for districts that want to reward performance and not specify what performance is because what we saw, for example, in Arizona was that's what it said, and they said, well, everybody's performing so everybody's going to get rewarded. That's not performance pay and that won't work. I mean, it's a sham. And so you can't use Arizona's Proposition 301 as

evidence of performance-pay working or not. They just said, measure performance. Well, that doesn't work.

You also need a strong, well-trained and well-paid leadership team that provides ongoing oversight, explanation and evaluation. What I've said – I've drawn an analogy – I'm probably the wrong person to do this – to a physical trainer, that you need – you can't just tell people to do TAP and go away and assume that they're going to do it. It's very, very tough. It's a change in the culture. It's a lot more work. And so what we've found – just as if you buy a diet book, it's not going to work, ultimately. I've lost about 600 pounds – (laughter) – at different times. The point is a trainer gives you goals, gives you objectives, evaluates you on an ongoing basis, and that's why you need competent principals, competent master teachers, competent state people who are overseeing programs to make sure they work, and actually competent and supportive union people, which I'll talk about in a moment.

Okay, another lesson is that incentive pay helps focus teachers on student achievement and rewards teachers for a successful effort. But as I said earlier, teachers do not need performance pay or incentives to want to make kids learn. If they are not doing that, it's mostly because they don't know how, and that's what we've learned.

Now, other things like working conditions matter more than money to teachers when you do surveys. What's important to us was to ask people who decided not to go into teaching what mattered to them, and what we heard most frequently was not the level, not the starting salaries, not even the average salaries; what kept a lot of good people out of teaching or made good people leave after one or two or three years, but it was the variants. What that means is – and we have this on video in the many, many focus groups. When a kid went in after college to a district recruiter and said, okay, I don't care about now, but if I'm really successful after 20 years, how much will I make? And they pulled out the salary schedule and said, you'll be right here after 20 years; if you got a Master's degree you'd be here. And he said, what if I'm really good? I've been the valedictorian, I've won all these awards; what would I get if I'm really good? And they say, so you'll be here. They go and apply for an MBA or a law degree.

And so it's the variants. So we thought the performance thing was more important to get additional good people in than necessarily because it was important to the people who were already in. Money doesn't matter much to people who are in it. Obviously they're in it.

To attract high-quality teachers to high-needs schools, what we found, it's not – the kinds of things that I think they did in Massachusetts where they said, if you stay five years you'll get a \$10,000 bonus, those are not good ideas, for two reasons. One is in the sixth year they leave. Secondly, you're attracting – you're saying anybody, whether they're good or bad, and often if they're not that effective, are going to come to the high-needs schools. So what we have recommended is looking at performance bonuses that good people come to high-needs schools and earn every year but they may be higher – maybe they should be higher than the typical bonus. In other words, have extra bonuses for high-needs schools, but they have to be earned at all times – if it's we're going to pay your mortgage after three years, they'll leave after three years.

Test scores can be used. We think that they're more objective. You know, people say, aren't you just going to teach to the test? Well, if the test is testing state standards and that's what you want kids to learn, maybe that's not so bad. But as my friends at the AFT point out, only about, I think, less than half of the teachers can get individual rewards for tests in their own classrooms. In other words, from K-2 people argue that they're not stable. There are a lot of advanced courses. There's not a pre- and post-test of physics or French or whatever.

So there are ways to get to that with end-of-course exams now. People are working on it, but we have to recognize that even though we really advocate that we're available, at least part of the bonus comes from individual students of teacher's gains. I know I didn't put that well but you understand what I mean. That can only happen in certain places.

We award a bonus, 50 percent of which is based on the classroom evaluations; 50 percent on student achievement gains, but about half of that school-wide and half of that, where possible, on individuals. The judgment of others is also not corruptible if there are clear rubrics, people area trained, etc.

Another thing we've learned is that few comprehensive reforms will succeed without strong teacher buy-in. The question is, what does teacher buy-in mean? Does that mean that one needs the buy-in of the union before we start, or does that mean if we talk to teachers – and this becomes relevant in certain situations – if we talk – if the principal or the board or whatever talks to teachers and we get a vote, particularly if the union is opposed to performance pay – which this union is not necessarily but other unions, who we also won't mention, may be – does a vote of the teachers supercede the general policy of a union or does the union policy dominate? I mean, that's an interesting question.

We basically have required votes of 75 percent or more of the faculty before we'll go into a school, and we think that's very important. You can't impose a program as complex, as culture changing as TAP without having teacher buy-in.

Just a couple more. Next, costs are higher than originally anticipated, for a lot of reasons, because we don't change the salary schedule because a lot more training is required – and I'll go into that in a minute. There are a lot of reasons why costs are higher.

Ultimately this program will not be sustainable in the long term unless, as many of our districts are doing, districts or schools look at programs that are not working and say we want to transfer funds to programs that are working. That's a real challenge, but, I mean, there's so much stuff that goes on in Title 1 and Title 2 in particular that we've observed has not been effective that – I mean, there's a lot of money available unless you assume that nothing is fungible. So that's there.

Principals play a huge role and they should be part of any performance pay plan. And another thing that we've learned is tenure is not worth challenging. To be very honest, when we started we thought one of the ways of improving the quality of teaching staffs would be to end tenure so you could, quote, "get rid of" the least effective . Putting aside the question of how we would determine at the beginning who the least effective are – okay, we found two things. When

TAP started, a number of teachers decided to leave because they didn't want to change what they were doing, and that was fine. Secondly, when teachers are evaluated year after year, when their students' learning gains are constantly being looked at in teams, and when they're not succeeding and yet given additional opportunities to get better and still they're not succeeding, they tend to leave.

In other words, a lot of the fights in tenure are because of a perception of lack of fairness. When there is a very clear assessment of classroom performance and student gains, the opportunity is provided to get better and they still don't get better, teachers leave on their own. You don't need to fight tenure.

I would also say that we were shocked at the – we assumed that a functioning school had a certain basic set of competencies. Basically that could be – I mean, that people had teaching talents of some kind – pedagogical skills – and knew their subject matter to some level – obviously some not as good as others. We found surprisingly lack of skills in a lot of the schools. Now, admittedly we go into some pretty tough schools, but that's required a lot more training than we had anticipated. Similarly, we assumed that once we selected master teachers they would be able to play their role. In some schools, even the quality of master teachers needed a lot of work.

Another thing that we found was that the quality of teacher education was even worse than we had anticipated. I sort of knew what we were providing at UCLA. But so many people come into teaching really without fundamental knowledge of pedagogy or their subject matter. It's really shocking.

The rate – and this is the final one – the rate of sustainability of change is slower and more tenuous than we expected. We thought we would go in and everything would be fairly easy, but it takes a lot longer to make these things gel, and you're not going to succeed in all cases, primarily because of the lack of human capital in so many of our schools, and that was something that I think we were surprised by. We deal with it because we've just had to provide a lot more training.

But, okay, having said all that stuff, and a lot of the lessons are unfortunate, but what I would say is that we're very pleased that with this kind of a system, it seems to work.

Thank you.

MR. GOLDBERG: I presume there are some comments. Yes? You need to be near a microphone because you need to identify yourself.

MS. FASHOLA: Hello. My name is Toks Fashola. I'm from the American Institute for Research and also from Johns Hopkins University. I had two questions. One was almost in the form of a comment but it's a question. The Coleman – you made a comment about Dr. Jim Coleman's work about the relevance of the family and I just wanted some clarification. I believe it was my understanding that – he said that the family was important, the family was relevant, but I don't think that he discounted the importance of the teachers and/or early intervention. In

fact, I think that's what the Coleman Report was all about, saying that the teachers are very, very relevant, saying that, you know, the family cannot be eliminated from the equation but that the teacher is really relevant.

So I wondered if I misunderstood what you said and wanted to, you know – but I guess my other one is in the form of a question, and it addresses the achievement gap, and having done some research in academic achievement in at-risk youth, I guess my comment is, I heard you say you reward achievement gains, and when you look at the achievement gap, you know, it's a certain level. It's like get them to the 50th percentile. That is still a C. And I guess my question is, at what point will the rewards become not just when you make one or two or three or five points, but for being at least on grade level, because it seems over and over, as we study the achievement gap, we go for gains, but over and over again, those same schools that are making incredible gains can still remain identified for improvement and below at least a C.

So I'm wondering what TAP is doing in terms of saying, after we've rewarded you for gains for a few years, we're going to reward you for at least being at the 50th percentile.

MR. SOLMON: Okay, let me answer the first one first. I think that – and I – (audio break, tape change). Okay, the first questions are always easier. The first question is that we generally have a year, we call it a practice year, where you go through the evaluations, hopefully three or four evaluations, and the professional development, but there's no consequence. In the second year there's bonus. So, we've actually done it more quickly when, excuse me, schools or districts have said we can start doing it in January, but we want to do it the second year, so we'd only prepare them for six months rather than a year, but a year is what we prefer.

You're asking what is the split of 50/50 and half-and-half based on. In fact, if there was a perfect correlation between the rubrics of classroom performance and student achievement gains, we could just pick any of them and it wouldn't matter.

We've actually found that the student – that the teacher performance rubrics are actually correlated with their student achievement gains. If they perform the way the rubrics would hope they perform, they're more like to get student achievement gains.

Quite frankly, it was a comfort level. I mean, there was not really any specific research. Some teachers would say, what if I perform well and I still don't get value added, and others would say, what if I use my own nutty non-rubric related techniques but get huge value added, you know? So in order to make everybody comfortable we did a 50/50. I mean, I have to admit that. If anybody has research that we should do it some other way, I'm happy to adjust.

MR. GOLDBERG: Well, we do now. No – (chuckles).

Go ahead.

MS. ENGEL: Penny Engel with the American Association of Colleges for Teacher Education. I have two questions. One kind of relates to the lady's question here about the role of the family. Your very first slide went by fairly quickly, but you had a pie chart in showing

various percentages that account for student learning, and we've always been saying, for recent years, that the teacher is the major factor in the student's achievement, but I see that you have 43 percent on that chart and 49 percent for family, and then I didn't get the rest it, but could you run us by that one more time?

MR. SOLMON: What we always say is that teachers are the most important school-related factor affecting student achievement.

MS. ENGEL: Oftentimes the school-related doesn't get into the sentence, I've noticed.

MR. SOLMON: I always try to say that.

MS. ENGEL: What are your sources on that chart, as well?

MR. SOLMON: That chart was a meta-analysis by Marzano. Is it Robert Marzano?

MR. LAWLER(?): Robert Marzano.

MR. SOLMON: Yeah, and so that was his finding.

Nobody is denying that families have huge impacts, but the fact is that if the least-privileged kids had the same quality teachers as more privileged kids; or indeed, better quality teachers who knew their subject matter; who were schooled with the pedagogy and the teaching and learning skills that others have, we could reduce that student achievement gap; despite the fact that families play a role.

You know, I wrote something in the National Review, okay, in 1973 or something – people who haven't read it keep coming up to me – and it was titled – they make up the headline – “Stop Making Equal Education.” And what I said is if we want – in 1973 – if we want to have everybody end up at the same level, we can't start them at the same level and give them the same inputs all the way through. So, I mean, we've got to do more for people who are disadvantaged in other settings, and I think that's the same message today.

MR. GOLDBERG: I'm sorry did you have another questions?

MS. ENGEL: Yes, I did. One of your last statements was about the appalling quality of the teacher education that you encountered, and you were a dean at UCLA and you said you saw something there that, I guess, wasn't so great. I mean, I'd be interested in what improvements do you see that ought to be made and are there some good examples of those kinds of improvements that are out there?

MR. SOLMON: The problem that I saw was that – not only my university, which was, obviously, a fairly elite one, but even in the Cal State system, where they were supposed to be more focused on teacher training. Promotion and advancement in the university, whether admitted or not, depended on a significant amount on publication, and teacher education doesn't write. It is really a very labor-intensive activity that, quite frankly, in many cases, takes away

from the ability to do research, get it published, and particularly when, at least in my day, the way ed schools got prestige was to look more like social science departments.

So the real question was, how do you get real disciplinary knowledge to people who are being trained? In other words, how do you get the math department training teachers in math as opposed to doing the history of math, which is all too common. And secondly, how do you get the education faculty to actually go into schools? And those things are very difficult. So, I mean, the way I would recommend it, and I've talked about this a lot, is to change the incentives. In other words, you've got to not just have university presidents urging math faculty to work with education students and education faculty to go to the schools, but you've got to provide incentives in terms of additional research, help, you know, really promote – we used to always talk about promoting people for practical, professional work. It never happened. And maybe we were the only place in the country to do that, but I probably – I mean, maybe we were the only place in the country.

MS. ENGEL: But there are examples, you know, the professional development schools, and I thought there was more than you're reflecting going on where institutions teach a preparation, where faculty are getting out into the schools, doing clinical work almost fulltime.

MR. SOLMON: There's some of that. I mean, the fact is that when we go into schools, we see a serious lack of knowledge. Maybe it's older people and maybe the newer people are more prepared, but that's not what we see either. I mean, I'm sure there is some good stuff going on.

MR. GOLDBERG: We are going to move on to other comments. We have here and then Ruth, and then we'll go over here.

MR. SEE: Hi. I'm John See from AFT's public affairs staff – department. Before I came to AFT, I worked in factories probably two or three years. Not right before I came to AFT, but I've done that before, so I –

MR. GOLDBERG: Worked in what?

MR. SEE: In some factories, a few factories. I'm really intrigued by the idea that we can bring free market ideas into the schools. I see something here that seems to be just a fundamental sort of limiting factor on the effectiveness of a program like TAP that focuses on the rewards for teachers. This, to me, would be analogous to trying to produce more Styrofoam – I worked in a Styrofoam factory – by rewarding managers, the lead people, the foreman, but not the actual workers on the factory floor, and in this case those are students. I mean, we have all these levers for working on the teachers and trying to get them to improve what they do, but these children, certainly as they get older, are really actors in this too, and I just wonder, I guess, what sort of effect size you can get or whether TAP, without a focus on curriculum and some of the things the students themselves are doing in trying to get effect, how effective it can be.

MR. SOLMON: In terms of effect size, as we – when we looked at the first couple of years and did a cost-effectiveness thing, one leading researcher said, if these effect continue, it

would be the most cost-effective program, even though it is expensive, that he had ever seen. Putting that aside, I mean, we think that teachers are a good lever to improve student achievement. I think that incentives – I don't know, it's called "I Have a Dream," those kinds of things where you say to kids that if you do well, we'll guarantee your college education. I think the evidence is that those are pretty effective. There may well be other ways of incentivizing kids, but – you know, just one quick thing.

When I talk to legislators and people, they say, well, we're not interested in teacher quality anymore; what we're interested in is math and science. And I have to – (laughter) – I have to ask the question, has anybody ever gone into math or science without having a teacher who knows math or science and loves math or science and stimulates them?

Now, another word for stimulating may well be incentivizing. So, I think one of the best ways of rewarding kids, or incentivizing kids, is that really good teachers, so I get back to that. If anybody wants to develop a program to pay kids for grades, that may work, but it may also turn into a social services thing where we give grades so that kids will get money. I don't know. I get your point; It's not a trivial point, but we focus on teachers.

MR. GOLDBERG: There are two comments that I want to get them before – Ruth and here.

MS. WATTENBERG: One comment on one of your comments and then a broader question. Ruth Wattenberg, AFT. Going back a couple of questions, you made the point that to be effective with kids who are from very poor homes, the school needed to invest even more. And I totally agree with you on that, but I want to take that back to something else you said, which is this: you talked about the huge number of schools that are out there in poor areas that are failing so miserably, and I think it is absolutely true that there are huge numbers of schools out there who are failing to bring poor kids up to the very high levels we want. But I think that it's important to note that, as you said later, for those people in those schools to bring those kids to these very high levels, the quality and quantity of time and instruction, and one on one, and resources, and so on, would need to be so enormously greater than what would be provided to students elsewhere.

I just think it's really important to convey the idea that, in a lot of these very poor schools where the kids are doing poorly, what's going on in those schools may be no worse than what's going on in schools that are showing much better results because the kids don't need as much. So I just want to throw that out there as a matter of clarity about what's going on in these schools.

MR. SOLMON: But it is much worse. I mean, we –

MS. WATTENBERG: The levels of achievements are much worse.

MR. SOLMON: No, but the quality of the instruction is, in often cases –

MS. WATTENBERG: In some cases yes and some cases, no. I just think that there's not a lot of evidence to that effect. I think that there's the – my only point is that what you would need to move the levels in those schools is extraordinary; and that's what we need – you know, you just need to keep that in mind. But here's my bigger, more – the point I wanted to just raise, which is the whole system you described is one of enormous investment in human capital and in human resources, just the enormous investment in people who can do evaluations, principals who are looking at teachers' multiple evaluations, professional development aimed at exactly the problem that teachers have, which is terrific. And I guess my question is -- talk about culture change. I mean, schools strike me as the places that are the least involved in any sort of human capital development of any institution I can think of. So what you're describing is so -- I mean, it's great; that level of investment. It's just – it's amazingly great. And I guess my question is how did you bring about such a culture change that I assume has to require a huge investment of money. And two, to what extent is that sustainable in this otherwise very inhospitable culture to human development?

MR. SOLMON: I think both questions are both related. Our program costs, on average: about \$400 a kid. When you look at the spending on education, it's amazing to me that every district in this country, including some of the poorest in some of the southern states, etc., cannot afford to find \$400 dollars in their budget and indeed, some of the poorest states have found that -- and I'm talking about Louisiana, Arkansas, and South Carolina have actually found ways to do that.

Secondly, when we – it is an enormous cultural change and it is an enormous effort, but with the level of effort that we have done, I mean, we – a quick story. There is one parish school district in Louisiana, called Calcasieu. It had one school of ours, in a year. It got very, very good results and they said, we want to use – we want to figure out how to do this in more schools.

They looked at their Title II and find they were getting nothing out of the Title II that they were using now. They took of their Title II and could go from 1 to 26 schools in one year. Okay? They had to hire 60 master teachers and the schools – that was exactly half of the number of schools in their district. They had to hire 60 master teachers in that year, in one year, for these 25 new schools. Forty-five -- 75 – three-quarters of them came from higher SAS schools, either in their district or in surrounding districts. So their bonus pool was something like \$2500. Their master teachers, I think, got maybe \$8,000-\$10,000 increment. Yet they got high-quality master teachers from higher SAS areas; and the average cost of their program is about \$400 a kid. So they didn't have to come up with that because they just reallocated their Title II money.

So it's a massive cultural change and it's a massive readjustment of money, but when people say to me that they can't afford it; you've got to ask, what are they spending their money on now, that doesn't mean we don't need more money on education. I'm definitely not saying that, it's just got to be used differently. So that's my answer.

MS. DEVLIN: Joan Devlin, AFT. Earlier we talked about you could probably put this on a chart and make predictions as to whether this system would survive or not, and I'm struck --

because as you were going and describing the program -- how often your characteristics were present in this program.

So I guess my question for both of you is if you put TAP on a chart, and if you evaluate your results from TAP, is this a sustainable, predictably successful program or not?

MR. SOLMON: I think yes.

MR. GOLDBERG: If he said no, the meeting is adjourned. (Laughter.) It's a living.

MR. SOLMON: It is, but it requires a change in culture. I mean, it's a lot more work, and there are some people who reject it because they say the stress is too high because of the evaluation and because of the performance pay, and it's a lot more work so we don't want to do it anymore. Now -- but that happens in probably in less than 15 percent of the cases. Other than that, if people are willing to reverse the -- reallocate money, I think it is.

MR. GOLDBERG: Joan?

MS. SNOWDEN: Joan Snowden, AFT. I would say that on the criteria that Dr. Lawler laid out -- of transparent evaluation, of a chance to improve if you didn't make it the first time in terms of multiple measures, in terms of group and individual incentives -- I think that there are -- on the criteria that we heard today, this would be pretty high up, in terms of predicting more success. But I wanted to get back to the issue that was raised by the gentleman from TIF about the student performance versus the teacher evaluation.

I believe -- first off, only 22 percent of the teachers could get rewards, if you only use test scores; but more important, since you have -- I have watched TAP, it went from a pay for performance, to a teacher quality, to a school improvement program; and if you're going to get teachers to improve, we just -- if this isn't an issue, there are some people who naively think, that we're putting pay-for-performance and we're not going to improve teachers, we're just going to get different ones in there.

I mean, I don't know where they're looking, but there's a way to train teachers and by having overt criteria that the teachers buy into, and that they can understand, and that professional development is based on, you have a chance for improving your workforce in a way that just magically throwing out, you know, a 2 percent bonus won't get you.

MR. SOLMON: You said it better than I would.

MR. GOLDBERG: Yes, go ahead.

MS. CHENOWETH: Karen Chenoweth from the Achievement Alliance. I just wanted to ask in Calcasieu Parrish -- did I get the name right? What were the gains in student achievement -- were there gains in student achievements in those schools and what were they? Is there a way to find TAP schools and evaluate how they've been doing on student achievement?

MR.SOLMON: Yeah, in that particular case, the first school, which is called AA Nelson did very, very well. This is the first year of the massive increase in schools. So we haven't done it. One of the problems is that we keep -- it's not a problem -- we keep adding more schools every year. So more and more schools are in their first or second year, but the gains, compared to control schools, have been very good on average. Sometimes we're not as good, but on average, we've out-gained our control schools in a consistent manner.

MR. GOLDBERG: I'm going to pause at this point because I think that we are getting very close to the end. If you have a short question, you can ask it. Oh, do you have a short answer?

(Laughter.)

MR. SOLMON: I'll give it a try. I'll give it a try and say short answers.

Q: So I assume that there are some TAP schools that are duds, and you know, that don't work, that don't do better than the control schools. So if you have all of these measures of, you know, you do it bottom-up, you implement slowly, you have multiple measures, are there other indicators, are there ways to tell what schools won't be successful at this?

MR. SOLMON: Unfortunately, often not before the fact, but the closer to -- the more orthodox an implementation; the more likely they are to be successful. In other words, those that really implement it -- we have these professional development groups. To the extent that they spend their time actually looking at data, actually working on particular teachers' needs, that's a better implementation. To the extent that they spend time talking about who's going to take recess duty, which drives us crazy, but -- or complaining about parents, that's less of a good implementation, and that's -- they're not going to do it. So it's that. It's really the quality of the master teachers and the buy-in of the principal and the quality of the people that we bring in to oversee the activities in the state.

Unfortunately, we've had some variation in the quality of those people. A lot of principals, when they start and see that there's going to be more money infused, and some other things that are being done, they get very enthusiastic, but unfortunately some of them are not capable of helping this program get implemented -- so those are the kinds of things. We're getting better at that. We're getting more prescriptive in terms of who becomes master teachers. I mean, it's really not our position to tell people who to hire. Sometimes they want to hire the oldest, the most senior person in the school. We want them to look beyond the school. So those are the kinds of things that we are sort of sharpening up on over time, but those are the reasons.

MR. GOLDBERG: We're going -- I'm going to ask both Ed and Lou, if you'd like, to take a few minutes to kind of summarize -- not on what they've said, but what they've heard here today. Ed?

MR. LAWLER: I may not even take a few minutes -- a minute or two. I've heard this debate about merit pay, pay for performance in schools for quite a few years now -- a couple of decades, I guess -- and my position on that I don't think has changed a whole lot. It was from the

beginning and still is that, by itself, it's probably more of a dysfunctional intervention than a positive intervention. There are just too many things that can go wrong.

As part of a comprehensive redesign of your human capital management, your performance management system, the design of schools, it makes a lot of sense. The current system simply doesn't fit very well. Most of what I think are the next steps that education needs to take could happen with this change as part of that, but how it changes, and when it changes needs to be coordinated as part of a systemic redesign of the administration and teaching in schools.

Unfortunately, I often hear it debated in school boards (and other places as well) as "I'm paid for performance at work. Shouldn't the teachers be? Why are they different? Why shouldn't they be like me?" Of course, in some cases, the same people, if you interviewed them in their work place, would tell you how terrible the merit-pay system is, how unfair their boss is, etc., etc., and it's not working. But perhaps more important, they're working in a different kind of system, you know. If it does work, it's not because it has merit pay, because it's part of a different kind of management system than the one that's present in schools. So, bottom line: yes, it can be a positive, but as a stand-alone, it's probably going to be more dysfunctional than functional.

Now the question is, will all these change efforts, all the TAP schools be successful? Will all merit-pay systems be successful, if they're in the right environment? No, I think the whole history of organizational change shows that it doesn't always take. You may have to go back at it again, and again, and again, because it is such a complex issue of people, personalities, vested interests, legal changes – just an incredibly complex series of management and operational choices and systems that people face.

MR. GOLDBERG: Lou.

MR. SOLMON: Well, I would buy your comment and I would associate myself with Joan's comment, as well.

I would just say a couple of things. Number one, this kind of change is so difficult. We didn't realize how difficult it would be and how – I don't know whether entrenched sounds like a bad word, but how inflexible so many of the things in education are, through no particular person's fault.

The second thing is that there have been number of questions about has it worked yet? Or show us that it works and I – one of the problems is that we never give anything enough time, and I think that we have not shied away. We have on our website – www.tapsschools.org – our evaluations of the last couple of years. We are happy to have had people look at our stuff, but it takes time.

I mean, you can't ask – if this program's been in place two years – is it working, because so many things have to change that it's a long-term investment and that means going on faith a little bit. Well, I guess that's it – we think it's working. We get testimony from all of our schools

– most of our schools, even the ones that are not doing well on test score gains, are saying we’re changing the way we’re teaching. But the ultimate evaluation, I think, will require sort of some maturity in the program.

MR. GOLDBERG: Genie, would you like to add anything to this conversation, be we – before I close it?

MS. KEMBLE: Well, just one thought. I think what Ed Lawler said at the end was very important in this sense – and I think this goes to what Lou said also – and that is, how are we defining performance in schools? Are we defining it in terms of a core curriculum or are we defining it in terms of good state standards or lousy state standards? Are we defining it in terms of assessments that match those standards or not, and so when it comes down to it, it does seem to me – and this is, I think, really where you were going– that one has to look at the system that you’re developing in the context of some kind of overall reform that makes sense. That’s it for me.

MR. GOLDBERG: Okay. Well, first of all, I want to thank -- particularly thank Ed and Lou. I think that they deserve a great round of applause. (Applause.)

And I want to thank you. I think that this has been really a very rich conversation and it’s one that clearly needs to be sustained, as with the whole issue of how to make major improvements in the way schools are managed, administered, organized in order to improve student performance. It’s an issue that’s been around for awhile – many, many years. But it’s one that needs to be kept high up on all our lists because thinking about only simple ways to determine effectiveness isn’t just going to work. We need an improved education system. So with that, why don’t we say good afternoon.

(END)