



Public Policy Forum

Workforce Planning

in Education:

Replacing Retiring

Teachers and

Administrators



Presented by

Johanna Duncan-Poitier

Maria Neira

David Szczerbacki

James Wyckoff

March 29, 2006

Brian Stenson:

Good morning. My name is Brian Stenson and I am deputy director of the Rockefeller Institute of Government. I want to welcome you to this Public Policy Forum on workforce planning in education. Assuring that New York is able to supply new teachers and administrators for elementary and secondary schools is becoming a very important and pressing public policy issue. The idea for this session grew out of a Public Policy Forum we held last October on No Child Left Behind. Jim did an excellent job of

explaining that law and its implications for New York. The audience at that time expressed strong interest in the session we're holding today and we were able and happy to assemble a panel of distinguished experts in the field. For newcomers, and there are some new faces here, this session is part of a series of forums we present on matters of public policy concern.

Allison Armour-Garb is a senior research scientist here at the Institute and she will moderate the forum this morning. Thank you very much, and here is Allison.

Allison Armour-Garb:

Thank you, Brian. I'm privileged to introduce our distinguished panelists this morning. On my immediate left is Johanna Duncan-Poitier. She is the deputy commissioner for the New York State Education Department's Office of Higher Education and the Office of the Professions. She has been recognized for her accomplishments with state and national awards including a member achievement award from the National Council on Licensure, Enforcement, and Regulations and the New York State Governor's Workforce Champions award. The Office of Higher Education directs the preparation and certification of public school teachers, of whom there are currently more than 225,000 in the state. The Office works with school districts and teacher education programs to prepare, recruit, and retain quality teachers and leaders for the state's schools. Ms. Duncan-Poitier and her team are leading reforms to improve services and they have reduced processing times for teachers seeking certification by 30 percent in the last two years.

Our next panelist will be Maria Neira, an elementary school bilingual teacher who rose through the ranks of union leadership to become a nationally recognized expert on educational issues. She is first vice president of New York State United Teachers, which represents more than 525,000 members. She is responsible for the union's Research and Educational Services Department and is the union's advocate to the Board of Regents and the State Education Department. She previously served with the United Federation of Teachers, which is the New York State United Teachers' affiliate in New York City. She

has received many honors for her leadership, including the 2005 Ellis Island Medal of Honor from the National Ethnic Coalition of Organizations.

At the end of the table and coming third in our panel will be David Szczerbacki. He is provost and vice president of academic affairs at the College of Saint Rose in Albany. Before coming to Saint Rose in 2004, he served for more than 20 years at Alfred University in a multitude of roles, including provost, dean of the Business School, dean of the Engineering School, director of graduate programs, and others. His professional work is focused on the fields of urban and regional planning, economic development, environmental management, strategic management, and organization development. He received a Ph.D. in public policy studies from SUNY Buffalo.

And finally, in the center is Jim Wyckoff, professor of public administration, public policy, and economics at Rockefeller College here in Albany. Currently, he is working with college students and the attributes of teacher preparation programs that are effective in increasing teacher retention and student performance. He has written on a variety of educational policy issues including school choice, the equity of school spending, and teacher retention. Professor Wyckoff serves on the National Academy of Sciences Committee the study of teacher preparation programs, directs the education finance research consortium, serves on the editorial boards of education finance and policy and the economics of educational review. He is a member of the scientific review panel of the U.S. Department of Education.

Please welcome our panelists this morning.

Johanna Duncan-Poitier:

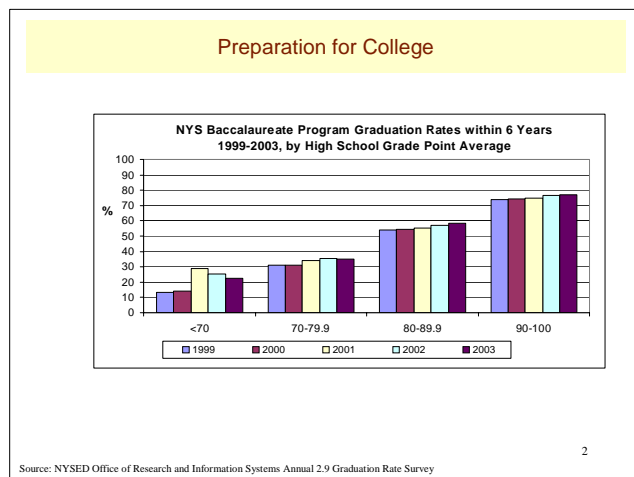
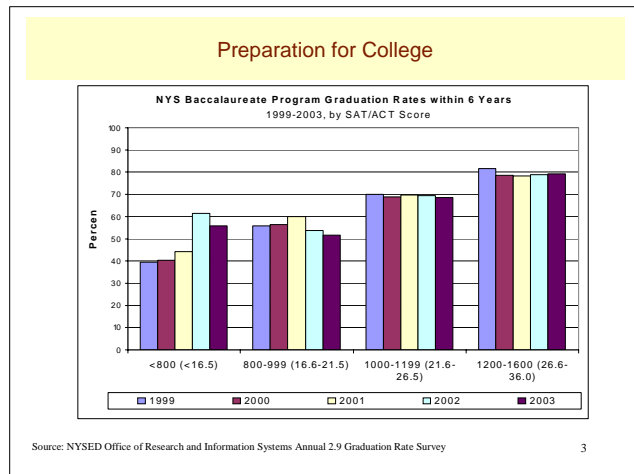
First of all, I would like to say good morning to all of you. It's really a pleasure to be here to speak with you about an issue very close to my heart, which is the future of, really, our country, as well as the future of teaching. I'm very happy to be here with my colleagues and partners, people whose work I think overlaps with ours on a regular basis and I think is meaningful because of it.

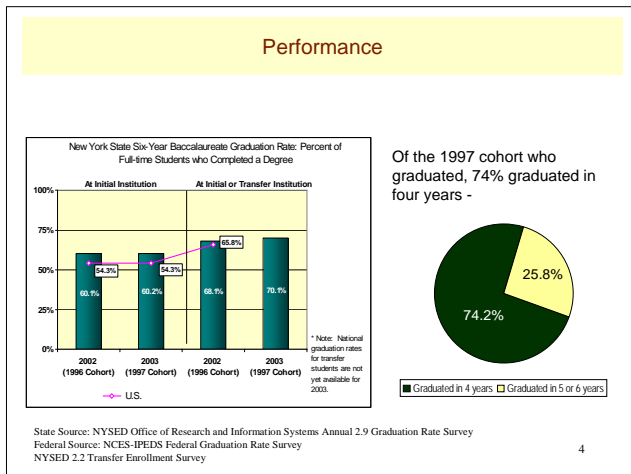
I am going to talk primarily about teaching but what I wanted to do is also give you some important information about what the Education Department is doing to really set the stage for K-16 education. You have a printed key to help you. This is what we consider the Cliff Note version of the statewide plan for higher education. For those of you who would like the complete version, it is available online free of charge [here](#). The reason that this plan is really important and why I gave you the summary of what it contains is it really is going to drive the agenda for higher education over the next several years, leading into the year 2012. Usually, the Education Department, when it establishes its statewide plan for higher education, which is required in statute, puts together a couple of pages and we are in compliance with the law. That's the end of that. But I think everyone is very well aware of how committed we and our partners are to really being better prepared for a global economy. We've got to do something to make sure that students K-12 are better prepared to graduate from high school, that they are better prepared to succeed in college, and that means they are retained and they actually graduate, let alone go on for additional education. So it can't be something that we do in isolation anymore. The Office of Higher Education can't be in one place, the Office of Elementary, Middle, Secondary and Continuing Ed another place, VESID, and so forth.

So what we did, is, in the development of the plan, is we went to all of our 271 colleges and universities around the state. We went to all of our school districts, to parents, and to students. We said, "What is it that we have to spend the greatest amount of time on to ensure the future of our economy and, also, our world?" The first is teaching, maximizing success for all higher education students, ensuring a smooth transition from pre-K to higher ed, meeting New York's needs through graduate programs and research, and ensuring qualified personnel for every community in the state. And, of course, the last piece is a balanced regulatory environment. The regulatory environment really just means the Education Department won't regulate the field to death. The other pieces, I think, are self-explanatory.

When I was introduced, Allison mentioned that we have 47 licensed professional categories, three quarters of a million licensees in our state under the aegis of these

offices. People say to us, “Well, you know that there are shortages. You know what’s going on with the baby boomers. Why are you making it so hard to enter these fields? Why don’t you lower the standards for teachers?” The truth is that we are one of seven states that requires a master’s degree for teachers. So why are we making it so hard? Well, we don’t think we have a choice. We have raised the standards for children and all of those children deserve a well-qualified teacher. Why do we think that it’s essential? Why are we willing to make the commitment that I just described? Well, this is not rocket science. I mean, this isn’t something that the people in this room aren’t familiar with, but we are constantly reminded of. If you have a well-prepared student, if students do well in school, their grade point average is going to pretty much predict their success. As a student achieves an 80 or better, they are almost twice as likely, and in some cases more than twice as likely, to succeed in college. And as we all know, a high school diploma just is not enough anymore. The same thing is true for SAT scores. Now, I know that that is a sort of a sensitive topic these days. Assuming all is well with the SATs, the SAT scores are a great predictor of success. You know that if students get high scores academically, as well as high scores with the SAT, and of course there are other indicators, it is not so hard to figure out these are the students who are going to succeed. What you’re looking at here are from 1999 through 2003, the cohort for that time period, what the success rates are of students graduating from college, based on their scores with SATs and before that, grade point average.

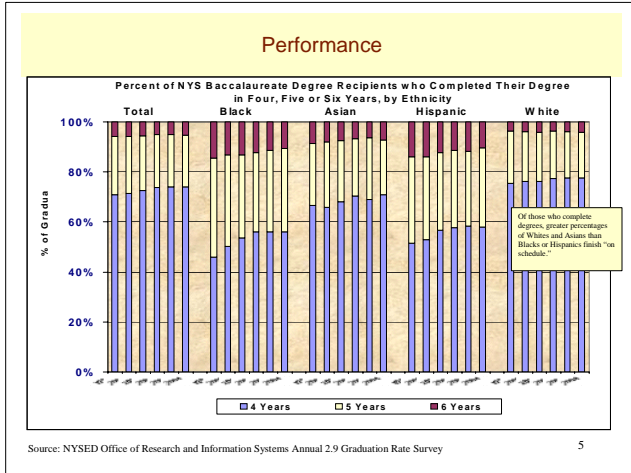




So what's the problem that we have? I'm sure everyone has been following the cohort data that came out about K-12 and the number of students that aren't graduating from high school. But there is a similar problem, of course, with colleges. Of the data that we have last available, we are looking at students who

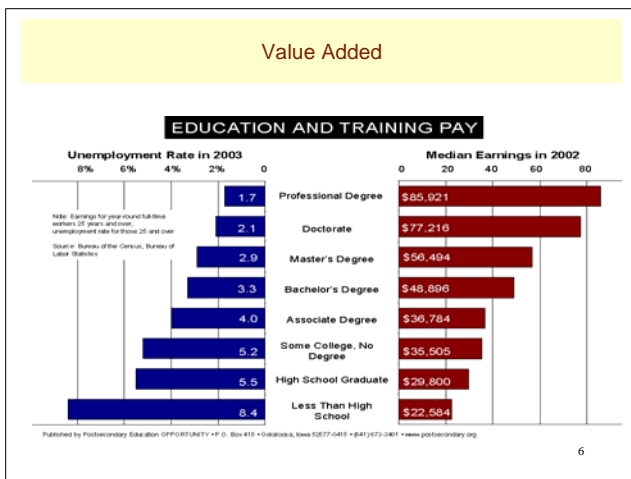
graduated from any institution, not necessarily the institution in which they were first enrolled. So if somebody first went to Columbia University and then transferred to SUNY Buffalo, we are looking at students who graduated somewhere over the course of six years. We have about a 70 percent graduation rate. That's higher than the national average. The national average is only 65 percent. But that's really not good enough. That means about one third of the students who go to college and make a tremendous investment of time and dollars don't graduate. It's not really good enough for our country because we need more people prepared. We all know that. I'm not going to discuss *The World Is Flat* because everyone who has been to any forum has heard about that. But I think you know what the problem is. Of those who graduate, about 74 percent of them actually graduate within four years. And, of course, that's the goal. I'm fascinated when I hear about the graduation rates for high school, people talking about five-year graduation. I'm old enough to remember when you graduated from high school in four years unless you were in some special class. When you graduated from college, it was in four years unless you went to a two-year school. People are now looking at six-year graduation rates because the challenge is so great.

Looking at performance in terms of diversity, this is only looking at the students who actually graduate. Students who are coming from schools that are not performing as well as others have a much harder time of graduating and it's not acceptable. Yet, all of this information in much greater detail is provided in the statewide plan. These are just excerpts from it to set the stage. Everyone knows that the better prepared a person is, the



better educated they are, the better the chances are of them not being unemployed and, of course, pay scales go up.

Teacher workforce needs. The first part is just a backdrop to talk about why we are so committed to continuing to have the best-prepared teacher ever. Jim Wyckoff is working with our department, as well as other partners, at the ways in which we are preparing teachers and the benefits to actual student learning. I think you will probably be hearing some exciting stuff from him this morning. But we know that it isn't about certification and it isn't necessarily



about the different pathway. The bottom line is: Are we preparing teachers the best way? A couple of years ago our biggest challenge was just having a certified teacher, period. We had 14,000 temporarily licensed teachers in our state. Students who were being asked to achieve higher standards were having teachers who were not properly qualified. A couple of years later, we modified that. We had something called a modified temporary license so that people who were on their way to becoming certified could still teach in the schools. Today, we haven't totally solved that problem but for the most part the challenge is not getting a certified teacher; the challenge is getting a certified teacher in the subject in which they teach. We have gym teachers teaching math. We have English teachers teaching science. We have science teachers teaching music. And we have lots of issues with students actually receiving instruction from a teacher who is prepared in the subject in which they are teaching.

Teaching Workforce Needs

Difficulty of Recruiting Certified Teachers	
Subject Area	Somewhat Difficult or Very Difficult
Foreign Languages	96.0%
Science	89.7%
Mathematics	89.3%
Vocational	81.3%
English as a Second Language	73.1%
Computer Science	63.7%
Music or Art	52.9%
Special Education	45.3%

Source: Dana Balter and William Duncombe, *Staffing Classrooms: How New York's School Districts Find Their Teachers*, Syracuse University, 2004.

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This is a survey that was done in 2004 asking teachers, statewide, what are the areas in which they are experiencing the greatest difficulty? I will tell you, I was surprised that foreign language was at the top of the list. I expected math and science, which, of course, followed. But foreign language continues to be a

tremendous problem. Maria is going to talk a little bit more about some of the shortages regionally. But we do know that the shortages are not the same statewide. In New York City, of course, we experience the greatest shortages in everything. But statewide there are differences as to whether or not it is foreign language, special ed, and so forth.

The second biggest area is what is going to happen in our future. We know that of the 125,000 baby boomers who were aged 45 or older in 2004-2005 who will retire in the next two decades. And that is about half of our teaching population. What are we going to do to make sure that we have teachers to replace those who are leaving? We need a certified teacher, we need a teacher certified in the subject in which they teach, we need to replace people who are leaving our system, and what's happening with the colleges? Are the colleges working hard at this? Well, they really are. The colleges are producing more teachers today than they did four years ago, on average. Every year they're producing about a thousand more teachers. That's not enough.

In some ways, the Education Department created the problem for the right reason. But in doing away with the temporary licensed teachers, there were lots of vacancies. Well, we think that was the right reason but that, coupled with the retirements, we need a larger pool of folks. While the colleges are doing a good job of preparing more, they are not preparing enough and they are not preparing enough in the right subjects. So what is the Education Department and our respected partners, including NYS United Teachers

(NYSUT), colleges and universities, and school districts doing to address what we know is coming down the pike as well as the what's happening right now?

Next Steps
✓ Teaching Pathways
✓ Data to Support Regional and Local Workforce Planning
✓ Retired Teachers
✓ Financial Incentives for New Teachers
✓ Review Teacher Certification Requirements
✓ Innovation and Partnerships

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The first is teaching pathways. Jim Wyckoff will talk to you a little bit about the effectiveness of these teaching pathways. But there are three ways you can become a certified teacher and, again, it's not about the certification as much as it is having a properly prepared teacher. The first, of course, is college. The college

prepares you, whether it's an alternative pathway or the traditional pathway we're all familiar with. The second is transcript evaluation, where there's an assessment of their credentials to determine if they are substantially equivalent to what we would have in a traditional teacher education program. The third is reciprocity, getting teachers from other states to join our fold. This is the hardest, perhaps, of the three because our standards are the highest. The good news, in regards to No Child Left Behind (NCLB), is we are better prepared than a lot of states because we have been planning on meeting a lot of the needs. But we still have lots to do.

Anyway, back to teaching pathways, the first piece, because we have asked students to have higher graduation requirements. Again, we have higher graduation requirements for teachers as well. Around the state, 114 of our colleges have revised their teacher education programs and the largest majority of them are actually accredited now, just like any other academic program in a college or university. We have created pathways. There's alternative certification, supposedly for the second-career person, but that's not always the case. We have conditional initial certification for teachers from other states. There are other pathways for candidates close to meeting requirements or for those wishing a second certificate, we call those supplementary certificates if a certified teacher in math wants to become a certified teacher in science or is going for a second

certificate. And, we have also a great deal of flexibility with the support services, language pathologists, school psychologists, and others. We have created this and we are taking a look at whether or not it's really working. The earliest indications are this is a way we should continue. There are some promising trends.

The second step involves data. Right now, if you go to any teaching conference and you see young people, probably younger than anyone I see in this room, and you ask them about a career in teaching they will tell you that they want to be a nursery school teacher, an elementary school teacher. That's what they want to do. I find it fascinating because the reason why is because they want to feel older than the students that they are teaching. So they think about, you know, elementary grades. Right now, we have five teachers prepared for every one vacancy in an elementary school. I'm not going to go so far as to say there's a glut, but students going into these fields need to know that we really need teachers in math, science, special ed, foreign languages, and so forth. But we have not done a really good job of getting that information to folks. We are in the process of changing that right now. We have 2004-2005 data, which is annualized regionally based data so that college students who have not yet selected a major will know where the jobs are going to be over the next several years. I would say probably in the next 10 days, possibly by the end of April, we will have a report that will show the trends from 2000 all the way to 2006: where the jobs are and where the needs are regionally based, because they vary. We have got to get that information so that workforce planning can be done in a meaningful way.

When I was in high school I remember there was a teacher shortage then too, but not the same one we have today. The need is tremendous. You will see when this data comes out that the number of math, science, foreign language and special ed teachers that we need, and those of you in school districts know this firsthand, it is *so* difficult to find these folks. We can say that we'll have a new policy and we need regulation. You can't find people who don't exist. So what can we do to have some immediate return? We're looking at some legislation that will allow teachers who have been out of the profession and are already retired for at least a year to be able to come back for a limited period of

time, to be able to return to the classroom but only in shortage subjects like math, science, special ed, and so forth. In terms of financial incentives, you already know what they are. You've been watching what's going on with the budget. We really need to have more of those Teachers of Tomorrow, Teacher Opportunity Corps, and so forth. We need to make sure there is some incentive to pursuing this field.

Knowing the data that I've described to you, we have to rethink some of what we're doing with teacher certification requirements. For special ed, we used to have one certificate for special ed, K-12. We now have 19 different certificate areas, one for pre-K-12, birth to two, one through six, five to nine generalist, five to nine specialist, seven through 12 specialist, etc. Each of those specialist categories in math, biology, chemistry, physics, earth science, social studies, English, languages other than English. It's too much. And we're seeing what's happening. There's nobody in the pipeline. We're looking at students going into special education. They're not there. We've made it too hard. So we have to rethink that. We have to rethink reciprocity. We are going to need to have teachers coming in from other states. Right now we say that if you're from Connecticut or New Jersey, you could have taught for 30 years, we're going to make you take the teacher certification exams that we have in this state over again. Well, I don't know about you guys, but if somebody told me I had to take, let's just say for the sake of argument, the SAT over again and I've been teaching for 30 years, I would say, "Thanks but no thanks." We have to make it easier to teach in New York State. So we're looking at a Regents regulation change that would allow folks who have a history of successful teaching to come into our state, they still have to meet all the same requirements, but they don't have to take the test all over again. Supplemental certification for a teacher certified in one subject who wants to be certified in another. We have some requirements and we want to look at those again as well.

Last but not least is the innovation in partnerships. I meant what I said when I started out by saying that a lot of my partners are in this room as well as on the panel. There are a lot of things we haven't thought about. There are a lot of things we are doing together that I think can make a world of difference. We're working with IBM right now.

They have something called “Transitions to Teaching” where IBM is paying for mid-level employees who would like to pursue teaching. They’re paying for their education and two years of assignment so that they can enter the classroom in math and in science. They’re looking to set the stage for other businesses to have this kind of partnership. Why? Not just because they want to be altruistic. They need math and science graduates to work in their companies. We had a recent education summit and the guy from IBM said that if we don’t do a better job preparing math and science graduates, they have other plans. The other plans means going to India, China, they’re going to go somewhere else. We don’t have a choice. So there are lots of different kinds of initiatives like that where we want to bring in the resources of others to better meet this need.

Maria Neira:

Good morning. I’m Maria Neira. Johanna set the background for us and what I would like to do is speak to you about the recruiting and retention issues. I’m really going to do it from the perspective of a teacher, a teacher who worked in a hard-to-staff district and a hard-to-staff school in Spanish Harlem. That’s my background and is what I will be sharing with you today. One of the things that we know is that closing the achievement gap hinges on three things. It hinges on the teacher education program, recruitment, and retention. The one thing that we know as classroom teachers, administrators, and students is that the research is clear that the single most important determinant of what makes a difference in a student’s achievement is a highly qualified teacher. We know that. That’s

Teachers Leave the Profession

National

- 14% of first-time teachers quit in the first year and a 1/3 leave within three years.
- After 5 years—the time it takes for teachers to maximize their students’ learning—1/2 of all new teachers leave the profession.

Source: June 2004 report *Tapping the Potential: Retaining and Developing High-Quality New Teachers*, released by the Alliance for Excellent Education

New York State

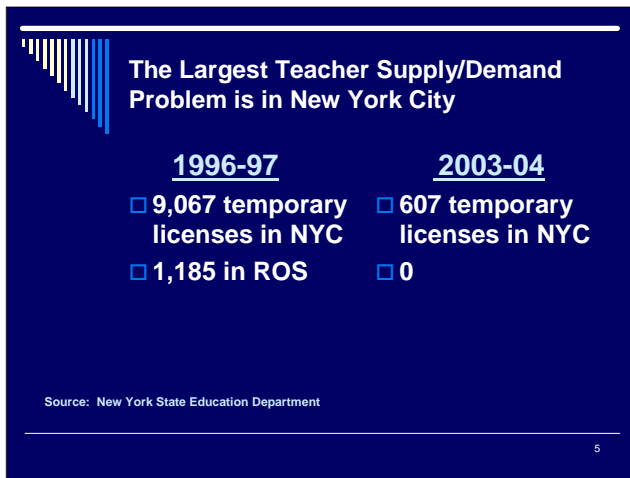
- 32% of first time teachers quit in the first 6 years.
- 42% leave teaching in New York City in the first 6 years (25% within 3 years)

Source: New York State Education Department

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a given. We then go and take a look at some of the national numbers on what happens to teachers once they come into the classroom. We know that nationally we have about 14 percent of teachers who leave the classroom in the first year and one third leave within three years of coming into the profession.

If we take a look at New York State, that number goes to 32 percent of first-time teachers quit in six years. Forty-two percent leave teaching in New York City in the first six years. That's 25 percent within three years. Now, as a classroom teacher who started teaching 27 years ago in a hard-to-staff district, I can tell you that those numbers are much higher now than they were then. There weren't support systems when I came in, but we did have experienced teachers who were willing to take you under their wing. That is one variable now that we see is not prominent in many of our schools because of what Johanna said. We have this gap between the new teachers coming in and our experienced teachers and we're having difficulty bridging that gap.



Now, Johanna said that we have an abundance of teachers in some areas. I know that there are some suburban areas that I have visited quite recently where administrators tell me, "I don't have a shortage. I have a file cabinet full of applications." Then I will go to a rural area or down to visit my colleagues in

New York City and they are starving for applicants. You do not have five, ten applicants per position. That just does not happen. Now, the other piece that I want to tie in here is, not only is it a regional issue but it is also a higher ed issue. Higher ed is also not keeping up with the need. And one is the lack of data. The other is also an issue that we have discussed quite frequently on the professional standards board, which is all the certification areas that have come out at the same time. I don't want to tell stories out of school but this is advice that the professional standards board six years ago gave to the Regents. Six years ago, teachers in the field advised the Regents that it was not to the benefit of our schools to have the multitude of certification areas that were recommended. And we can see that. We can see the lag in schools now. We also see that the largest need for teachers is in the City. With the initiatives outlined by Johanna, we can see that 14,000 temporary licensed teachers went down to 607 temporary licenses. But what this

does not show you is all the teachers that are teaching out of license. If you walk into a New York City school, you will find that every other teacher, especially in the middle schools and high schools, is teaching out of license. And, you know, we do get around that because you can teach 40 percent of your program out of license. But what we forget is that the highly qualified teacher in the content area is missing.

The Reasons Teachers Leave The Profession

- ❑ Lack of administrative support;
- ❑ Lack of adequate resources;
- ❑ Lack of guidance and support;
- ❑ Meaningful decision-making;
- ❑ Poor salary;
- ❑ Class size.

Source: Who Stays in Teaching and Why? A Review of the Literature on Teacher Retention, February 2005.

Now, why do teachers leave? The United Federation of Teachers (UFT) in New York City has had exit polls in the last five years. We have also talked to our members as NYSUT representatives and this is a no-brainer. We know why teachers leave. There is lack of administrative support. We know about the lack of adequate resources. We all know that teaching is hard for everyone. For newer people it's even harder. And many times we forget to look at why our colleagues are leaving within the first five years. One of the things that everyone says, "Oh, it's the salaries." But salaries are not the only reason people leave the profession. And, if you take a look at it, it does make

Why Teachers Leave New York City
2003-04 Comparison of Median Teacher Salaries

<u>Geographic Region</u>	<u>Median Salary</u>	<u>Years of Experience</u>	<u>Turnover Rate</u>
New York City	\$52,847	9	25%
Westchester	\$77,586	12	11%
Nassau/Suffolk	\$70,052	11	11/12%

Source: New York State Education Department July 2004

sense why you would leave if you take a look at the salary base. You take New York City and the turnover rate is 25 percent. Johanna showed the slide that in many other professions, depending on how many years of college you have, the better your salary will be. Well, when you stay in the teaching profession, you're going to have a salary gap between you and your colleagues in other professions. And it becomes wider and wider the longer you stay in the teaching profession. NYSUT had a survey 25 years ago and in

2004 MetLife had a survey and when we compared these surveys we found it was a no-brainer. The issues are still the same 25 years later. So how much progress have we really made in looking at these issues?

Survey Data Highlights the Challenges Teachers Face

<u>1979 NYSUT Survey</u>	<u>2004 Met Life Survey</u>
<ul style="list-style-type: none">• Student behavior• Lack of administrative support• Overcrowded classrooms• Lack of recognition of achievement• Contract violations• Insufficient time for planning and preparation• Compensation	<ul style="list-style-type: none">• Maintaining order in the classroom• Lack of guidance and support• Communicating and involving parents• Insufficient resources• Preparing students for testing

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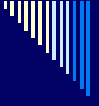
We frequently hold teacher focus groups and teachers are very, very vocal in letting us know what it is that they need. They're looking for professional and financial respect. There aren't adequate materials and equipment. I recently spoke to a teacher who said, "Well, you know, if we were doctors, we wouldn't be allowed in the operating room because we wouldn't have the scalpel to do the work needed. But here we don't have the materials, we don't have labs, but I'm supposed to make sure that every student meets the lab requirement though we don't have labs in the school." These are real issues that our members say if they were different,

What Our Teachers Tell Us They Need

- Professional and financial respect;
- Adequate resources and materials;
- Strong leadership;
- Supportive and active parent community;
- Safe, supportive environment;
- Meaningful professional development;
- Adequate preparation time;
- Manageable class size.

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they would be able to stay in the classroom longer. When we take a look at professional development, that's an all-encompassing area because what they say to us is, "There's no induction process in many of our districts." Mentoring programs, although they are required, are not in place. And if they are in place, they are not meeting the needs of the newer teachers. This is an area where we know high rates of attrition means that there is a high turnover. I know that some of the principals in the room will tell you that when they have turnover, it is impossible to implement a comprehensive improvement plan when every year you have to bring in new people and not have the ability to sustain any kind of student achievement.



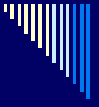
Impact of Attrition

High rates of attrition mean that for every two new teachers a school district hires, one of them will completely drop out of the profession in five years — **just at the time they are able to consistently improve student achievement.**

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What I really want to focus on is working conditions. If you take a look at what teachers tell us, what the surveys indicate, they boil down to working conditions. Business leaders recognize and respond to the connection between working conditions and productivity. However, most districts, schools, and most

policymakers do not look at the working conditions. They really glaze over the fact that if you have the resources you need, a clean safe environment, a facility that is not falling apart, they not only contribute to retaining the teachers but they also contribute to the kind of achievement you are going to see in your schools.




NYSUT Recommendations

- Invest in state initiatives that directly address teachers' greatest concerns about their working conditions.
- Invest in high-quality leaders who will include teachers in decision making about instruction and learning communities that help all students succeed.
- Ensure districts implement high-quality induction and mentoring programs and

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NYSUT over the years has made several recommendations. Our recommendations are, like Johanna said, not rocket science. It really isn't. But there is a science to creating a comprehensive approach to teacher quality. We have outlined several recommendations. One is to invest in state initiatives that address teachers' working conditions. Invest in high-quality leaders, who include teachers in decision-making on instruction and creating success for all students. Ensure that districts implement high-quality induction and mentoring programs. This is an ongoing debate that we have had with the



Continue...

- Strengthen and fund meaningful and effective professional development programs.
- Offer state incentives for teachers in hard-to-staff geographic areas and certain subject areas (Teachers for Tomorrow).
- Make better use of Nationally Board Certified teachers in schools and colleges, particularly in hard-to-staff areas.

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policymakers about mentoring and having programs that are funded. Strengthen and fund meaningful and effective professional development. That's a no-brainer. But this meaningful professional development means that teachers are engaged in the process, that teachers are part of making the decisions about what they need to improve instruction and their practice. Offer state incentives for teachers along the lines of increasing Teachers of Tomorrow, especially tying them to the shortage areas. If there is a shortage in math and science, then what is the incentive that is coming from the state to allow this to happen? Make better use of our nationally board-certified teachers in schools and colleges. Everyone hopes that maybe one of these will make the difference. Ultimately, the policies needed to ensure that we have a highly qualified teacher in every classroom have to be comprehensive. Just choosing one of these is not going to make the difference as we look at recruiting and retaining our teachers.

David Szczerbacki:

One of the interesting challenges of going third at these kinds of things is that you may not have a whole lot to say. I think I do, but there is a chance that I may have some redundancy. Hopefully, that will be for the better. I do already see some common themes emerging here and hopefully that will become more apparent as we move to your questions a bit later on. First, a little bit about Saint Rose. We are one of the leading providers of certified teachers in the state in terms of the number of teachers who go on to get full certification. We are an institution of about 5,000 students. Half of these are graduate students with the majority of these in our school of education. At the undergraduate level, the other 2,500, about a third of our students are in our school of education. We also run a certification program in New York City for school district administrators and right now the enrollment for that program is about 600. So we're into this game big time and I guess you can say we're both part of the problem and the solution.

I have three points to make this morning. These do overlap with both Maria's and Johanna's to some extent. I want to talk a little bit more about supply and demand and of equilibrium issues at the macro structure level. I also want to talk a little bit about quality

and character of teachers that are needed and the supply thereof as we look over the next ten years or so. Finally, I want to talk a little bit about how we're organized to deal with some of these issues. And again those are themes that we heard somewhat about already.

First, let me address the supply side. Looking at the research, it looks like we will need something like two million new teachers between now and roughly 2014. Interestingly, and this is important, only about one third of those, a third of that need, comes from anticipated retirement. In the same time frame, 2006 to 2014-2015, we'll see a little growth in enrollment. In the literature and the demographic data I've looked at, one can see a growth of about two to three million K-12 students nationally, the bulk of that being K-8. We're seeing a spiking and eventually a flattening in terms of 9 through 12 in that particular period. Some of these demographic trend lines, by the way, are making those of us in higher education very nervous. We're thinking there might be this confluence of factors in higher ed by the middle of the next decade where there is going to be dearth of students going to college. Right now we're in a bull market. So I would argue the importance of thinking about these variables: the need for new teachers resulting from attrition and the fact that we will have this modest growth of students that are entering the system in the next decade or so.

So how is equilibrium achieved between supply and demand? The answer to this question flows from an understanding that we do not have a teacher supply shortage in the making per se, but a shortage of trained teachers who choose to go into and stay in teaching. One-third of the two million gap referenced above will come from retirement. Obviously, something else is going on here to create the projected shortage. Some numbers for your consideration: three million people in this country trained to teach right now are not teaching. In any given year, 20 to 30 percent of teachers leave after one year. The number is as high as 50 percent in some urban districts. One-third of our teachers leave after the first three years. Almost one-half leave after five years. We see something like 60 percent attrition rate of those entering teaching via nonalternative pathways. This latter point is significant given alternative pathway initiatives currently being led by such entities as IBM and the New York State Business Council. This says something about the

sort of environments that we need to create in order to retain those people who are going to come into K-12 education via the IBM-like initiatives.

So my question might be (I don't have the answer on this but I pose it here), why don't qualified teachers enter the field and for those who do enter, why don't they stay? Particularly, why don't they stay for very long? Previously, Maria talked about working conditions and had a nice slide about this factor being a major contributor as to why people either don't enter the profession or why they leave in a hurry — some can't wait to get out of the profession. I think back to undergraduate school where we learned about hygiene factors and motivators and all those psychological theories about what motivates people to be productive in their work. Why are people productive? One-half of the equation clearly relates to working conditions. This includes the environment that we work in: pay, safety, and security. Those are so-called hygiene factors. Frederick Herzberg and Abraham Maslow dealt with all this you may recall. But the other half of the equation relates to the satisfiers, those things that truly motivate. The higher order needs of Maslow's needs hierarchy. So when we try to answer the question or why people leave or why they don't enter, we need to think about these hygiene factors and satisfiers. The satisfiers in this particular profession would include control over one's work space and curriculum, for example, and the sort of professional satisfaction that one gets from the work one does. A lot of times this flows from having localized control, decentralized decision making, and a relative degree of autonomy in the classroom in a particular school building. If you've been reading the *The New York Times* lately, some of this is currently being piloted in New York City schools. So what are the solutions — we're been asked today to think about solutions to the problem — for the attrition issue? The issue has to be addressed holistically. We need to address hygiene factors — working conditions — but also these satisfiers. The cost of not dealing with the attrition issue is tremendous and in the billions of dollars. But there is also cost in terms of the type of communities that exist within our schools, the continuity of leadership, and the mentoring that exists or doesn't exist, as has been pointed out earlier.



My view, and I think it's the prevailing wisdom in the teacher education business, is that teachers teach best and are more likely to be satisfied and stay where they are when they work within a supportive community of teachers, allied educational professionals, and paraprofessional staff. Interestingly,

creating these environments really becomes a function of administrative leadership, board of education leadership, and union leadership that exists in a given school district. I think Maria will agree with me on that. That's my first point on the macro level. The supply issue that worries me, in short, is this issue of retention and of how we might address it.

The second issue is the issue of the character and quality of teacher supply. This is the "beyond the numbers" part of the challenge. Some of this has been touched upon already but let me give my own spin on it. I would argue, again, that the teacher supply challenge is this: attracting quality teachers and retaining the teachers that school districts work so hard to recruit. The quality issue these days has to focus on preparedness in general. At our schools of education, at Sage or The College of Saint Rose and a lot of other places, are we preparing students properly? In the former case, it relates to preparedness in general as well as to specific disciplines, math or science for example, or to environmental-specific preparation. In the former case, the preparedness issue, school administrators and teachers in the field, particularly this New York City cohort I was mentioning at Saint Rose, the key recommendation for teacher education programs that we learn from people out there "doing it" is to provide relevant education that speaks to the realities of an urban environment. Our graduates need to know how to teach in an urban environment and how to achieve environment specific goals. Schools of education in this regard need to redouble efforts to form collaborative and persistently communicative relationships with K-12 systems. I will return to this theme as a concluding thought.

Relative to discipline-specific or environment-specific preparation — and by environmental I mean the nature of the environment that one is or will be teaching in — much has been said already about the topics of math-science education and so-called urban education. Some facts: 77 percent of urban schools have shortages in math-science, special education, bilingual education, and elementary education. Urban and rural public schools face the highest rates of out-of-field teaching, consistent with that you're already seeing in fields like history, science, languages, and math. The National Academy of Sciences, in a recent report cited by President Bush in his latest State of the Union address, has found that 60 percent of the eighth graders are taught math by teachers who neither majored in nor have studied for or passed the certification exam in that particular field. So we have this education gap — the “Quiet Crisis” that Tom Friedman and Shirley Jackson like to talk about. Both previous speakers used the expression “this is not rocket science” in reference to education reform. It is interesting that Friedman, in *The World is Flat*, basically says in reference to math and science education “But, oh by the way, math-science education *is* rocket science.”

But rather than read Friedman to you, I thought of an anecdote that is, I think, telling. About a month ago, I was interviewing a physics faculty candidate in my office, who we have since hired. The interesting part of this story is he had been at West Point for about 10 years, teaching physics. I spent about a half hour with each one of these candidates — most of the work is done by the search committees — and we get into this discussion of preparedness of students coming out of the K-12 system in mathematics. He said, “My biggest problem at West Point is these kids are not coming prepared in mathematics.” The best and the brightest, the top five or ten percent of their classes from across the country — this guy's teaching at West Point remember — and they've got a problem. That suggests to me that we all have a Friedmanesque-like problem in this regard.

I suspect that we are at the beginning of a national debate, probably well into the national debate and a national commitment, which will be of a Sputnik-era or moonshot-like proportion as a response to legitimate concerns with the quality of math-science

education. But my larger point here, beyond math-science education, is that we need to be concerned about teacher quality and focused preparedness given a competing, and sometimes even conflicting, set of needs that the educators in the classroom are being asked to exercise. Math-science education provides but one example, of course. Relative to challenges of urban education such as we have in Albany, for example, we face diversity issues of all kinds, a need to communicate a sense of citizenship and responsibility and the like. And we have to do all this in a No Child Left Behind environment, either the current version of NCLB or, I suspect, a future innovation of some similar set of national mandates. So we have our hands full in terms of responding to the supply and demand equation relative to the quality and character of our current and future teachers.

The third problem, finally, at least my take on the issue of the day, is how are we organized to prepare teachers and administrators? Let me give you a couple of examples that may illustrate my point. Johanna had on her slide the need for innovations and partnerships. My take on this subject is that we need to reconsider how our systems broadly define the supply chain that leads to creating a certified teacher; molding that teacher in the probationary and pretenure period; and providing a career-long support system that generates a plethora of professionals truly befitting the title of master teacher. Is our system working? Are we satisfied? Can we do better in structuring the system? That whole process of entering the profession — of becoming a professional educator — is mostly linear, compartmentalized, and, for many, suffocating. To be kind, it's not working all that well, although it was refreshing to hear some of the initiatives that are coming out of State Education right now in this regard. So there is need for new models, approaches that are collaborative and sustainable. I'll give you some examples of what I'm talking about there and then I will have a concluding thought and get out of your way.

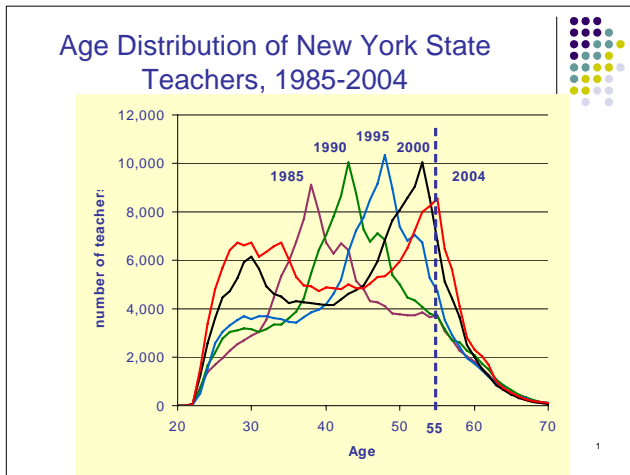
In the area of teacher training, what am I thinking about in terms of these innovative partnerships? The IBM initiative was mentioned. In taking a leadership position, IBM is doing some exciting things and we hope to partner with them. The

Business Council has a parallel initiative to develop alternative supply and certification pathways. All this has been a healthy endeavor. Roger Hull, formerly president of Union College, has developed a foundation which is looking at redefining the relationships between higher education, particularly schools of education, and K-12 systems and K-12 students. I think you're going to see a lot more of these innovative approaches. Johanna asked if we are preparing teachers the right way. I'll give you an example from Saint Rose's point of view. We had an initiative in terms of how we're teaching future childhood education teachers in the area of math-science education. This is the Tom Friedman issue. We've basically changed our curriculum and have invested heavily in faculty development for our faculty and for partnership school districts. We feel we have a fresh approach as to how science should be taught to children through something called problem-based learning or, if you will, inquiry-based learning. Importantly, this approach is first integrated in the curriculum for the teachers who will teach these children. We are basically getting at this question of what does it mean to teach teachers the right way — to teach students the right way in the area of math-science education? Curricular innovation involves partnerships among many parties, including providers of outside funding, school districts, and departments within higher education. In our case, the partnership began among faculty from two separate schools as well as our Academic Support Center. The partnership has been aided by Foundation funding and has had the luxury of building upon excellent relationships with a number of school districts in the region.

On the school leadership side, not much has been said about this today, but I will note we have a crisis in New York State in this regard. We are seeing massive retirements on the horizon and significant shortages of principals, building leaders, superintendents, and superintendents-to-be. It's a tremendously stressful occupation. These are very, very tough jobs and we don't see enough up-and-coming and aspiring leaders in that field. At Saint Rose, we have a three-year federally funded initiative involved with something called the Institute of New Era Educational Leadership and that's basically a partnership with 10 school districts in the Capital Region. We will develop 120 future school leaders and we're trying to do that in a way that can be replicated across the state and national

levels. But the point here is that we need to be innovative in developing sustained partnerships between the providers of teachers, the schools of education traditionally, and perhaps new providers like business, as well as K-12 systems. These partnerships may coalesce as local or regional consortia. Unions need to be at the table as well, and there is a role for professional associations. All these new models and organizations and partnerships, I think, should have as a shared goal the attraction and retention of motivated teachers and administrators.

James Wyckoff:



I'm going to skip past the first couple of slides because that material has been more than adequately covered by folks beforehand. The first slide is going to show you the distribution of teachers by their age and how that's changed over the last 15 years and what you see is that we're right on the cliff of this retirement decision. So, as

you see, we have been progressively for a long time heading towards this problem with retirements, not to diminish the issue about teacher retention, and we're right in the midst of having a large number of teachers retire.

Teacher Sorting

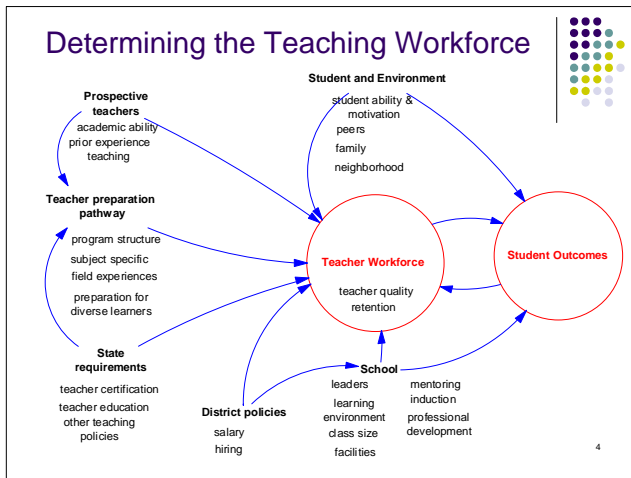
Attributes of Teachers in NYS Elementary Schools Grouped by Level 1 Scores on 4th Grade Math Exam

Percent of teachers	Lowest 5%	Low 20%	Middle-Low 25%	Middle-High 25%	High 25%	State-wide
0-1 year prior teaching experience	21.9	21.1	15.9	13.4	12.3	16.2
failed general knowledge or LAST exam	35.7	29.8	16.9	11.1	10.1	19.1
BA from a least competitive college	27.8	23.1	15.1	11.5	11.4	15.9
not certified in any assignment	28.8	23.6	11.4	5.8	4.3	12.5

The second point I want to make is that this turns out, as others have said, to be a much greater problem in some places than in others and the whole issue of getting qualified teachers into schools that most need them is difficult. This slide suggests that in the places where we

have the greatest need for qualified teachers, that is the uppermost column in red, shows you the schools in New York State based on the fourth-grade math exam who are the lowest performing. And then the rows show you the different measures of qualifications of the teachers who are teaching in those schools. So what you see when you compare the leftmost to the column that says High 25%, is that the most inexperienced teachers are teaching in those lowest-performing schools. The teachers who failed the last exam, the initial certification exam that teachers take, is over three times as high compared to the lowest-performing and the highest-performing schools. The last row shows you teachers who are uncertified in any of the assignments. These data are from 2003-2004 and I'm sure that would change somewhat. But the point here is that regardless what the aggregate or macro trends are in terms of qualified teachers, the schools who are going to suffer most are the schools where the students are lowest performing. Theirs are the most difficult-to-staff schools.

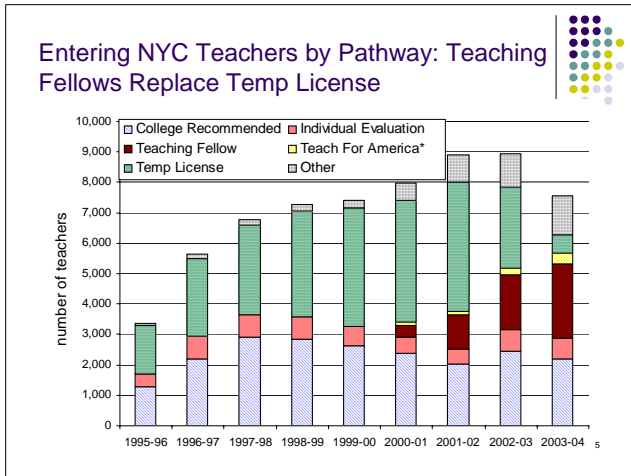
Many of the things that I want to talk with you about are focused on those kinds of schools. These are the challenges I think others have outlined: How do you attract a potentially strong group of people to enter the teaching profession? Once they become interested, how do you provide them with the appropriate skills? And, finally, how do you keep those people once you have them in the classroom? And I'm not sure what qualifies as rocket science, I guess. But I will say, I don't think this is an easy problem. It certainly is not an easy problem if you have constrained resources, as we always do. And so, trying to figure out what are the high leverage points in this system, where you can, in fact, get the greatest increases in teacher quality that in turn influence student outcomes, I think is not a well-known science at this point. We know very little about the kinds of things that influence teacher workforce quality, teacher retention, and, ultimately, student achievement. If you go to the data, there is very little information that makes that final link with student achievement. While there are all sorts of good ideas, and I don't disagree with any of the ideas that have been proposed, when you get right down to it I don't think there is a whole lot of hard evidence that will make those linkages.



So what I and some colleagues, Hamp Lankford and Don Boyd here in Albany and a couple of other colleges like Stanford, have been doing for the last several years is working very closely with Johanna and other staff at the State Education Department and Chancellor Klein and the staff of New York City Department of Education to try and

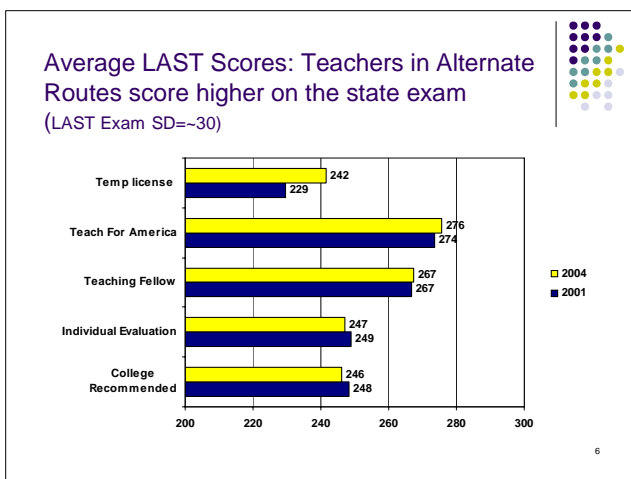
put together a database that would help us try and understand what attributes of teacher preparation seem to make a difference in terms of teacher retention and student performance. What are the attributes of what goes on in schools that make a difference? How important are mentoring programs in terms of student achievement? And so what I would like to share with you today are some of the early results from that work.

Johanna and other folks from State Ed keep calling me about every three weeks: “Do you know anything more? Come back and talk to us.” And we’re trying to push this as hard as we can. And I can describe in more detail, if you want, during the discussion the kind of data that we put together and try and do this. But briefly we have data on every teacher who teaches in New York City over the last 10 years. We’ve linked those teachers to the performance of our students in grades 3-8 in math and English Language Arts (ELA). So we have those data going back to the 1999-2000 years. So for about five or six years now we have data that link teachers to their students. We also know an awful lot about those teachers in terms of all the certification information that comes out of State Ed, as well as data in the human resource database at the New York City Department of Ed. Every time a teacher makes a move from one school to another or leaves the teaching workforce in the City or the state, we know that. So we are able to track many of these interesting interactions that we might care about if ultimately what we are interested is student performance.



This slide shows you rather dramatically what's been alluded to before. In New York City, the green area shows you the people who are either on temporary or modified temporary licenses over a long period of time. So a large minority of the teaching workforce in New York City back in the years 2000-2001 were

temporarily licensed teachers. It was a huge issue in the City; they had a very difficult time. As a result of more than just a little prodding from the State Education Department, the City was encouraged to pursue an alternative route and, by and large, that alternative route turns out to be the New York City Teaching Fellows program, an alternative certification program many of you are probably familiar with and I would be happy to talk more about. But you can see that over the last three or four years, there has been sort of a direct tradeoff in the reduction of temporarily licensed teachers in New York City and a rather dramatic increase in the number of teachers who are entering in those years from the New York City Teaching Fellows; and rather much smaller, but still growth in the yellow area, which is the Teach for America alternative certified program. So this shows you a rather dramatic shift in the way that teachers enter the profession in New York City. This line gives us a little sense of what some of the qualifications of those people look like. And this chart is just the average score on the last exam, the initial



certification exam for teachers. And what you see is that the folks who come in from these alternate routes are not at all like the people they replaced. We've also done this with SAT scores, we've done it with the ranking of the undergraduate college they've come from and you get the same results. So it isn't as if we just

took those temporarily licensed people and implanted teaching color on their forehead and they're the same people. These are a substantially better qualified, at least based on these measures, group of people who are now teaching in New York City as opposed to the temporarily licensed teachers who had been there. And you can see that in this measure they are about the standard deviation, or not quite, better on the last exam than on the people who come through traditional college preparation programs.

One of the things we were particularly interested in doing, and we've got a much longer paper and I've got lots of slides buried in this presentation that I won't bore you with, was trying to understand whether the preparation pathway from which you enter the profession in New York City had anything to do with the performance of the students that you end up teaching. So as soon as somebody walked through the door, their first day of teaching in New York City, we said, "What was the most recent pathway that they went through?" So if they had just come out of the Fellows program, we labeled them a Teaching Fellows program. If they came out of a college-recommended program, they got labeled that way. And so on. There are six various pathways through which these folks could have entered teaching in New York City, including the individual evaluation that Johanna mentioned, where you send transcripts to the state and they evaluate you that way.

Do Some Pathways Improve Student Achievement More than Others?

- Alternatively certified teachers appear to produce less student value added relative to college recommended teachers in their first year but typically improve more in years 2 and 3
- Alternatively certified teachers have higher value added in math or middle school than in ELA or elementary school
- These differences are typically either small or modest

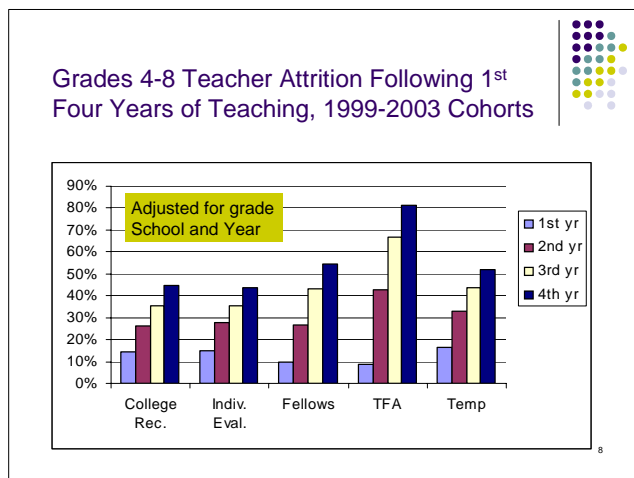


The long and the short of all this is that alternatively certified teachers appear to produce less student value added. I can get into a lot of ethnological issues here if you like, but basically we looked at between fourth and fifth grade, for example, how much better did the student do on their fifth-grade math

exam than they had done in fourth grade? So, what was the gain in fifth grade? We then linked that gain back to the teacher who taught that student. We controlled for a whole lot

of things. Most importantly we only compared teachers across different pathways to other teachers in the same school because there is all this sorting of teachers across schools. So whenever we make a comparison, say for a Teaching Fellow to a college-recommended person, they were in the same school and that controls for a lot of the things that you might worry about that would make those two groups different because, for example, Teaching Fellows teach in much more difficult-to-staff schools than college-recommended do in New York City because those are their jobs that are available.

So when you sort through all of this, and it's a 40-page paper that I'm happy to share with any of you, it's on our web site that I'll give you, the alternatively certified teachers produced somewhat less value added relative to the college-recommended teachers in their first year. That is more true if they're in elementary schools teaching ELA. It's much less true, in fact, they do about the same their first year, if they're teaching math in middle schools. So what they're teaching and the grades in which they're teaching seem to make a difference as to how well Fellows perform relative to college-recommended folks. In general, the Fellows performed somewhat better than temporary-license people who were still a very prevalent path during this time, and over time they improved their skills relative to that group. I should say that these differences are not huge; the differences between college-recommended and Teaching Fellows. We would say they are somewhere between small and modest in terms of their effects. Again, there are lots of other things that we could talk about that come out in this paper but those




were some that I thought might be interesting.

Another question that frequently comes up in this regard is the issue of retention and so what we have here is by pathway what the retention rates are following their first, second, third, and fourth years in the profession. And what we see, for

example, is that the Fellows have somewhat lower retention by the time you get to the third and fourth years. They do well the first two years but by the time you get to the fourth year with the Fellows, this is the first cohort of Fellows that entered New York City. It is our belief based on some more recent work we've done that the Fellows are really, once the whole thing sorts out, going to look an awful lot like the college-recommended people in terms of retention. I think there's no hope that Teach for America will ever look like that. Their program is designed differently; people are expected to provide only two years of service through Teach for America so what you see there is that following the fourth year, there are less than 20 percent of the people who started as Teach for America teachers.

Draw of Home



Region of First Job	Distance from Home to First Job			
	0 to 15 miles	15 to 40 miles	40 to 100 miles	100 or more miles
Buffalo City	76.0	10.3	3.7	9.9
Buffalo suburbs	71.0	18.3	4.3	6.3
New York City	63.4	26.9	6.6	3.1
New York City Sub	71.0	22.7	3.6	2.8
Rochester City	54.2	11.4	18.7	15.8
Rochester Suburbs	44.8	25.9	18.2	11.2
All	60.8	23.9	8.6	6.7

• 85 percent of teachers take a first job within 40 miles of home

I want to make two points with regard to this issue of how we can think about recruiting and retaining teachers. Well, it's the same point I made in two different applications. And it's this importance of geography, a place, draw of home, whatever you want to call it. We did some work a few years ago where we

found that across this state, teachers took their first job very close to where they went to high school. Statewide, 85 percent of teachers take a job within 40 miles of where they went to high school. So while some people may leave Buffalo and go to New York City to take a job, that's extraordinarily unlikely. If we're thinking about how to develop teachers, we ought to be thinking within geographic areas. For New York City that poses a challenge. Sure, we could have Saint Rose locate a program in New York City but the City has to look to the CUNY system, to the private colleges that are very close to the city in terms of where they can expect to have teachers come from. So it places a very big burden on those preparation programs to be doing a good job of preparing teachers who will succeed with students and stay in their jobs.

The Importance of Place

Annual Turnover of First-Year Teachers by NYC Residency Prior to Taking First Job

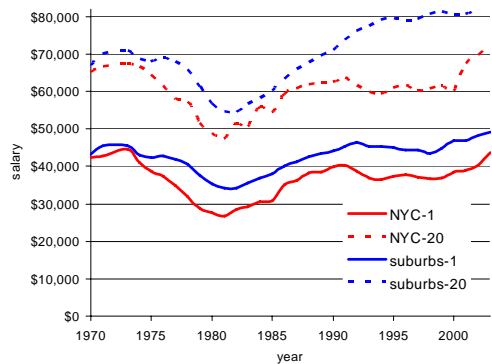
Location	Remain in School	Transfer within NYC	Transfer out of NYC	Quit Teaching
NYC Resident	84.9	8.1	0.9	6.1
Nonresident	75.3	6.8	9.7	8.3

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You see the same thing with retention. We did this study in New York City and examined the location of the teacher before they took their first job in New York City. So where were they before they started teaching in New York City and then, once they took the job, how likely did it make it that they stayed on the job? And you

see that it is ten times more likely that if you were outside the City before you started teaching, you were going to leave that job than if you were inside the City. So around issues of both attracting and keeping people in the profession we think we ought to pay a lot closer attention to geography. It isn't so much the geography, perhaps, that's important. It's what goes with that. It may be a familiarity with the environment. Part of it is cultural. Part of it is that lots of us like to be closer to home, whatever home means to us. So we think there's both cultural and environmental reasons as well as other reasons that give us this result.

Real Salaries of Teachers in NYC and Its Suburbs (1 and 20 years of experience, 2003 dollars)



We have alluded to the importance of a lot of other attributes and I would certainly support what everyone has said about working conditions and salary being important issues. This chart is not up to date in terms of the last couple of years where some important gains have been made. But this gives you a sense of

the salary trends in real dollars in New York City for novice, as well as experienced teachers. And so, I think as long as we have a meaningful salary gap, or even parity in salary, because the City is so much more difficult to teach in, getting back to the issue of

working conditions, that we can expect we're not going to necessarily keep the brightest people, the more able people in teaching positions in New York City.

Our web site is www.teacherpolicyresearch.org. We put everything up that we are doing. As part of this work we're working with the state and the City on lots of surveys of teachers. And we're in the field right now with another survey. For example, last spring we surveyed every new teacher in New York City, about 6,100 teachers, and had about a 70 percent response rate. We asked them lots of questions about mentoring. We asked them questions about professional development, leadership in their schools, how important their preparation was. And these were factually based questions. It wasn't like "Did you have a good preparation program?" but specifically what things occurred in your preparation program. We want to link these surveys back to the administrative data that we have and use all that information to help us better understand what aspects of preparation are important. It is a good field experience, more important or not even in a relative sense, but in an absolute sense compared to things like pedagogy forces. Where are the key leverage points in trying to prepare people better who then can turn out to work with students and produce student outcomes that may be more effective as well as their own retention issues?

Allison Armour-Garb:

I want to thank all of our panelists for their very informative presentations. And now I want to give them an opportunity to respond to one another's ideas if they wish. We'll split our remaining time between an interchange among the panelists and questions from the audience. So, would any of you like to take this opportunity to respond to what the panelists after you said?

Johanna Duncan-Poitier:

I will take the bait. Thank you. I just wanted to say something about the work that Jim Wyckoff is doing. He's correct, we do call him every day, saying, "How's it coming?" I'm sure you're very happy when you see our name on the phone. The reason that his

work is so important to us is, to my knowledge, it is perhaps the only research of its kind. And there is research all over the country about teacher certification and about alternative preparation. But what's different about this is one, it's for New York State. It's independent. It's objective. It has the specific information about New York City students. We were able to make some sort of agreement so he was actually able to follow graduates of teacher education programs as well as alternative certification programs and so forth. But, most importantly, it's linked to student learning outcomes. What you will see with me as you look at research, for the most part, is how many teachers graduate and pass exams. Or how do they do on exams? Or how many schools produce X number of teachers? But it's more factual data as opposed to data that's linked to learning outcomes. So for us it's very important. It is going to drive policy decisions. There is one thing I did want to mention about this information that is very, very important to understand. The term "college-recommended" versus "the Fellows." For us, the college-recommended is somebody who has graduated from a traditional college preparation program. But the alternative preparation programs (AKA the Fellows program in New York City) is also a college program. I'm sure my counterpart from higher ed would agree that the colleges have really made the investment in alternative preparation and are seeing this as a viable pathway. So college-recommended and Fellows really go together in terms of what the colleges are doing. The others, we have to look at carefully. We're very excited about the data that you have coming out. So thank you for your work.

James Wyckoff:

Let me mention one other thing. The analysis I just showed you was up through student achievement in 2003-2004, which predates the Regent's changes to certification and registration requirements. So we don't know yet what the effect of those changes might be. I want to make clear that they don't reflect those changes.

Allison Armour-Garb:

Are you planning to study more recent data to see if you can get at those changes and do you have a sense of where they might be taking things?

James Wyckoff:

Yeah, we now have the data for school year 2004-2005 and we're working with those data to try and better understand how the group of teachers who entered that year, which is the first year that those teachers would have been through the newly registered programs, compare to early years. I guess I would say also that unless folks at Saint Rose or the other preparation programs would disagree with this, I think there is still a lot of settling in going on in terms of how they're meeting those new requirements and how fast we are actually implementing them. So even this first year, without knowing the results, I would be a little skeptical that you're going to see much difference. I think that will grow over time if, in fact, there is an effect there.

David Szczerbacki:

Well, I think we are just settling in. I mean there are two things that happened, bang, bang, when the new standards came out. Most schools were simultaneously having to deal with other accreditation agencies like the National Council for Accreditation of Teacher Education (NCATE). So there was this massive re-engineering of what we do, how we do it, and how we assess it. So I think you're right; I think it's going to take two or three years in schools of education for all this stuff to impact as it was designed to impact. But to go back to Johanna's original point, in one of your first comments you were apologizing for creating new standards. Well, I guess you were sort of apologizing. I think developing the new standards was the right thing to do, but it's going to take a while for all of this to settle in. I'd like to echo your other comment regarding Jim's work, this notion of taking a hard assessment look at these alternative pathways. We can generalize from that point a little bit. Whatever the innovation might be — it might be working conditions in the school district that Maria had talked about or it might be innovations in math-science education or whatever — we always need to have that assessment moment. As we innovate, some things are going to fail and that's okay, but we ought to sort out the good from the bad along the way. I think that's the commitment that people are making now.

Johanna Duncan-Poitier:

I really appreciate your comments. I'm sort of apologizing because it really speaks to the point I made before about Jim's data. A lot of people will say to us, "Why do we even need colleges? We have these great people who could teach in a classroom. Teaching isn't that hard." A lot of folks wanted to hire some of the temporary licensed teachers as permanent employees. If we really want a better-educated workforce, I agree with you a hundred percent, Maria, that teachers are so very, very important. So we do need a well-prepared teacher and that's why it's so important that we make the connection between college-recommended and Fellows because there are people less informed than those of us here today who think that maybe Fellows is some sort of an ad hoc program that the Board of Education has, but isn't really linked with higher ed, and it is. I think the results are really encouraging.

Maria Neira:

I would just say that it's really essential that we take a look at the data from 2004 on. I think there are a lot of certification requirements that were simultaneously added that also have to be looked at. We have the additional 175 hours of professional development. We have the mentoring. All those pieces have to come together at some point to see the impact of the quality on teaching. The point I always try to stress is that data are excellent and we need to use them to make policy. We also need to factor in the classroom realities. Some of the data we collect doesn't reflect the everyday realities of the classroom. I think that as policymakers, when we take a look at these data we also have to factor in what my reality is when I'm walking through that classroom every day, which can in many instances not be reported and captured by data.

James Wyckoff:

I think that's a great point. And that's part of the reason, probably the most important reason, that we wanted to do these surveys. So you can hear what gets reported in the administrative data. You can also understand what preparation programs think they're

doing. But the teacher's experience in those programs and her experience in her classroom, I think, are important and trying to get that perspective I think is really useful.

Allison Armour-Garb:

I would like to throw it open to questions from the audience.

Linda Jackson-Chalmers:

I'm with the City School District of Albany. I really am encouraged by what I've witnessed today because we're doing so much in the area of teacher recruitment and a lot of the strategies and pathways that we're utilizing, such as partnerships with Empire College for second-career educators. What incentives or support is State Education providing to our local colleges, similar to the large urban districts for teacher recruitment or Teachers of Tomorrow. One of the things where we're falling short is our affirmative action goals in terms of teachers of color in the classroom. To me, we need to do a better job of connecting that piece of it with our local colleges and universities similarly to the large urban areas in New York State.

Johanna Duncan-Poitier:

Thank you for your comment and your questions. There are a lot of things we are doing now, but there are a lot of things that we need to do that we haven't even thought of yet. And, not to escape the question, any ideas you have would really be welcome, which is why we really welcome participating in forums such as these. But here are some meaty things that we actually are doing. One, I may have mentioned when I was presenting the whole concept of K-16 and the fact that the colleges and the school districts really have to work together in a more meaningful way than they ever have before. We really see both sides of the fence wanting that. I remember years ago I would meet with school administrators and they'd say, "The colleges are at fault. They haven't produced the best teacher," or "They don't produce enough teachers," or "When are they going to do what I really need?" And sometimes there's a little bit of this from both sides, but not anymore.

A couple of weeks ago, I met with the district superintendents and they were identifying their needs in their local school districts. So certain school districts said that they really need to have science teachers. Others said they need foreign language teachers. Others said they have got to get some special ed teachers and if they don't get them they're going to go under. They are linking with the schools in their area, for the most part the public institutions, because the issue of tuition is a concern. But linking with the SUNY institutions upstate, the CUNY institutions downstate, then our next step will be with the independents. We're looking at benchmarking the linkages that already work. You mentioned opportunity programs, Liberty Partnership programs, College Now, Teachers of Tomorrow, Teacher Opportunity Corps. I'm very, very happy to say that the governor's budget is looking to double the amount of money available for staff and the Collegiate Science and Technology Entry Program (CSTEP). These are all initiatives where you have the college and the school districts working in a way that we know works. And I don't want to use the analogy again to say that it isn't rocket science, but it really isn't. We know it works. You can get a kid who is totally disenfranchised in their school for whatever reason, but they actually attend college classes or they go to the campus and somebody is there to help them along, and they feel grown up and they're getting the kind of counseling, academic support, and visions that they need to succeed, it really will make a difference. So one is making the linkages to maximize the resources we already know exist. Two is getting additional funding that doesn't yet exist.

Three is not only just saying the students in the high schools need to be participating in college activities, but also having the colleges and the school districts start to share resources. I have a meeting tomorrow out on Long Island with Regent Tillis. Regent Tillis is one of our newer regents who used to be on the board of trustees for Long Island University (LIU). They actually had the very kind of partnership that you were describing with LIU and the Westbury school district. The reason for the meeting is to see if there are some things we can benchmark and then look around the entire state to do that very kind of thing where some of the colleges are actually adopting school districts. Again, we are looking to maximize resources.

But the last part that I would like to mention is really the first part. There are so many things we haven't thought of. And we really have to speak to you and other people who will give us ideas we haven't yet thought of. I meant what I said at the beginning about my partners. Maria is out there everyday in the schools talking to teachers, talking to administrators, and they are identifying their needs. And we have got to make them a reality. I said it before but we really have to find out what's going to make a difference for student learning. I love your chart where you have the circles. I want to copy that and put it on the wall. Because no one thing is all we need. It's so many things combined, but what's going to make the greatest difference for the student in the classroom?

Maria Neira:

I want to follow up on the statement about diversifying our pool of teachers. I think that's something we need to really hone in on. We've looked at giving teacher assistants a pathway to becoming classroom teachers and giving them more assistance. We know that teacher assistants are usually in the community. They usually have spent time and will stay within the community if they get a full-time job. However, they need the incentives and supports to be able to get through the pathway to teaching. That's an area that we have focused on in the last few years, talking about how we use an untapped resource to diversify the teaching pool.

Mike Dokowsky:

I'm assistant superintendent for human resources in Shenendehowa. We just had our teacher recruitment fair last week. We had 28 retirements in Shenendehowa this year, mostly senior teachers with 30-plus years of experience. So we're not losing teachers with the three, four, five years of experience, as many others might be looking at. With our teacher recruitment fair, we had over 500 candidates that we interviewed. We do 20-minute interviews, 350 of which were elementary candidates, and we probably could have put more people on if we so chose. I personally had the pleasure of interviewing about 21 of those candidates and I will tell you, most of them were from Saint Rose and most of them are extremely well-trained, energetic, and very bright in terms of their

pedagogy coming out of school compared to what I've seen in years past. But somebody mentioned that we have a lot of people who go into elementary certifications because they don't want to be dealing with big kids; they like to deal with little kids. How do we take some of these best and brightest and channel them into different certifications other than elementary, and whose role and responsibility is that?

David Szczerbacki:

Well, what I heard from Johanna was that we need the data that tells us that the opportunities exist elsewhere right now. That would be the sort of data that a place like Saint Rose could use and its admissions process could use to kind of get the word out even before people enroll in college, but also try to get the word out to people who have already enrolled. The childhood end is our strong suit and we are heavily enrolled and I have a lot of faculty lines invested there. I don't have too many faculty lines invested in secondary ed. And I wish I did. It seems like I ought to. But we need to see that data and then use it in our own marketing materials. I'll leave it up to State Education to come up with alternative pathways to recertify childhood educators but that's not a bad idea either.

Johanna Duncan-Poitier:

Thank you for verifying what I said earlier by your personal experience because we really do see it all the time. I think two things. One, you've already mentioned that having the data is really important and, again, if any one of us thinks about ourselves when we were in high school, you're thinking about how you want to get a nice car, you want a job that's going to make a lot of money, you want a nice apartment. You want a job that you know is going pay a decent salary and that you can choose from. You don't want to have to say, "Geez, I hope I'm going to find a job." And a lot of kids are hearing "teacher shortage, teacher shortage, teacher shortage." So they assume that any field they go into is going to have a job waiting for them and they can teach wherever they want. So they can go to Clifton Park or Loudonville or Bethlehem or wherever and, of course, that's not the case. So we have to arm kids with the right information so they can make educated choices. And it has to happen at the school, it has to happen while they're in high school,

it has to happen in the colleges. That's one thing. Second, we need to tell them where the greater need is, of course. Here's where it isn't. This is where it will be.

The other piece is, what can we do with those who are already graduated? If you have someone who's graduated from school, well prepared, if they don't already have their master's, there's a whole lot more room to get them where we need them to be. The supplementary certificate that we were talking about is perfect for the person who has gotten their bachelor's in let's just say elementary ed, and they want to be a math teacher because they've now seen the light. And they say, "Geez, I really would like to work at Shen but unless I have X number of credits it won't happen." Or, "If I don't start all over again, it won't happen." The supplementary certificate is intended to give them an opportunity to teach in another subject that they have, let's just say math for example. We're talking about 12 credits. If they can pass the content specialty test, which means they know something in math, they can pass the test and they have at least 12 credits in math-related courses, they can start teaching in another course while they get the rest of their education. So, right now they're rather strict in terms of the 12 credits we're talking about. Sometimes we're getting second-career people, you know, so there might be somebody who worked on the stock market or somebody who worked in a bank who has math-related courses. They may not be the exact courses we're looking for now but maybe we can be a little more flexible so we can attract the kind of student you're talking about who has recently graduated who would get their master's in an area where we need teachers to the greatest extent. Those are the big pieces for second-career people as well as those graduating and getting initial certificates. That's our hope. But we have to make some changes. Right now, we're not there yet but we're working on it.

Caleb Offley:

I'm with the Hoover Institution. My question is for Jim. Can you tell me a little bit more about the student data that you captured and how you went about with your value-added data net? Specifically, I'm wondering about the student outcomes that you were looking at. If it was just confined to the state testing system?

James Wyckoff:

New York City tests all their children in grades three through eight every year in math and English Language Arts (ELA) so they rely on state tests for fourth and eighth grade. But they also have tests in grades three, five, six, and seven that are also tied to the state standards and are in many ways comparable to the state tests. We've spent a lot of time looking at the tests and trying to work with the specific data. I won't drag you through all that. But basically, we have become fairly comfortable that a third-grade test is a good pretest for a fourth grade. And so we take a look at essentially the difference between how they did in math in third grade and how they did in math in fourth grade and attribute that gain to all the things that could have influenced that over that year, some of which are what happened in schools and with the teacher, but also other influences like their family, the peers who sit in that classroom, and in this paper we go through the importance of all those other factors. We do not have as strong data on the socio-demographics of the kids as we would like but we know, for example, how many times each of these kids was late for school; how many times each of these kids was suspended from school; their race and socioeconomic status; a measure for income for each of these kids; and we also have all those same measures for all the other students who sit in that same classroom. So we use all of that information, in addition to the pathway results that I reported to you, to try and gain a sense of, in terms of that diagram I had, as many of those things as we can. Our goal when we created that diagram was to measure or account for in some way all of the things in that diagram that could end up influencing student performance.

Tom Gais:

I'm with the Rockefeller Institute. When you were talking about some of the differences or the problems of recruiting in areas like foreign languages and math and science, I was just wondering, in New York State to what extent is there flexibility to respond to these different markets with different salary levels and to the supply and demand for the different labor markets that you're actually experiencing. If there is not that much flexibility in New York State I was wondering if other states do have a lot of flexibility in

responding this way or do they have the same sort of difficulties in recruiting and moving people and drawing people into the teaching positions?

Maria Neira:

There are states that have used signing bonuses. However, those signing bonuses do not become part of the teachers' salaries. So we find those teachers leaving after five years. We see the same change in rate. We have taken the position that if the state has incentives for these market areas, then it would be a statewide effort. Now, on the local level, on the contractual level, that's another issue. But we have always taken the position that if the state were to say that they're going to have incentives in their salaries for math teachers we would not be opposed to something like that. For example, we need math teachers so the state will say, you know, there are X amount of incentive dollars that are going to be used to recruit more teachers in math, which means there will be an impact on their salary.

Tom Gais:

Now, is there any evidence that places that have a lot of flexibility and exercise it see these market problems of recruiting in math and science reduced substantially?

James Wyckoff:

There is not, to my knowledge, an awful lot of work that has been done in that area, Tom. But I've seen a couple of things in terms of geography-based incentives, which is the other part of this equation. I guess I wanted to turn a question back to Mike. You only had 150 of the candidates who were secondary ed, but my guess is you guys always end up with a reasonably well-qualified math teacher at the end of the day. So the real problem to me is the compounding of subject area shortages and geographic shortages. And I think there is some evidence that bonuses or incentives that are created to try and address those issues have had some effect but, again, it's very preliminary. The Institute

of Education Sciences (IES) is now funding lots of work to try to better understand what those relationships are.

Johanna Duncan-Poitier:

The other piece, I think, of your question is about college faculty?

Tom Gais:

Well, that was just say an example. I mean colleges and universities have adjusted to market differences across disciplines. Or they've always had those markets across disciplines.

David Szerbacki:

That's true. And if you don't have that differential you just will not be competitive in recruiting those faculty. I've been doing this for 20 years and you will not recruit unless you acknowledge the market, although it is a particularly politically contentious issue on most college campuses. It's pretty well settled in as a concept as part of the cost of doing this business.

Diane Ward:

I'm with the School Boards Association. As for the area of retention and how we keep hearing that this next generation of people who will be entering the workforce are likely to work in multiple careers over their lifetime, I just wondered if maybe we're just seeing the start of people who are making career changes no matter what we could do to necessarily improve working conditions. It's just going to be that future generations won't want to stay with teaching for a lifetime perhaps like their predecessors have. Maybe that just is the direction that we're heading.

James Wyckoff:

I'll take a stab at that. I guess I didn't spend any time on it but I think retention is like most of these areas, much more complicated than just saying retention. I don't think we want to retain all teachers. There are some teachers who find they get into a job and say, "This isn't what I expected." And both for them and for the benefit of the students they say, "This isn't the right environment for me." So there's a lot of sorting out. I don't think that's just the function of teaching. You know, I've got kids who struggled through all this, a lot of people are sort of trying to figure out what the right match for their interests and their abilities are go through a lot of shifting early on in their lives. So I guess I don't find that unusual. I think what we need to understand better is who are the teachers that we want to keep and how do we create the incentives. Because I do think there is an enormous cost. Teachers learn a lot in the first four or five years of their jobs of how to be effective with student achievement. And so if every three years teachers are turning over and you're starting over, then you're penalizing the students who are in those classrooms. And, as I said earlier, that occurs most often in hard-to-staff schools. And so the issue of inexperienced teachers I think is an important issue and we need to try and figure out a way to deal with the retention. You're raising an issue that may make that more difficult in general. But I guess my point is, when we find effective teachers, I think we need to figure out more effective ways of keeping them in the schools where they're most needed.

Maria Neira:

I also think we need to take a look at where they go. I don't think when they leave the classroom that they necessarily go into another career. I think in New York City, for instance, a lot of the teachers go to teach in suburban areas. So it isn't like they're leaving teaching; they're leaving the City to go teach somewhere else. But I don't know if we have that kind of exit survey that would give us a better picture.

Johanna Duncan-Poitier:

Just a last comment. I think it's been covered but I see three things, to answer your question. First, the demographic issue is something we're seeing in every single profession. Many of us are baby boomers. We're just aging out and there just aren't as many people in our society to do given jobs. We're looking at that in nursing, medicine, physical therapy, and pharmacy. I mean, all of the professions will say, "We need to do more in the way of recruiting." Okay, so that's just one, demographics.

The second issue is a cultural change. I do see real parallels with nursing and teaching. There was a time when nursing and teaching were the only careers for women. You know, the idea was when you grew up you could be a teacher if you were a girl. Not anymore. You can grow up to be a bank president, college president, anything you want. We won't get into the glass ceiling, but for the most part you can pursue any career. So teaching and nursing now have to be something someone really wants to do, not just that it's the opportunity for women. So given the fact that there are fewer people, given the fact that there aren't as many people who choose teaching and nursing just because it's a woman's career, we have to make sure that those people who really are committed enough to pursue those professions are kept in them. I think Maria's points about retention and the fact that we have not paid as much attention to it seems to be the thing that's always at the bottom of the list and I can say that for the Education Department. We do lots of things with the colleges, with the school districts, with our regulations, but when retention is talked about it's always the last. It's perhaps the hardest thing to change. But I think we as a society have to keep the good teachers that we get in the classroom because we just can't afford to lose them. So, again, it's one of those things we know but we have got figure out how to combat.

David Szczerbacki:

If I understand the question correctly and I heard something a little bit differently, which was that there might be something sociological or cultural in the air that says no matter how hard we try to retain, people just have different life cycles now and different life

patterns and all the rest. It might be Generation X or Generation Y. If, in fact, we're now going to be stuck with a situation where people move around a lot, even good people move around a lot, that means that when people do come in for their five- or eight-year stint, either as an end-career stint or a mid-career stint or an early-career stint, we have to make that experience "plug ready." If I'm in a school district and I'm going to bring somebody in for a short period of time, I need to provide creative orientation and mentoring systems, as well as supportive policies and procedures that, at least for those five years, makes the most of the moment. And I would add a corollary: Try to make five years ten years. But if someone is only going to be there five years because there's something sociological or cultural in the air, make the most of it. Don't treat "short timers" like they're transients; treat them like they're going to be around for the long haul. You might be surprised by the result.

Todd McKee:

I'm the principal of Albany Preparatory Charter School here in Albany. Jim, you were talking a minute ago about this group of really great teachers that we want to figure out how to keep in education and it's okay for some people to not stay in if it's not a good fit. I'm just curious if any studies have been done or any data collected about the reasons why those great teachers are leaving and which of those reasons are controllable by education agendas.

James Wyckoff:

That's a great question. It sort of begs the question, how do we define a great teacher? I guess I'd be the first to say that although we've used student achievement data to identify one aspect of what makes a good teacher, I think most of us would argue that that's only part of the story. What teachers impart to students goes well beyond how much math I learned that year or how much better in English Language Arts I did. It's those other things that are so difficult to measure though. It's not all that easy to measure the achievement part, to be honest. But let's assume we all can agree on what makes a good teacher. There are some studies that have done exit surveys of teachers. State Ed has been

involved in a couple of those. In fact, the survey that we have in the field right now we've specifically targeted teachers who have left teaching in New York City during their first 12 months as a teacher to try to better understand what were the factors that influenced both what they say, but also as we observe the situations they were in, what factors those were. So I think it's a hard problem in the sense that it requires us to collect data that are not easily collectible. But the harder part is for all of us to come around to some agreement about what we mean by a high-quality teacher. I think it goes well beyond how well you did on the last exam or what college you graduated from. I think those may be indicators of some of that, but it goes well beyond that and I think that's the hard problem.

Allison Armour-Garb:

Well, it's 11 o'clock and I guess we will wrap up for the morning. Let's have a round of applause for our panel. Thank you all very much for coming.