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Featured Speaker:
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Secretary of Education, Commonwealth of Massachusetts

Good afternoon, everybody. As with all great speeches, I should start with an apology – sorry I'm late. Although I did learn from Tim's speech, and I'm sure all of you were well aware that it took about 100 years to settle Worcester – I assume those folks were coming from Boston. That's about how long it took me to come out here tonight. I felt like I was one of you, in that trek out of the East Coast.

I also want to say it's a great honor to be at The Research Bureau. Maureen mentioned in my introduction that I used to be the executive director of the Pioneer Institute. I took that job, or got that position in 1993, so that's getting close to 25 years ago, and it was very early on that I began my relationship with Roberta Schaefer and what was then the Worcester Municipal Research Bureau. So I feel like I've been part of this organization for a long time. I didn't realize it was only 32 years – I was almost there from the beginning. I wish I had started earlier so I could have been there.

It is great to be here, and it's great to be with you, and I'm honored to speak tonight about the state of education in Massachusetts and some of the initiatives and priorities of the Baker-Polito administration to address some of our continuing challenges.

In talking about Massachusetts and its place in the education world, it's very natural, I think, to acknowledge the reality that we are viewed from the rest of the country as being the gold standard. Forbes Magazine describes us as the most educated state in the country. Education Week, which produces an annual report called Quality Counts, where they give a grade to every state in the country, gives us the highest grade. The U.S. News and World Report, as you probably heard maybe six months ago or so, rated Massachusetts the number one state in the country, and the primary reason for that ranking was the high esteem in which they held our public education system. When you look at the National Assessment of Educational Progress, which is a national test that's administered by the U.S. Department of Education across all 50 states, we rank number one in virtually every subject and grade level. So at a very high level, the news is very good. We're as good as it gets in that sense.

But when you look a little bit deeper at what the data suggests and what some of our challenges are, it's pretty clear to see we aren't where we need to be. We certainly can't afford to rest on our laurels.

So a couple of observations generally about the environment. First, even though we're the best at the moment in the country, the other states in the United States are investing heavily in education, trying to catch up. So just standing still isn't enough to keep us ahead of our peers. But even more important, we exist in a global economy, in a world in which we are competing – especially in Massachusetts – against countries like India, China Singapore, and Germany, as much as we are against North Carolina, California, and Texas. So those countries as well are catching up and in some cases are already ahead of where we are. Society in general is changing, even as we stand here. Technology is changing our daily lives, it's really changing the expectations of the workplace, and our education system needs to change as well. The bar is rising even as we speak. And similarly, the demands of employers for the skills they expect students to have and the knowledge base that they bring to their businesses is also changing, and when I say changing, I don't just mean it's different, but the expectations are getting higher over time.

Finally, the demographics of our Commonwealth are also changing, and that's creating additional challenges and putting new pressures on our education system. Because first of all, the overall school-age population is flat or declining, and that will continue for many years to come. And the diversity of that student-age population or that school-age population is increasing all the time. And so the students who are increasingly making up a larger and larger portion of our public education system are students who have historically lagged behind their peers. And therefore, in order for us to lift them up and to maintain our standing overall, we again need to do better just to stay in place, let alone to improve.

When you look at some of the data that describes us at a high level or that puts us in such a strong position, when you look at the overall data, when you peel the onion a little bit, you see that there are some areas for serious concern. I don't mean to suggest that the glass is half empty but I do want to suggest that the glass isn't anywhere close to being full.

So we're number three in the country when it comes to access to early education but we're number 19 when it comes to the quality of that experience. We started implementing MCAS back in 2001 in third grade, and since that first administration of the third grade reading assessment, we have seen absolutely no improvement in the overall level of proficiency among our third graders in reading. That's true across the state, it's true in Worcester as well. We've seen similarly flat scores when you look at that National Assessment of Educational Progress, or NAEP. Since we saw significant increases in the first 10 to 15 years after education reform, but since 2007, our NAEP scores on fourth grade reading, fourth grade math, eighth grade reading, eighth grade math, have been essentially flat lining. If you look at that NAEP data at the overall level that's worrisome, but when you look at the differences in performance between different subgroups, it becomes even more concerning. In particular, I use one example, eighth-grade math. In eighth-grade math,

Massachusetts ranks number one in the country, but we rank number 49 when it comes to the gap between our white students and our Hispanic students, number 49 being second to last. So we look great when you look at the overall numbers, but when you look at our subgroups and when you look at the achievement gaps within them, the picture is not nearly as positive.

About one third of the students graduating from public high schools who go on to a public college or university require remediation before being able to take credit-bearing courses, especially in math. One-third of our students. And when you look at community colleges, that number is 50 to 60 percent. And finally, when you look at higher education, especially in our public system, what you'll see is that our graduation rates on time – and by one time I mean within four to six years from a four-year institution or two to three years from a community college – are on the order of 50 percent, in some cases significantly less. So there are a lot of challenges notwithstanding our high status relevant to our peers.

And when you look at some of this data, and you look at the performance of our school system from a business perspective, there are also reasons to be concerned. The Massachusetts Business Roundtable conducted a survey of its members a couple of months ago and the results were this, the survey asked the membership to rate their local school system and 80 percent of their members gave their schools an A or a B rating, which is obviously pretty good. They were then asked to rate those same schools on how well-prepared their students were to enter the workforce and in particular, to gain employment at their companies and 80 percent gave those same schools a C or a D. When you look at the degree production in our public higher education system, only about 20 percent of our bachelor's degrees are in STEM fields. Only about three percent of our undergraduate and graduate degrees are in computer science, and only about five percent are in engineering. Given the level of dependence our economy has on these disciplines and on students coming out with these kind of credentials, that's not nearly good enough.

Less than 25 percent of our schools offer computer science courses, and the vast majority of students come out of their K-12 experience without ever having taken a computer science course of any kind. When you look at the gap between boys and girls, the number of girls who have computer science experience before they finish high school is vanishingly small. And finally when you look at the teachers who we are certifying, new teachers coming into the field, there are only a handful every year who are being certified in physics, chemistry, or engineering.

The short answer to all of this is we may have done a lot that's right over the last 25 years, we may have had a lot of success and we deserve to sort of pat ourselves on the back for the hard work and the achievements that we have seen to date, but we cannot afford to stand still. Andy Grove, who was the legendary CEO of Intel, is famous for saying that success breeds complacency, complacency breeds failure, and that only the paranoid survive. That's funny but unfortunately it's probably true. We need to regain that sense of urgency that animated education reform back in 1993 when it was originally enacted. I feel to some extent we have become complacent because of our success, and haven't focused enough on

the challenges that lie in front of us. Not to criticize the great work that's been done, but to recognize the opportunity and the challenge that lies ahead of us that we need to meet.

For that reason, I want to congratulate the Research Bureau and the Worcester Education Collaborative and the school district and all of the stakeholders here, for the Urgency of Excellence report, for the strategic planning process that's underway, and for all of the work that's going on in order to recreate that sense of urgency, reclaim that sense of mission and purpose and vision for the future that we all need. Worcester is leading the way, and I urge you all to continue to work forward and to pursue it aggressively.

But I now want to sort of shift and talk a little bit about what the Baker-Polito administration is doing and some of our key initiatives when it comes to education and education reform. I'd say there are basically five areas, and I'll go quickly through them, and I think we'll have time for some questions and answers when we're done.

So the first is to reinforce the foundations of education reform, strengthen the building blocks that got us to where we are today, and I'll talk a little more about that in a second. We need to strengthen the quality of early education. I mentioned earlier about access, the sort of national data comparing access to quality. We need to focus even more strongly around quality in early education. We need to do more to empower our schools and our educators. And again, I'll discuss this in more detail. We need to develop and expand STEM and career pathways, especially in high school but reaching down into middle school and beyond. And we need to address the looming crisis, the growing crisis in college affordability and completion.

So what are we doing in each of those areas? First, in terms of the foundation, strengthening and reinforcing the foundations of education reform. We've been addressing our standards and assessments. We've recently reviewed and updated our English language arts and math assessments. We've adopted revised science standards, which tries to rebalance the curriculum such that there's more focus on doing, rather than just knowing, what science is about. We've initiated, developed, and launched new digital literacy and computer science curriculum frameworks, including a set of standards around teacher certification in those fields. We have just recently, as you all may be aware and will be even more aware next week, we have developed and updated our MCAS so we've created a next-generation MCAS assessment that is aligned to those new standards in English and math, results of which are going to be announced within a week. Ready for that, Maureen? It'll all be fine, it'll all be fine.

I will say, just as a preview, and some of this has come out, the data will look a little bit different than it did before. The performance categories have different labels, the standards have been reset in a way that isn't entirely consistent with what was the case in the year or two before, and so the data will look a little bit different and therefore it's going to require some thoughtful analysis to understand what the numbers mean. But, basically this is a new baseline that we're establishing in order to track our growth and progress over time

more than it is a comparison point to what's gone on in the past. That's all new, and I think all to the good of strengthening our standards and assessments.

We're continuing to drive for accountability for results. As you know, Lawrence has been in receivership, state receivership, for the last six plus years and what we've seen in Lawrence is really, I think, a pretty remarkable success story. Lawrence has gone from a situation back in 2011 where there were 25 schools in the city, only three of which were a Level 1 or a Level 2, the two highest performing level categories in our accountability system – now there are 13. Now that's 13 out of 25, that means 12 are still Level 3 or 4, but that's a long way from where we started from and that demonstrates the kind of progress that's possible when the state and local communities that are struggling form a partnership to support their schools and students. We've taken that further over the last couple of years by intervening in both Holyoke and in Southbridge to address serious underperforming issues and capacity challenges in both of those school districts.

The third pillar, if you will, of education reform is equitable and sustainable financing. On that front, we have undertaken two things. One is we have continued to meet and exceed our responsibilities under the current foundation formula in each year of this administration. In addition to that, in the current fiscal year, through the initiative of the Baker-Polito administration, their budget, and with the endorsement of the legislature, we have adopted a new metric, a new factor, for healthcare. This recognizes the fact that when the foundation formula was originally created, the expectation for healthcare growth was significantly below what the reality has been. So we're making adjustments that over time are going to have meaningful impact on the overall level of school funding, especially in districts like Worcester.

So, in all of these cases what we're trying to do, and importantly what we're not doing, is we're not walking away from what got us here. What got us here was a focus on these core foundations of standards, assessments, accountability for results, and financing, that ensured we had the conditions for success that allowed our educators to do what they needed to do at school districts and within the schools. We need to not walk away from it. We need to strengthen those basic foundations. So that's the first thing.

Second is around the quality of early education. So there's been a lot of focus over the last decade or more on access to early education, increasing the resources available, particularly for subsidized early education, so more and more working parents can afford to have childcare that enables them to work. Access is tremendously important and continues to be a priority. Nonetheless, even more important is the quality of that education experience. Because in the end, access to childcare – while important, especially from a workforce point of view – is intended to lay a foundation to enable student success both in their educational career in K-12 and as their life unfolds beyond that. In the absence of having high quality early education, that impact is weak or non-existent. So it's not enough to have access – you have to have quality and we haven't focused enough on that.

A couple of things that we've done. First of all, we have instituted the largest rate increase for early education providers, at least in the history of the Department of Early Education and Care, over the last decade. That's \$28 million that's going to providers that enables them to increase the compensation of their workforce, which in turn ensures greater stability and hopefully attracts greater quality and talent into the field. Second thing we have done is we have created a \$33 million flexible resource for quality improvement that allows us to make investments in the field, especially in the development of the workforce, to strengthen the quality of early education across the Commonwealth. Finally, we're in the process of developing and strengthening our quality standards so that we are clear to our providers what constitutes the basic components of a high-quality early education experience and which allows us to start aligning and mobilizing resources around those standards and expectations. So we are addressing the issue of quality early education.

Third thing is empowering schools and educators. I talked about Lawrence a minute ago and one of the basic strategic approaches that Jeff Riley, the superintendent in Lawrence, has taken since receivership began was to devolve resources and authority away from the central office and then place more and more of those resources and decision-making authority within schools. In turn, holding those school leadership teams accountable for results. That, I think, has been, the key structural change and the key strategic change that has unlocked the performance within Lawrence. What we're trying to do is find ways to take that basic model to more places, and the first place that I would point towards is the Springfield empowerment zone.

In Springfield, there were eight middle schools that were low performing, that were on the verge of receivership. In lieu of receivership, the state worked with the city to develop a joint, shared, state-local governance body that oversees those eight schools. As part of that approach, they essentially devolved 85 percent of all the financial resources per student, down to the school level and gave the school leadership teams the authority to make decisions about how those resources were to be allocated. In turn, establishing a performance management system that ensures that they are meeting expectations, and if they are not, provides a mechanism for replacing school leadership, or in some cases bringing in third parties to operate those schools under contract. That is now into their third year, and while it's still too early to see the data that can demonstrate the success of this, all of the evidence that I've seen so far suggests that this is moving in the right direction and having powerful results. These are especially powerful results in terms of the school cultures, the level of investment and ownership that educators have in their own work, and in the success of the children. I think it's been transformative, and I think it presents a model for us around the state.

To that end, the governor has endorsed legislation that was drafted by Representative Peisch and Senator Lesser which would establish a legal framework or structure that would enable the replication of the Springfield empowerment zone in other districts across the Commonwealth. At the end of the day, I believe strongly that schools are the unit of change, and we need to figure out how to create structures and systems, across the state and within districts, that do exactly what we've been describing, to devolve as much authority down to

the schools, empower educators on the ground to make decisions, and provide performance management systems to ensure that they are accountable for the results.

And then fourth, STEM and career pathways. So, as I mentioned, we have a reputation in Massachusetts of being a leader in the STEM field when it comes to our businesses and our economy as a whole. And with respect to certain educational institutions as well, MIT most notably, but WPI and others that are clearly on the leading edge of technology both from a development point of view and an educational point of view. Nevertheless, when you look at our public education system as a whole, we are not nearly as strong as we need to be to maintain our leadership position as the rest of the country, and the rest of the world, catches up.

We've been doing a number of things. In some ways the biggest one from a dollar point of view is that we have invested over \$35 million in what are called skills capital grants. These go to vocational programs in vocational schools, community colleges, and certain community-based organizations in order to strengthen programs around manufacturing and engineering, which is where over 50 percent of these resources have gone.

We've also developed what are called innovation pathways, and this is being launched as we speak. Innovation pathways are career-oriented courses of study within high schools that are based on a close partnership between a high school and an employer or set of employers that creates a program of study over the four years that is geared toward that particular sector and the careers that are available to students in them. So to give you an example, in an IT pathway program there might be a partnership between a high school and/or school district and an employer or employers in the field. They would develop certain coursework that is aligned specifically to the IT sector that could either be distinct from the regular curriculum or fully integrated in it. It would ensure there are opportunities for career exploration for the students, it would create opportunities for internships and co-op programs within the field. All of which is designed not to be vocational education, but to connect career opportunity to education and to academic learning in order to create real relevance and hopefully motivation for young people to succeed while they're in school and to open up new vistas for them in terms of what is possible in their career.

One other thing I'll mention that is related but independent, is that we have been aggressively trying to expand the number of paid internships through what's called a Massachusetts STEM Work initiative. High school students are given paid internships over the summer with employers, and in doing so, are not only getting experience in a real-world environment, but are also creating the kind of connections between their schoolwork and career possibilities that makes them better students. So expanding and developing STEM and career pathways is the fourth area.

The final one is around college affordability and completion. There are a number of things that we're doing here, I'll just mention two in particular. One is that we are launching an early college initiative and we have received over 30, almost 35, applications from high schools around the Commonwealth to establish and designate programs, early college

programs, in their high schools, which effectively are partnerships between a high school and a college. Sometimes a community college, sometimes a state college or university, even UMass or private colleges, in order to create this course of study that is putting students on a pathway to college, including the ability to earn at least 12 college credits before they complete high school. The idea here is to focus on those students who wouldn't otherwise think about college as part of their future, who are first-generation students who may not have a parent or role models who have been to college, who may not have a sense that that's what's in store for them. In order to not only prepare these students for college, but also that they will succeed and to give them the vision of what's possible in their lives.

So early college programs are related to college affordability and completion in two ways. One is, as I said, if you're taking college courses and passing college courses before you get out of high school, then it's a natural thing not only to go to college when you're done, but to know that you can succeed when you get there. Second, these credits are free. Free to the students. They would earn at least one semester, in some cases two or more, before they get out of high school, and that's not a trivial sum of money as some of you who have sent children to college in the last century would know.

Then finally, there's something called Commonwealth Commitment, which is an initiative that was launched by the governor now a year and a half ago, which basically says for students who go full-time to a community college, earn their associate's degree and then transfer and go full-time to a public, four-year institution for their junior and senior year, we will provide a set of discounts and rebates such that their total four year college experience, not counting room and board if they wanted to reside in their four-year institution in their junior and senior year, would cost less than \$30,000. Now again, for anyone who's had anything to do with college in your lifetime, I think you know that's a pretty great deal. I've got two daughters who have been to college, one who's still in there, and they're both at private universities, and I can tell you that if it was \$30,000 for four years we might have made a different choice. At least I might have made a different choice, I don't know if they would. But \$30,000 for a four-year degree is an amazing, amazing bargain, and that's before financial aid. Students who are eligible for financial aid may be looking at costs that are more like \$15,000 or less. So there is good news on that front but there is much more to do.

So I started out with a lot of statistics, I'd like to close with another one. There's another assessment that our students in Massachusetts take, it's called the PISA exam. It's administered and overseen by the Organization for Economic Cooperation and Development or OECD and it's administered every couple of years. Massachusetts participated in this assessment in particular in science in 2015, as if it were a country. So the PISA exam is administered at a national level, but states were given the opportunity to participate at a higher level so that their results could be compared to other countries in the sample. So Massachusetts participated in this in 2015 and we just got the results back maybe six or eight months ago. What the results showed is that we were number six in the world in science. Actually, if you look at it from a statistical point of view we were tied for second, from a statistically significant point of view we were tied for second. So that's pretty good.

We can do better, but it's pretty good. But what was much more important than our ranking was what the data showed about our own results. What it showed was that 85 percent of the variation in our Massachusetts results, meaning 85 percent of the difference in student performance on that assessment, can be attributed to factors that are in schools, that have to do with what goes on in our schools. This is incredibly powerful. This data point is incredibly powerful, because if you ask most researchers what they will tell you is what determines a student's performance is the educational level of their parents, it's their family income, it's their zip code or community, it's things that have nothing to do with what goes on in schools. But what this data suggests is that in fact what goes on in schools matters and it matters a lot. That's good news for all of us because it means that the kinds of challenges I've been talking about, the kinds of challenges that our students are facing, are challenges that we can affect, that we can change, that we can improve. But we have to keep the pressure on ourselves, we have to keep working, we have to keep getting better, we have to feel a sense of urgency that this work is as important today as it was 25 years ago when education reform was first enacted.

I want to thank you for letting me be here tonight, I want to thank you for the work you're doing to create that sense of urgency in Worcester, and I look forward to our conversation going forward.