Paving a Path Forward for Digital Learning in the United States

presentation by
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Good morning. Chairwoman Clyburn, Commissioners Rosenworcel and Pai, thank you for the opportunity to speak with you today about modernizing the E-Rate program, and thank you for your leadership in putting the E-Rate Notice of Proposed Rulemaking on today's Commission meeting agenda.

I'm Jim Steyer, here with Margaret Spellings, and together with Jim Coulter and Lee Bollinger, we are the co-chairs of the bipartisan Leading Education by Advancing Digital or "LEAD" Commission.

This is a seminal moment for kids and education. With your support, it could be revolutionary.

As a LEAD co-chair for the past sixteen months, as CEO of Common Sense Media for the past decade, as a teacher, and as the father of four, I have seen how technology – used wisely – can dramatically reform the education landscape – and transform kids' lives.

Think of the classroom when we were growing up – 35 kids at their desks, all using the same textbook, with their teacher at a blackboard at the head of the class. Thirty-five different kids with different needs, stuck with the same book, the same blackboard. (I don't know about you, but I spent an awful lot of time staring out the window).

Today, with advances in technology and education, there is a better way to offer personalized learning, so that we can fully engage each child, improve learning, and equip American students with the 21st century skills they need – and our nation needs – to compete in a global economy.

With digital textbooks, online lessons, learning games and peer networks, we can help students enjoy better lessons in school – and at home, too. Real-time assessments can help teachers identify how each child learns, where he needs improvement, and which learning strategies suit him best. New online tools can also help teachers aggregate and display this data for the student and his parents, so that they can be more engaged in personalizing that student's lesson plans and monitoring his progress.

I teach at Stanford University and have seen how students and professors use interactive media in the classroom there. Let me share a few examples and some impressive results from K-12 schools:

- Last month I traveled to Mooresville, North Carolina, where I saw students with laptops working with teachers who use online tools to provide highly personalized interactive lessons. The Mooresville School District has demonstrated genuine success in improving education outcomes after the implementation of digital learning technology. One of North Carolina's poorer school districts, Mooresville has risen to become one of its most effective.
    - Mooresville saw a 300 percent increase in scholarships, an increase in graduation rates from 62 percent to 90 percent, an increase in academic proficiency from 64 percent to 89 percent, and a decline in dropout rates from 5.6 percent to 1.8 percent.
    - Since making the digital transition three years ago, the Mooresville School District pass rate on state tests in reading, math and science has increased from 73 percent to 88 percent.
    - Although Mooresville ranks 100th out of 115 districts in North Carolina in terms of dollars spent per student, it now ranks third in test scores and second in graduation rates.

- In digitally integrated High Tech High in San Diego, California, the classrooms feel more like labs. Classes run longer. Teachers work in teams. And students present in PowerPoint. The results are impressive, from student performance to faculty retention and parent satisfaction. Perhaps High Tech High's greatest achievement has been to create a learning environment that prepares a diverse group of students for post-secondary success.
    - High Tech High sees 100 percent of its graduates admitted to college, with approximately 80 percent admitted to four-year programs.
    - More than one-third of these students are first-generation college students.

Unfortunately, these schools are the exception, not the rule, in the United States. Meanwhile, there is a substantial international movement to implement technology in the classroom. International leaders in digital learning, such as Singapore and South Korea, have nationally funded pools of technology-enabled model schools as a means to demonstrating the future of education. Even countries like Turkey and Thailand are working to put tablets into the hands of millions of students in urban and rural schools. As these and other countries are forging ahead, we are falling behind.

The LEAD Commission was formed in March, 2012, in response to a challenge from the FCC and the Department of Education to figure out why the adoption of education technology is happening so slowly in the United States and, more important, to create a national roadmap to advance digital learning across the country.

Over the past year, LEAD has spoken with a broad cross-section of teachers, parents, government and school officials, students, and education tech industry leaders. Our work involved hundreds of interviews, product demonstrations, school visits, and travels in the United States and around the world. We polled more than 1,600 teachers and parents. And we held a conference at Stanford University with 100 education thought leaders and technology experts – all to identify key adoption challenges and find a way forward.

Based on this work, last month the LEAD Commission released a five-point blueprint, outlining specific actions to accelerate the expansion of digital learning in K-12 education in the United States.[1] Let me outline the five recommendations:

1. Solve our infrastructure challenge by wiring schools with high-speed broadband;
2. Build a national initiative to put learning devices in the hands of all students by 2020;
3. Accelerate adoption of digital curriculum and encourage continued innovation;
4. Embrace and encourage model schools; and
5. Invest in human capital to train our teachers.

All of these recommendations are important – they will build upon each other to reconstruct the education landscape – but the *sine qua non* is to bring high-speed broadband to the schools. The way to do this is to modernize the E-Rate program – and that's up to the Commission, that's up to you. Nothing else can happen if the infrastructure isn't in place.

Put simply, asking educators to improve student achievement in classrooms with 20th century internet access is like asking firefighters to put out a massive wild fire with a garden hose.

This is all about American kids, and what we must do to provide them with the 21st century education and skills they need to join a tech-savvy workforce. And this is all about what our nation needs to maintain its competitive edge in today's global economy.

With that introduction, I turn to my colleague Margaret Spellings, to take a deeper dive into the E-Rate program and needed modernization. Margaret was the Secretary of Education from 2005 to 2009 and has served in several other key positions in government and education. From the White House and the Statehouse to the school board and college campus, she has been involved with education policy at every level.

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[1] LEAD Commission, *Paving a Path Forward for Digital Learning in the United States: LEAD's National Education Technology Initiative – A Five-Point Plan* (June 2013), available at http://www.leadcommission.org/sites/default/files/LEAD%20Commission%20Blueprint.pdf.

Thank you for that kind introduction. I'm pleased to be here to discuss how technology can equip our students for the 21st century and close the achievement gap. I have spent nearly my entire career working on reforms to make education more innovative and responsive, to ensure that the U.S. education system is competitive on the international stage, and to provide every young American with the knowledge and skills necessary to succeed.

Let me begin by noting that E-Rate has been a success in doing what it was originally designed to do—bring Internet connectivity to our nation's schools. From 1996, when E-Rate was first implemented, to 2004, the number of schools connected to the Internet increased from 14 percent to more than 95 percent. The E-Rate program has provided tremendous benefits for rural and urban schools, public and private, and has helped bridge the digital divide across America.

In 2008, towards the end of my tenure as Education Secretary, I along with then FCC Chair Kevin Martin issued a report noting that as a result of the Commission's E-Rate program, nearly 100 percent of schools and 94 percent of classrooms were connected to the Internet. Yet back then, and continuing today, the challenge has been to use this technology to its fullest potential to deliver more personalized instruction to address each student's needs and to improve student achievement. Indeed, for over a decade, I have been calling for E-Rate reform to ensure that the program is updated and helping to move the needle for our students. And policymakers on both sides of the aisle have called for modernizing the E-Rate program as well.

The E-Rate program should be updated to reflect the realities and needs of kids and schools today. Several key goals are important to this rulemaking process:

- The program should be aligned with today's technology, focusing on high-speed bandwidth;
- It should focus on supporting next generation models such as online and blended learning;
- The program should be simplified to make it easier for school districts to access E-Rate funds;
- It should be updated to align with current reform efforts in education; and
- It should better connect to other technology efforts at the state and local level so that we leverage other efforts and build a cohesive system.

As you know, technology has fundamentally improved so many aspects of our lives and our economy. Ironically, however, despite the affordable education technology at our fingertips, advances in education technology have barely penetrated the schoolhouse doors. While our country has done a great job of wiring our classrooms, we have yet to realize technology's potential to transform the way education is defined and delivered so that students of all colors in all communities leave our schools ready to succeed in post-secondary education or the workforce.

It's high time to balance the equation by using technology to amplify educational opportunity. New technologies can help students access customized interactive instruction anytime, anywhere, at any pace – and can level the playing field for students regardless of geographic location or socioeconomic status. Education technology can transform the way teachers teach and the way students learn. Technology can help educators use data in real time to improve instruction and help school and district leaders improve the education enterprise. Yet neither online learning nor data transmission is possible without high-speed Internet access.

Although most of our schools are wired, they generally do not have the high-speed bandwidth and technology they need to use state-of-the-art digital learning tools. According to the FCC's own survey, 80 percent of schools and libraries do not have sufficient broadband to fully meet their current needs; and according to EducationSuperHighway, 83 percent have outdated Wi-Fi networks.

Inadequate high-speed Internet connectivity in the classrooms is the most immediate and expensive barrier to implementing technology in education. The centerpiece of solving this infrastructure challenge is E-Rate. Although the E-Rate program has been a successful in bringing affordable telephony and basic broadband connectivity to K-12 classrooms, in the era of tablets and digital educational content, the connectivity provided under the current E-Rate framework is no longer sufficient. We need an E-Rate program that supports learning that can happen anytime, anywhere, at any pace. By reviewing how E-Rate funds are currently used and how they could be better used in the future, the Commission has an opportunity to make the current program more strategically targeted towards the needs of today's teachers and students. By updating the program, E-Rate can provide the funding necessary to migrate our schools from the current inadequate bandwidth to high-speed broadband in a timely, efficient manner. The effort to modernize E-Rate and build the necessary infrastructure will take many years, and must begin immediately.

Simply put, the time is ripe for E-Rate reform. Five years ago, LEAD's blueprint for digital learning would have been prohibitively expensive with $1,000 work-stations, shrink-wrapped sub-par software, and torn-up walls to wire school buildings. Today, thanks to the plummeting costs of tablet and laptop computers, innovative cloud-based software, and enterprise Wi-Fi technology, implementation is more affordable. LEAD's plan is ambitious but achievable, and an imperative for our schools, our students, the creation of a technology-savvy workforce and in turn, our economy. We can't afford to wait. Five years from now, it will be too late.

This is a historic opportunity for the Commission to craft a modernized and strengthened E-Rate program, so current and future generations of American students can obtain the education and skills they need. Today, technology transforms every business, every market, everything it touches. Let's make sure that technology transforms the way our children learn and achieve. Enhancing technology in our schools is affordable, it is

achievable, and it is imperative if we, as a nation, are to compete and win in today's global economy.

We look forward to working with the Commission, other federal and state policymakers, educators, business leaders, and other stakeholders to implement these important education reforms.

Thank you.