Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Modernizing the E-Rate Program for	)	WC Docket No. 13-184
Schools and Libraries	)	

EDUCATION COALITION COMMENTS

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Council of Chief State School Officers
Foundation for Excellence in Education
Alliance for Excellent Education
Chiefs for Change
International Association for K-12 Online Learning
Knowledge Alliance
National Alliance for Public Charter Schools
Clayton Christensen Institute for Disruptive Innovation

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September 16, 2013

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The Council of Chief State School Officers, Foundation for Excellence in Education, Alliance for Excellent Education, Chiefs for Change, International Association for K-12 Online Learning, Knowledge Alliance, the National Alliance for Public Charter Schools, and the Clayton Christensen Institute for Disruptive Innovation (collectively "Education Coalition") respectfully submit these comments in response to the Federal Communications Commission's ("FCC" or "Commission") Notice of Proposed Rulemaking seeking to review and modernize the E-Rate program.[1]

The Education Coalition represents a broad cross-section of national education groups and commends the Commission for undertaking this bipartisan review of the E-Rate program in a comprehensive manner. The ongoing transformative changes in our nation's education system focused on digital learning and the incorporation of technology make the timing of this review fortuitous and the opportunity presented substantial.

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[1] Modernizing the E-rate Program for Schools and Libraries, WC Docket No. 13-184, *Notice of Proposed Rulemaking*, FCC 13-100 (rel. July 23, 2013) ("*E-Rate NPRM*").

INTRODUCTION AND SUMMARY

Since its creation in 1996, the E-Rate program has played an essential role in providing basic Internet connectivity to our nation's schools. It has done an admirable job of extending that basic level of connectivity to allow virtually all students, including those attending public charter schools and non-profit private schools, to access some level of digital services and content. The challenge, as the Commission fully recognizes, is that too many schools do not have the necessary bandwidth or network resources to support today's – let alone tomorrow's – digital learning needs. The LEAD Commission framed the problem correctly: "[I]n spite of E-Rate's success, today fewer than 25 percent of our nation's schools have the high-speed bandwidth necessary" to support modern teaching methods using digital tools.[2] The program simply has not kept pace with technology and educational developments. New educational resources such as digital curricular materials, online and blended learning programs, and online assessments need high-speed broadband and network resources that are sorely lacking in too many classrooms today.

The Education Coalition offers six reform principles to guide the Commission's efforts. These principles can help ensure a transformed and revitalized E-Rate program that better serves the needs of all U.S. students.

1. *Expedited Action is Needed*. All stakeholders recognize that this review process is long overdue, as rules designed in the 1990's still shape technology funding decisions almost twenty years later. We urge the Commission to have reforms in place before the 2014-2015 school year begins. Our nation's students cannot wait another school year without the benefits of high-capacity broadband networks needed to succeed globally.

2. *Schools Need to Control Their Own Technology Future.* Each state, school district, and school is embracing digital learning and technology in different ways. This exciting era of experimentation needs flexible E-Rate funding rules to allow local

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[2] Testimony of James G. Coulter, Senate Committee on Commerce, Science and Transportation, Hearing on "E-Rate 2.0: Connecting Every Child to the Transformative Power of Technology" (July 17, 2013) ("Coulter Testimony").

communities to shape their own network and technology needs. The foundation of digital learning is flexibility and individualization, not one-size-fits-all answers.

3. ***E-Rate is Part of Broader Education Technology Efforts.*** E-Rate is critical to our nation's successful transition to digital learning, but it is only one piece of a much broader reform effort, as reflected by the ConnectED initiative and LEAD Commission recommendations. While properly limited to its statutory objective of connectivity, the FCC's reforms should reflect parallel efforts to empower curriculum reform, teacher training, digital textbook adoption, and new modes of online and blended learning.

4. ***The Application Process Should be Streamlined to Better Reflect Education Procurement.*** The current E-Rate application process is too complicated and introduces too much uncertainty into school funding decisions. Reform should be focused on simplifying the process, incorporating concepts from non-technology education procurement, and encouraging states and consortia to be more active in the program.

5. ***Allow for Future Innovation***. The Commission would miss a significant opportunity if it simply updated its rules to reflect the immediate needs of schools and libraries. Reform should allow for the continued evolution of digital learning and new innovative solutions. Indeed, emerging broadband-dependent models of education, such as blended and online learning, are too often forced to operate without the benefit of E-Rate support. Policymakers can open up new models of learning, or it can restrict them. The FCC can help foster a policy climate that is open to innovation and accelerates new models of learning.

6. ***Fiscal Responsibility is Fundamental to Successful Reform.*** All stakeholders must recognize that federal funds are limited, and that average consumers are responsible for funding these vital national priorities. Reform should ensure schools have the level of connectivity mandated by the Communications Act in a manner that encourages programmatic fiscal discipline; limits waste, fraud, and abuse; and is respectful of the impact on the monthly phone bills of all Americans.

These principles can help inform the Commission's development of E-Rate program goals, operation, and rules.

I. THE COALITION REPRESENTS A BROAD CROSS-SECTION OF EDUCATION LEADERS

The Coalition consists of education-focused organizations that are at the crossroads of education and the use of technology and digital learning in education. Coalition members are:

- **Council of Chief State School Officers ("CCSSO")** − a nonpartisan, nationwide, nonprofit organization of public officials who head departments of elementary and

secondary education in the states, the District of Columbia, the Department of Defense Education Activity, and five U.S. extra-state jurisdictions. CCSSO provides leadership, advocacy, and technical assistance on educational issues to support student success across the country.

- **Foundation for Excellence in Education** − a not-for-profit organization dedicated to fostering excellence in education across America founded by former Florida Governor Jeb Bush. ExcelinEd's vision is for an education system that maximizes every student's potential for learning and prepares all students for success in the 21st century. ExcelinEd includes a national campaign, Digital Learning Now!, whose goal is advancing state policies that will create a high-quality, digital learning environment to better equip all students with the knowledge and skills to succeed in this 21st-century economy. The policy framework stems from the belief that access to high-quality, customized learning experiences should be available to every student, unbounded by geography or artificial policy constraints.

- **Alliance for Excellent Education** – a national policy and advocacy nonprofit organization that works to improve national and federal policy so that all students can achieve at high academic levels and graduate from high school ready for success in college, work, and citizenship in the 21st century. The Alliance provides objective, nonpartisan advice that informs decisions about policy creation and implementation. Working with educators, researchers, business leaders, citizen groups, and decision makers at the local, state, and national levels, the Alliance develops federal policy recommendations and advocates to policymakers in the federal government.

- **Chiefs for Change** − a coalition of state school chiefs and leaders that share a zeal for education reform. Together, they provide a strong voice for bold reform on the federal, state, and local level. It is committed to putting children first through bold, visionary education reform that will increase student achievement and prepare students for success in colleges and careers.

- **The International Association for K-12 Online Learning ("iNACOL")** − a non-profit organization focused on research; developing policy for student-centered education to ensure equity and access; developing quality standards for emerging learning models using online, blended, and competency-based education; and supporting the ongoing professional development of classroom, school, district and state leaders for new learning models. The mission of iNACOL is to ensure all students have access to a world-class education and quality blended and online learning opportunities that prepare them for a lifetime of success.

- **Knowledge Alliance** − a non-profit, non-partisan organization focused on learning and applying what works to dramatically improve K-12 public education. It advocates for the greater use of research-based knowledge in education policy and practice at the federal, state, and local levels. Knowledge Alliance is comprised of leading education organizations that are dedicated to solving some of the biggest problems facing our schools today through the development and use of high-quality, relevant research.

- **The National Alliance for Public Charter Schools** − the leading national nonprofit organization committed to advancing the charter school movement. Its mission is to lead public education to unprecedented levels of academic achievement for all students by fostering a strong charter sector. The Alliance provides assistance to state charter school associations and resource centers, develops and advocates for improved public policies, and serves as the united voice for this large and diverse movement.

- **The Clayton Christensen Institute for Disruptive Innovation** − a nonprofit, nonpartisan think tank dedicated to improving the world through disruptive innovation. Founded on the theories of Harvard professor Clayton M. Christensen, the Institute offers a unique framework for understanding many of society's most pressing problems. Its mission is ambitious but clear: work to shape and elevate the conversation surrounding these issues through rigorous research and public outreach. With an initial focus on education and health care, the Christensen Institute is redefining the way policymakers, community leaders, and innovators address the problems of our day by distilling and promoting the transformational power of disruptive innovation.

This Coalition seeks consensus-based solutions that will help ensure that the Commission's reforms are fully reflective of the education community's needs for 21st century learning.

II. THE STATE OF U.S. DIGITAL INFRASTRUCTURE CALLS FOR IMMEDIATE REFORM

The Commission should expeditiously modernize the E-Rate program. The digital infrastructure in too many schools is inadequate to provide the instruction necessary for U.S. students to compete globally. Legacy regulations and antiquated structures must not continue to guide the framework, funding, and decision-making within the American education system. The need for reform is striking.

Lack of capacity. Too many schools do not have enough bandwidth coming into the school, let alone each individual classroom. NTIA's National Broadband Map found that "two-thirds of the nation's schools subscribed to speeds below 25 Mbps, dramatically lower than the

50-100 Mbps per 1,000 students" recommended by digital learning organizations.[3] Nearly 80

percent of respondents to the FCC's 2010 E-Rate survey "reported that their broadband

connections were inadequate to meet their current needs," primarily due to "slow connection

speeds."[4] For example, Arkansas school districts have, on average, just 2.1 kbps of bandwidth

for every 1,000 students. Hawaii's 170,000 students have a bandwidth per student of 11.76 kbps.

And Georgia provides 3 Mbps per school – less than what the FCC recommends for residential

broadband *per household*.[5] Further, as students and educators continue to recognize the benefits

of Internet-enabled devices, bandwidth demand will only increase exponentially – both at school

and at home.

    Lack of functionality. Too many students and teachers are unable to access and utilize

online tools and curriculum because of network congestion. In Arkansas, nearly 75 percent of

school superintendents have restricted the use of educationally relevant Internet websites due to

the lack of bandwidth. In Washington State, some school districts "frequently experience time-

out, sluggish or halting service," and students in one district "couldn't even watch the

Presidential Inauguration because we couldn't stream the live transmission."[6] Teachers in an

Indiana district "went for days without any Internet access at all – meaning no online science

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[3] State Educational Technology Directors Association, The Broadband Imperative: Recommendation to Address K-12 Educational Infrastructure Needs 6 (May 21, 2012) ("Broadband Imperative"), *available at* http://www.setda.org/web/guest/broadbandimperative.

[4] Broadband Imperative at 7.

[5] Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act, *Eighth Broadband Progress Report*, 27 FCC Rcd 10342, 10360, ¶¶ 18-19 (2012).

[6] State of Washington, Office of Superintendent of Public Instruction: Broadband for Washington State, http://www.k12.wa.us/EdTech/broadbandforwa.aspx (last visited September 7, 2013).

videos, access to educational games, or use of video-editing sites" when its students took the first round of online testing required by the state.[7]

Lack of devices. The current state of student access to reliable, high-quality devices—including tablets, computers, and smartphones—is uneven at best. Across the country, the ratio of students to a computer with Internet access in public schools is 3:1[8] – far below current recommendations of a 1:1 ratio.[9] Rhode Island, for example, has only 40,000 computing devices for its 140,000 students. No state currently requires all students to have an Internet-access device.[10]

Lack of innovation. Too many exciting new digital learning innovations—from digital textbooks to online and blended learning and online assessments—are hamstrung by the lack of basic connectivity both in school and at home.

The opportunity presented to transform education is equally great:

- In Floydada, Texas, a local 1:1 initiative in which the middle school students and teachers received laptops to facilitate learning enabled double-digit student gains in all core subject areas.[11]

- Students spread across the five islands that make up the Maine town of Cranberry Isles are able to "team up" for writing lessons, "use Skype and cloud computing

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[7] Michelle R. Davis, School Districts Seeks Faster Internet Connections, Education Week (March 14, 2013), http://www.edweek.org/ew/articles/2013/03/14/25broadband h32.html.

[8] L. Gray, N. Thomas, and L. Lewis, L., U.S. Department of Education, National Center for Education Statistics, Educational Technology in U.S. Public Schools: Fall 2008 (2010), *available at* http://nces.ed.gov/pubs2010/2010034.pdf.

[9] Digital Learning Now! Funding the Shift to Digital Learning: Three Strategies for Funding Sustainable High-Access Environments 13 (2012), ("DLN Funding"), *available at* http://digitallearningnow.com/wp-content/uploads/2012/08/DLN-Smart-Series-Paper-1-Final.pdf.

[10] Digital Learning Now! 2012 Digital Learning Report Card 34 (2012) ("DLN Report Card"), a*vailable at* http://www.digitallearningnow.com/wp-content/uploads/reportcard/2012/2012ReportCard.pdf .

[11] Testimony of Bob Wise, President of the Alliance for Excellent Education and Former Governor of West Virginia, Before the North Carolina Digital Learning Environments in Public Schools Legislative Research Committee (Oct. 4, 2012), *available at* http://www ncleg net/documentsites/committees/DLEPS-LRC2011/10-04-2012/Governor%20Wise%20-%20Alliance%20for%20Excellent%20Education%20-%20North%20Carolina%20Testimony%20.pdf.

applications on partner assignments" and "video conference daily," as there is often only one student per grade In the one-room schoolhouses.[12]

- In rural West Virginia, 90 students were able to enroll in a virtual geometry class when a qualified teacher was unavailable in their school.[13]

- In Greenville, South Carolina, students can take Latin for the first time thanks to online instruction taught by a teacher in another school.[14]

- Over 2,000 students in Clearwater, Florida received e-book readers "loaded with e-textbooks tailored to their individual class schedules" as well as "more than 100 novels" and "access … to local newspapers."[15]

The FCC's reform is critical to help address these core challenges and to facilitate and expand opportunities for success through the effective implementation of education technology.

III. DIGITAL LEARNING DEVELOPMENTS DRIVE THE NEED FOR THOUGHTFUL AND COMPREHENSIVE E-RATE REFORM

Several trends are driving the significant need for a reformed and revitalized E-Rate program. When the Commission first implemented the E-Rate program, fewer than 5 percent of schools had basic T-1 connections, and students would "sit in front of a computer terminal waiting for images to appear" over 14.4 Kbps or 56 Kbps dial-up modem lines.[16] Today, broadband access, when available, allows students to unlock the ability to deploy digital learning technologies and approaches.

The Internet is making it easier and cheaper to not only access educational resources, but also to distribute content, including textbooks, training, videos, curriculum, and even entire

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[12] Broadband Imperative at 18.

[13] James B. Phares, Internet Access Improvement Can Enhance Learning, The Fayette Tribune (March 4, 2013).

[14] CTC Technology & Energy, Building the Broadband Future: The Communications Needs of Kansas Schools, Libraries, and Hospitals, at 51 (Jan. 31, 2013) ("Kansas Report"), *available at* http://www.ksde.org/LinkClick.aspx?fileticket=PYrZJbTCb5Q%3D&tabid=2745&mid=6353.

[15] Broadband Imperative at 11. .

[16] Joint Comments of National School Boards Association et al., Federal-State Joint Board on Universal Service, CC Docket No. 96-45 at 7 (April 10, 1996).

courses. When combined with new web-based tools and cloud-based systems, students have more educational opportunities than ever before both in and outside of the traditional classroom.

The increased use of online instructional materials, resources, and assessments made possible by expanded broadband capacity also dramatically multiplies the range of academic support readily available for students with accessibility needs. Without such support, students with disabilities cannot access the full range of instructional opportunities and resources, nor can they accurately demonstrate what they know and can do to provide teachers the insights into student learning that are essential for appropriate interventions to promote growth.

Three specific digital learning trends warrant consideration as the E-Rate program is modernized. The Commission's efforts should encourage these trends.

Digital Learning Materials. This current generation of students increasingly demands engaging, high-quality curricula and content that offers individualized learning and interactive elements not available with text-based resources. Digital textbooks will be the primary tools for digital learning in the 21st century, a fact recognized by the ConnectED initiative.[17] Technology platforms like digital textbooks that enable online learning can monitor student engagement and help teachers hone their instruction and assess individual student needs in real-time.[18] As digital textbooks continue to replace traditional textbooks – digital sales are projected to take nearly

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[17] The White House, ConnectED: President Obama's Plan for Connecting All Schools to the Digital Age, http://www.whitehouse.gov/sites/default/files/docs/connected_fact_sheet.pdf ("Educational devices supported by high-speed networks are the portal to the world of online learning and interactive content, to personalized education software that adapts to students' needs, and to breakthrough advances in assessing understanding and mastery.") ("ConnectED Fact Sheet").

[18] David Streitfeld, Teacher Knows If You've Done the E-Reading, New York Times, April 8, 2013, http://www.nytimes.com/2013/04/09/technology/coursesmart-e-textbooks-track-students-progress-for-teachers.html?pagewanted=all&_r=2&.

one-fifth of the U.S. market by next year[19] – the demand for increased bandwidth in classrooms will only continue to grow.

Too many schools, however, lack the broadband infrastructure necessary to support every teacher – let alone every student – with a connected device. Over 80 percent of K-12 schools have outdated Wi-Fi networks that greatly limit the amount of capacity available to individual classrooms.[20] And fewer than ten percent of schools have networks they need to meet broadband demand in 2017, according to Education Superhighway.[21] Broadband and Wi-Fi connections are only part of the equation. Students and teachers need devices – the 21st century chalk, blackboard, and notebook – to access online materials and learning platforms. The National Education Technology Plan wisely calls for ensuring "that every student and educator has at least one Internet access device and appropriate software and resources for research, communication, multimedia content creation, and collaboration for use in and out of school."[22]

Digital Assessments. States are leading an accelerated transition to digital assessments that more accurately measure what students know and are able to do. All but two states currently have a plan to require online assessments in core subjects in coming years.[23] Over 40 states are currently working with the Partnership for Assessment of Readiness for College and Careers or the Smarter Balanced Assessment Consortium ("SBAC"), each of which is developing digital assessments aligned with college- and career-ready standards for full implementation in 2014-15. Each of these new assessment systems will require schools to have enough broadband and

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[19] OnlineEducation.Net, Textbooks of Tomorrow (Feb. 2012), http://www.edudemic.com/2012/02/digital-textbooks/.

[20] LEAD Commission, Paving a Path Forward for Digital Learning in the United States 2 (June 2013) ("LEAD Recommendations").

[21] Coulter Testimony.

[22] Office of Educational Technology, U.S. Department of Education, Transforming American Education: Learning Powered by Technology, National Education Technology Plan 2010, at 61 (2010).

[23] DLN Report Card at 30 (2012).

connected devices to accommodate large numbers of students using the network simultaneously. The implementation of new online student assessments will place significant pressure on the bandwidth capacity—both to and within—schools, and underscores the need for expedited E-Rate reform. SBAC, for example, recommends that schools estimate approximately 1 Mbps for every 100 students taking the assessment.[24] In a recent survey of states participating in the assessment consortia, 31 of 36 responding states indicated that sufficient Internet access for administration will pose a challenge; 22 states described this as a major challenge, nine states described it as a minor challenge, and five states responded that it is too early to tell how large the challenge will be.[25] Only seven responding states indicated that they had sufficient fiscal resources to provide adequate technology support for these assessments.[26] Absent sufficient broadband capacity, critical efforts to revolutionize student evaluation will be undermined.

Online and Blended Learning. New models of education, particularly online and blended learning, require significantly more broadband than traditional instructional models. Digital learning can be full-time online, part-time online, or in a blended setting with a mixture of traditional classroom and online opportunities.[27] Schools also use blended learning approaches that "flip the classroom," where students watch lectures online at home and use class time for interactive discussion. Digital tools also support educators by providing expanded access to instructional resources and professional development opportunities.

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[24] Sean Cavanagh, Common-Core Tech Requirements Outlined, Education Week (Feb. 6, 2013), http://www.edweek.org/dd/articles/2013/02/06/02bits-commoncore h06.html.

[25] *See* Center on Education Policy, Year 3 of Implementing the Common Core State Standards: States Prepare for Common Core Assessments 10 (Aug. 2013), http://www.cep-dc.org/displayDocument.cfm?DocumentID=423.

[26] *Id*. at 11.

[27] Full-time digital learning offers education to students who cannot attend a brick-and-mortar school for medical causes, such as physical disabilities, acute allergies, or other reasons. Part-time digital learning allows students to combine online learning with onsite learning, allowing students to customize their education to meet their particular needs and interest. Full-time blended schools combine digital learning with other modes of learning, such as instruction facilitated by a teacher, group discussion, project-based learning, and one-on-one tutoring.

Demand for new models of learning is substantial and growing. Thirty-one states plus Washington, D.C. had at least one full-time online school operating statewide as last fall.[28] States such as Florida, Louisiana, Utah, Wisconsin, Michigan, and Texas have recently passed laws giving students the option to take courses online from any number of state approved providers, including other school districts, institutions of higher education, and private providers. The U.S. Department of Education estimates that 55 percent of public schools had students enrolled in distance education courses, with over 1.8 million enrollments.[29] Nearly 96 percent of all high schools indicate that they have students enrolled in a distance education class.[30]

These new models of learning are proving effective: a U.S. Department of Education meta-analysis has found that "students in online education actually performed slightly better than students who received face-to-face education."[31] Congress requires the Department of Defense to accept graduates from online schools, and the NCAA considers online courses valid for college eligibility determinations.[32] A recent large-scale study conducted by RAND and ETS of an online math curriculum found that student test scores jumped significant as a result of the adaptive learning system. That jump equated to a 20 to 30 point improvement on the SAT math section and if the curriculum was applied school-wide and a similar increase resulted, the given school would see an improvement equivalent to moving from a "failing" status to an "average" rating.[33] In addition, access to online Algebra I courses in grade 8 had a positive impact on the

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[28] Digital Learning Now! Online Learning: Myths, Reality & Promise at 16 (July 2013), ("DLN Online Learning"), *available at* http://www.digitallearningnow.com/wp-content/uploads/2013/07/Online-Learning-Paper-.pdf.

[29] DLN Report Card at 37 (2012).

[30] DLN Online Learning at 4.

[31] Ulrich Boser, Center for American Progress, Are Schools Getting a Big Enough Bang for Their Education Technology Buck? 6 (June 14, 2013)), *available at* http://www.americanprogress.org/wp-content/uploads/2013/06/UlrichEducationTech-brief-3.pdf.

[32] DLN Online Learning at 13.

[33] U.S. Dept. of Education, Access to Algebra I: The Effects of Online Mathematics for Grade 8 Students (2012).

academic rigor of students' high school experience: students from schools with access to the

course were significantly more likely to follow an advanced course sequence in high school.[34]

Yet the practical reality is that only 10 percent of U.S. students experience the benefits of

digital learning today, and even this relatively small proportion of participating students strains

the network capabilities of too many schools.[35] These modes of learning also often require a

broadband connection at home or a dedicated connected device, adding another complicating

factor.

IV. THE POLICY OBJECTIVES UNDERLYING THE PROPOSED E-RATE PROGRAM GOALS ARE SOUND

The Education Coalition applauds the Commission's development of overarching E-Rate

program goals and supports all three: (1) ensuring schools have affordable access to 21st century

broadband that supports digital learning; (2) maximizing the cost-effectiveness of E-Rate funds;

and (3) streamlining the administration of the E-Rate program.[36]

Ensuring Schools Have Affordable Access to 21st Century Broadband. The Coalition

supports the clear articulation of a goal to increase bandwidth dramatically in U.S. schools. The

Administration's ConnectED proposal called for a target of 1 Gbps to most schools within five

years.[37] The State Education Technology Directors Association ("SETDA") and the LEAD

Commission echo the call for higher Internet speeds: by the 2017-18 school year, both

organizations estimate schools will need a minimum external bandwidth of 1 Gbps for every

1,000 users.[38] Internal wide area connections should have a baseline bandwidth of 10 Gbps per

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[34] *Id*.

[35] Digital Learning Now! Roadmap for Reform 3 (Oct. 2011) ("DLN Roadmap").

[36] *E-Rate NPRM*, ¶ 12.

[37] ConnectED Fact Sheet.

[38] Broadband Imperative at 2; LEAD Recommendations at 2.

1,000 students/staff by 2017-18, according to SETDA.[39] These bold statements – and similar efforts by groups like Education Superhighway[40] – deserve significant credit for highlighting the pressing need for E-Rate reform and helping educators understand the inadequate broadband infrastructure in too many schools today. The promise of digital learning simply cannot be met without high-capacity connectivity.

The Coalition looks forward to reviewing the record in this proceeding on the best mechanisms for establishing a national speed target, and how such targets can evolve over time and reflect the real-world conditions and challenges, particularly in low-income and rural schools. As both the SETDA and LEAD Commission estimates indicate,[41] static speed benchmarks will quickly become outdated. Strict goals and targets could also fail to account for specific state and local needs, which the Commission recognized in creating the E-Rate program in 1997: "[I]n an environment of rapidly changing and improving technologies, empowering schools and libraries, regardless of wealth and location, to choose the telecommunications services they will use as tools for educating their students will enable them to use and teach students to use state-of-the-art telecommunications technologies as those technologies become available."[42] Coupled with speed targets, the Commission should also support consultative education outreach to schools regarding the technology needed to support specific functionalities, as well as take into consideration the fact that schools may need to upgrade bandwidth mid-year or mid-contract to support educational initiatives.

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[39] Broadband Imperative at 2. .

[40] Education SuperHighway, http://www.educationsuperhighway.org/.

[41] *See supra* notes 38 and 39.

[42] Federal-State Joint Board on Universal Service, *Report and Order*, CC Docket 96-45, ¶ 433 (May 8, 1997) ("USF Report and Order").

The Commission should not, however, attempt to link E-Rate funding and academic achievement or adopt educational-outcome measurements as a condition of E-Rate funding.[43] Broadband connectivity is a critical component of an effective 21st century education, but it is only one component among many. Seeking to attribute specific learning gains to broadband capacity runs a risk of limiting innovation in emerging education technologies. The Commission should not attempt to measure the causality of a connectivity input like E-Rate to overall academic success.

Maximizing the Cost-Effectiveness of E-Rate Funds. The FCC's rules should foster efficient and effective network solutions, as all stakeholders should be good stewards of E-Rate funding.[44] Greater transparency about how funds are used and requested is critical to ensure cost-effective results.

We encourage the Commission to adopt strong Open Data Policy practices with respect to the information collected as part of the E-Rate program. Publishing data online in an open format that can be retrieved, downloaded, indexed, and searched will can help accelerate collaboration, innovation, and better resource allocation. These data would help educators better understand their needs and benchmark their performance and would help providers identify unmet broadband needs. They would provide greater transparency of E-Rate supported services and help drive down prices and maximize the cost-effectiveness of all E-Rate-backed purchases. Improved data collection should not, however, introduce new onerous paperwork burdens to an already burdensome process. Consistent with its own data reform efforts,[45] the FCC should

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[43] *E-Rate NPRM*, ¶ 40.

[44] *E-Rate NPRM*, ¶¶ 41-45.

[45] Amendment of the Commission's *Ex Parte* Rules and Other Procedural Rules, *Report and Order and Further Notice of Proposed Rulemaking*, 26 FCC Rcd 4517 (2011).

consider the Open Data Policy guidelines released by the Office of Management and Budget on

May 9, 2013 to guide the release of data in an easy to access, machine-readable format.[46]

Streamlining the Administration of the E-Rate Program. The E-Rate application and

review process has become unwieldy, burdening applicants with numerous paperwork and

documentation demands.[47] The Commission should ensure that the disbursement and review of

funding decisions are timely and fair. Striking the difficult balance between curbing waste,

fraud, and abuse while not subjecting applications to unnecessary layers of review, delays in

funding decisions, and opaque administrative processes is critical. In particular, consortium

applications should not be subject to longer or more time-consuming reviews.

V. THE COMMISSION SHOULD REVISIT ITS PRIORITY FUNDING SYSTEM, WHICH MAY DENY SCHOOLS ACCESS TO 21ST CENTURY BROADBAND

The Commission appropriately focuses on transitioning the E-Rate program from a

voice-focused program to a broadband-focused program.[48] The success of the Commission's

efforts to already shift the high-cost and rural health care universal service programs towards a

long-term funding path geared to broadband is encouraging and can hopefully be replicated here

quickly.[49] The E-Rate program should be focused on the core broadband connections and

network infrastructure needed to support robust digital learning systems and prepare schools for

a new generation of learning opportunities and state online assessments. Specifically, the

Commission should (1) ensure a common understanding of education network needs and

technological options, (2) revisit its outdated funding priority rules, and (3) explore the need to

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[46] *See* Office of Management and Budget, Memorandum for the Heads of Executive Departments and Agencies: Open Data Policy—Managing Information as an Asset (May 9, 2013), http://www.whitehouse.gov/sites/default/files/omb/memoranda/2013/m-13-13.pdf.

[47] *E-Rate NPRM*, ¶¶ 45-56.

[48] *E-Rate NPRM*, ¶ 66.

[49] Rural Health Care Support Mechanism, *Report and Order*, FCC 12-150 (Dec. 21, 2012); Connect America Fund et al., *Report and Order and Further Notice of Proposed Rulemaking*, FCC 11-161 (Nov. 18, 2011).

update its discount matrix and budget rules to better account for funding demands and ensure equitable distribution of funding.

The challenge of inadequate broadband funding is now well established. As noted above, the LEAD Commission reported fewer than 25 percent of our nation's schools have the high-speed bandwidth necessary to support modern teaching methods,[50] and over 80 percent of K-12 schools have outdated Wi-Fi networks.[51]

We commend the FCC for seeking comment on the proper technological architecture for tomorrow's schools and the most cost-effective manner in which to design and operate those networks.[52] The proper role of fiber and wide area networks ("WANs") to schools, as well as wired and Wi-Fi networks within schools, needs to be better understood by all stakeholders – service providers and policymakers need to better understand the digital learning needs of schools, and school leaders equally need to better understand their technological options and the actual bandwidth demands of their digital learning efforts.

The Commission is also right to ask detailed questions about how to revisit its funding priority rules that today promote basic voice and paging over advanced Wi-Fi networks critical to delivering high-speed connectivity to actual classrooms.[53] For Funding Year 2012, $2.44 billion was requested for Priority 1 (basic connectivity services), an amount that exceeded the total new funding available for the entire program each year – $2.38 billion. Absent corrective action, there will simply be no E-Rate funds supporting any connections within schools (Priority 2 services) as early as next year. This lack of funding is untenable and puts at risk billions of

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[50] Coulter Testimony.

[51] LEAD Recommendations at 2.

[52] *E-Rate NPRM*, ¶¶ 67-89.

[53] *E-Rate NPRM*, ¶¶ 77-78.

dollars in education investments in new assessments, curriculum, and entire models of next-generation schooling. For example, the Apple Valley Unified School District is deploying new mobile devices including tablets and laptops to students but lacks the funding to support wireless in every classroom. Only 17 percent of the district's 1,350 classrooms have wireless support. This critical review of the outdated priority system goes hand-in-hand with taking a hard look at which legacy services are supported and the relative priority those services are given.[54]

The Commission should also strive to strike the proper balance in any new priority system to preserve the flexibility of schools to provide cost-effective network solutions to support their own unique investments in digital learning and new technologies.[55] An overly prescriptive approach—whether it be pre-selecting approved network components, speeds, or appropriate mix of services—risks unintended consequences of inefficient procurement, wasteful funding, and distorting future technology spending. The Commission has previously recognized that "[g]iven the varying needs and preferences of different schools and libraries and the relative advantages and disadvantages of different technologies … individual schools and libraries are in the best position to evaluate the relative costs and benefits of different services and technologies."[56] What is of paramount importance in digital learning policy is not merely the provision of technology, but also ensuring that the technology is actually being used to accelerate critical education reforms, better equip teachers, and ensure that students are receiving an engaging, high-quality education.

The Commission should also take a fresh look at the discount matrix, the relative proportion of state and local matching funds, the possible value of per-student or per-building

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[54] *E-Rate NPRM*, ¶¶ 90-102.

[55] *E-Rate NPRM*, ¶¶ 103-104.

[56] USF Report and Order, ¶ 432.

funding limits, as well as per-school fixed budgets.[57] Given that the E-Rate program is

oversubscribed today and the funding demands of the program are only going to grow as the

technology needs of schools evolve, such a review is important to ensure an equitable

distribution of finite federal funds and the financial accountability of the entire program. This

type of review should fully account for the overall technology budgets of schools, the vast

majority of which is not supported by E-Rate. Taking a holistic view of educational technology

expenditures—from device procurement, digital curriculum development or acquisition to

teacher training and development—will result in the most equitable line drawing with respect to

difficult funding decisions within the E-Rate program. However, as the Commission reviews

and revises the discount matrix, it must preserve the prioritization of funds toward eligible

entities serving those students with the greatest need.

VI.   THE E-RATE PROGRAM SHOULD INCENTIVIZE CONSORTIUM PARTICIPATION, COLLABORATIVE BULK PURCHASING, AND GREATER TRANSPARENCY

Many of the Commission's proposals to maximize the cost-effectiveness of E-Rate funds

are common sense proposals that warrant serious consideration.[58] To the extent that "average

recurring per-megabit prices of connectivity purchased by schools will need to come down

substantially"[59] in order for the E-Rate program to successfully fund the needs of tomorrow's

schools, the promotion of more consortium-based participation, bulk purchasing, and funding

transparency may be the most significant steps the Commission can make to ensure the long-

term sustainability of the E-Rate program.

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[57] *E-Rate NPRM*, ¶¶ 117-125.

[58] *E-Rate NPRM*, ¶¶ 177-223.

[59] *E-Rate NPRM*, ¶ 88.

Statewide and Regional Consortia. The E-Rate program should take affirmative steps to encourage and facilitate the participation of statewide or regional consortium of schools and school districts. The Notice recognizes that consortia represent only 13 percent of total funding today, and that the Commission's experience in the rural health care program demonstrates that "consortium purchasing can drive down prices."[60]

The E-Rate program, however, has never actively encouraged or facilitated consortium applications and the pooling of resources and expertise across a broader geographic area. Indeed, data suggest that consortium applications "consistently have longer wait times for Priority One funding commitment decision letters."[61] The timing of funding decision, as Funds for Learning notes, has an impact in the utilization of E-Rate funds: "The quicker an applicant receives a funding decision, the more likely they will put the money to use."[62] At a minimum, the Commission should take steps to ensure that consortium applications do not take longer than other applications. The Commission should also consider proposals to provide greater incentives for the formation of consortia, including funding prioritization or expedited review. Similarly, the Commission should explore how it can incent expanded state and private-sector funding and E-rate matching funds, including application prioritization.[63]

The good news is that existing educational technology consortia and statewide programs offer ready-made vehicles for future E-Rate applicants. The Wisconsin eSchool Network ("WEN") consortium, for example, consists of 16 school districts and was established to help

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[60] *E-Rate NPRM*, ¶¶ 179-181.

[61] John Harrington, The Waiting Game: Why Some Applicants Wait Longer for FCDLs, Funds for Learning (Aug. 21, 2013), http://www.fundsforlearning.com/blog/2013/08/the-waiting-game:why-some-applicants-wait-longer-for-fcdls.

[62] *Id.*

[63] *E-Rate NPRM*, ¶ 165.

with the development and rollout of online learning programs.[64] By pooling resources and
technical know-how, WEN develops and purchases program resources, curriculum, and
infrastructure to help jump-start and support new digital learning models that the underlying
districts and schools can then incorporate into their own instructional efforts.[65]

The Clayton Christensen Institute (formerly Innosight Institute) highlighted how the North
Carolina School Connectivity Initiative not only used a public-private partnership to build out
next generation infrastructure, but also used consortium purchasing to maximize the use of E-
Rate discounts.[66] Under the initiative, the North Carolina Department of Public Instruction
centralized planning and navigation of E-Rate, which maximized the benefit of the program and
resulted in a "[a] seven-fold increase in utilization of Internet by schools in North Carolina."[67] In
2006, 15 percent of districts relied on wireless or copper connections for their WANs, instead of
fiber-optic connectivity, due to a lack supply in rural areas and complexities of procurement and
rate structures in areas with adequate supply. From 2002 to 2006, districts requested a total of
$81 million per year in E-Rate funds, but only received 64 percent of these requests. Through
the initiative, schools had access to networking assessments and engineers to assist with their
planning and architecture, and a new E-Rate services bureau assisted schools with their
applications. By 2009, all but 6 percent of the approximately 2,400 schools had access to fiber.
Today, North Carolina school districts collectively use six times the bandwidth while expending
essentially the same middle mile and Internet access costs they did in 2006-2007. North
Carolina's success displays the power of aggregation of demand.

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[64] Evergreen Paper at 28.

[65] *Id.*

[66] *See generally* Innosight Institute, The North Carolina School Connectivity Initiative: A Public-Private Approach
to Improving School Data Networks (Dec. 2010), http://www.christenseninstitute.org/wp-
content/uploads/2013/04/The-North-Carolina-Schools-Connectivity-Initiative.pdf

[67] Kansas Report at 32.

Pennsylvania is another example of a successful statewide approach. Specifically, the Pennsylvania Association of Intermediate Units Network is the governing body of the statewide telecommunications network that connects all 29 intermediate units and their member school districts as well as public library systems and charter schools.[68] The state network is used to provide hundreds of online courses to students and teachers, submit state and federal reports to the U.S. Department of Education and the Pennsylvania Department of Education, facilitate online assessment, and support online learning. E-Rate has been essential in supporting and maintaining the state network, accounting for 42% of the state network's operating budget.

Because it is difficult for some school districts – let alone individual schools – to navigate the E-Rate application process and also understand the demands and needs of today's broadband network infrastructure, these organizations provide the technical expertise and knowledge to help schools make the successful transition to digital learning. The Commission should help foster the creation and maintenance of these types of consortium for all educational technology needs, including E-Rate procurement and network design.

Purchasing Power. E-Rate reform also offers a chance to create stronger incentives for pooling together technology purchases to achieve higher cost savings and enable incremental buying power.[69] Just like consortium bidding, it also allows states and regional groups with the requisite expertise to negotiate solid contracts that yield a good return on investment. The purchase of communications infrastructure and technology benefit from efficiencies of scale, and providing local schools and school districts with access to master contracts or other bulk

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[68] *See* Reply Comments of Pennsylvania Association of Intermediate Units Network Concerning Digital Literacy Training, WC Docket No. 11-42 et al. (May 1, 2012).

[69] *E-Rate NPRM*, ¶¶ 186-190.

purchasing options can help simplify the process, reduce E-Rate funding demands, and help promote best practices amongst schools and school districts.

Already today, states use purchasing power to negotiate lower cost licenses and contracts for everything from digital content to connected devices including laptops and tablets. States could leverage those same efficiencies of scale to negotiate low-cost E-Rate eligible contracts. For instance, the Pennsylvania Education Purchasing Program for Microcomputers provides a collaborative purchasing program, including 200 vendors representing more than 250 product lines including networking, computers, and education software. The State of Maine Department of Education's Maine Learning Technology Initiative ("MLTI"), in conjunction with the National Association of State Procurement Officers, facilitated a multi-state procurement effort for computers and tablets from which other states may purchase.[70] A majority of Kansas schools have expressed in interest in the formation of a "buying club" to negotiate the best possible communications services and prices.[71]

Aggregating demand can not only help drive down prices but also help demonstrate a business case for providers to justify the upfront capital costs needed for build out of advanced services, particularly in more remote areas. E-Rate should encourage aggregation of demand and collaboration whenever possible.

Transparency. The Commission should similarly examine other ways to provide the best quality network infrastructure to schools at the best price by increasing the transparency around pricing in the E-Rate program while "minimiz[ing] the reporting burden" on schools. The Commission should explore proposals to provide all stakeholders with greater data on how

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[70] *See* Maine Learning Technology Initiative, Request for Proposals (RFP) #201210412: Multi-State Learning Technology Initiative, http://www maine.gov/mlti/rfp/.

[71] Kansas Report at 68.

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funding is actually used by applicants, the actual prices paid by applicants, and the pricing

options available to applicants.[72] The more information provided in usable formats the better,

and can be a critical tool to help schools—particularly smaller schools and districts—to best

utilize the E-Rate program and design cost-effective broadband networks. Data collected should

be available using open data principles, which would not only improve transparency, but also

support third-party research and analysis.

VII. THE COMMISSION SHOULD SIMPLIFY AND STREAMLINE THE E-RATE FUNDING PROCESS

E-Rate applicants face a process that is long, complex, and exhaustive. The Government

Accountability Office ("GAO") has recognized that the complexity of the application process has

led some eligible schools and libraries to not participate.[73] For those that do participate, the

challenge of managing the procurement, application process, post-commitment record retention,

and audits, may force the hiring of additional staff, diversion of other administrative personnel,

or the retention of E-Rate dedicated consultants. Beyond these additional and unnecessary

expenditures, the program's application intricacy can result in schools being denied important

funding because of paperwork errors and mistakes. The GAO found that of the "about 23

percent [of rejected applications] were denied because applicants did not correctly carry out

application procedures."[74]

The E-Rate application process needs to be more streamlined, less resource-intensive,

and provide greater certainty to schools on funding decisions in a more timely manner. A few

proposals in particular warrant strong consideration. The gap between application and funding

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[72] *E-Rate NPRM*, ¶¶ 191-201.

[73] Government Accountability Office, Long-Term Strategic Vision Would Help Ensure Targeting of E-rate Funds to Highest-Priority Uses 29 (March 2009).

[74] *Id.* at 37.

commitment can be lengthy, discourage participation, and frustrate the effort of schools to fully invest in needed network investments. The Commission should take concrete steps to ensure its program administrator "more quickly release[s] funding commitment decisions,"[75] including for consortia applications. Similarly, SECA's call for greater transparency during the application review process would provide even more certainty to applicants, and better inform all stakeholders of USAC's review process.[76] Befitting a program that helps provide Internet connectivity and access, the application and review process should also be done entirely online and SECA's proposed centralized application portal proposal has merit as well.[77] As with all its reforms, the Commission should ensure that any streamlining preserves critical safeguards against waste, fraud, and abuse.

Further, the Commission should seriously considering expanding the ability of schools and consortia to utilize multi-year contracts, which could not only simplify the application process and provide greater funding certainty, but could also result in lower-unit pricing and help deliver on bulk purchasing power discussed above.[78] Similarly, the Commission should closely review the 55 page Eligible Services List: the current list is overly complex, tends to be behind technology advancements and often forces the FCC to make difficult parsing decisions regarding eligible technologies and services.[79] As the Commission's priority funding system evolves, the continued need for—and shape of—the Eligible Services List should be closely linked to those other policy determinations.

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[75] *E-Rate NPRM*, ¶ 237.

[76] *E-Rate NPRM*, ¶ 232.

[77] *E-Rate NPRM*, ¶¶ 227-231.

[78] *E-Rate NPRM*, ¶¶ 239-246.

[79] *E-Rate NPRM*, ¶¶ 248-252.

VIII. E-RATE REFORM SHOULD ACCOUNT FOR NEW FORMS OF DIGITAL LEARNING AND INSTRUCTION

The FCC's National Broadband Plan recognized that "[e]ducation doesn't stop at the schoolyard gate or the library door," and acknowledged the potential of "[d]igital textbooks and other mobile learning devices" to "allow students to learn in a real-world context, inside the classroom and beyond."[80] With digital learning, a student's education is no longer restricted to the school day, within the walls of a classroom, to a teacher's daily lesson, or the pace of an entire classroom. For example, educators are increasingly "flipping" their classroom by providing traditional lecture material for review at home which in turn frees up class time for discussion, more interaction with teachers, and problem-solving exercises. This model assumes student connectivity outside of a traditional school building and day. Entrepreneurs such as the Khan Academy are providing thousands of video lectures to support these new approaches to learning.

The Commission's reforms over the next 12 months will likely dictate the types of funding opportunities available to schools for the next five to ten years, and should not foreclose exciting new digital learning developments. Therefore, the Commission must not simply reform the program to meet the needs of students and teachers today, it must redesign the program in such a way as to anticipate trends and demands that students and educators will place on the program in the future.

There are two converging trends that are shaping the future of education. First, it is clear from broad industry research that mobile Internet traffic is exploding.[81] Further, Mary Meeker

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[80] National Broadband Plan, Broadband & Education: Education Highlights, http://www.broadband.gov/issues/education.html.

[81] Amendment of the Commission's Rules with Regard to Commercial Operations in the 1695-1710 MHz, 1755-1780 MHz, and 2155-2180 MHz Bands, *Notice of Proposed Rulemaking and Order on Reconsideration*, GN Docket No. 13-185, FCC 13-102 ¶ 4 (rel. July 23, 2013).

noted that "mobile is ramping faster than any 'new new' thing."[82] According to IDC, by 2015 more people in the United States will access the Internet through a phone or a tablet than through a desktop or laptop.[83]

Second, the introduction of lower-cost devices and tablets are fueling increased adoption of mobile devices for individuals, including students. As device prices continue to fall, students are bringing increasingly sophisticated connected devices to schools, including smart phones, tablets, and laptops. Mobile Internet use is dramatically increasing among teenagers as seen in the 2013 Teens and Technology Report from the Pew Internet and American Life Project.[84] Seventy-eight percent of teens now have a cell phone and almost half (47%) of them have smartphones. That translates into 37 percent of all teens who have smartphones, a jump from just 23 percent in 2011. In addition, 23 percent of teens have a tablet computer, a number comparable to the general adult population.

In addition to rapid consumer adoption, there is a surge of 1:1 initiatives where schools are equipping students with mobile devices. For example, Miami has recently approved a $63 million plan to lease more than 150,000 digital devices for students.[85] The Los Angeles Unified School District has similarly launched an initiative to equip 640,000 students with iPads.[86] Since 2002, Maine has been operating a 1:1 Initiative as part of its Maine Learning Technology

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[82] *See* Morgan Stanley, Ten Questions Internet Execs Should Ask & Answer (Nov. 16, 2010), http://www.scribd.com/doc/42793400/Internet-Trends-Presentation.

[83] *See* Matt Hamblen, Most Will Access Internet Via Mobile Devices by 2015, IDC Says, Computerworld (Sept. 12, 2011), http://www.computerworld.com/s/article/9219932/Most_will_access_Internet_via_mobile_devices_by_2015_IDC_says.

[84] *See* Pew Internet & American Life Project, Trend Data (Teens). http://www.pewinternet.org/Trend-Data-(Teens)/Whos-Online.aspx.

[85] *See* Benjamin Herold, Miami-Dade Approves $63 Million Plan to Give All Students Digital Devices (June 20, 2013), http://blogs.edweek.org/edweek/DigitalEducation/2013/06/miami-dade_schools_pass_63_mil.html**.**

[86] *See* Todd R. Weiss, Los Angeles Plans to Give 640,000 Students Free iPads, CITE World (July 25, 2013), http://www.citeworld.com/tablets/22178/ipad-los-angeles-unified-school-district.

Initiative, which provides laptops and tablets to middle and high school students.[87] Guilford

County Schools in North Carolina has launched a program to provide more than 21,000

education specific tablets from Amplify to their students.[88]

　　While once the exception, mobile learning platforms are increasingly becoming the norm.

One recent survey found that nearly 60 percent of the respondents said mobile tech has been

adopted in a quarter or more of the schools in their districts.[89] The FCC's only survey of E-Rate

participants acknowledges this trend where they found that while "less than 20% of respondents

currently use such devices for academic or educational purposes, 45% plan to start within the

next two to three years. If respondents follow through with their current plans, 60% of schools

and 74% of school districts may use handheld devices for academic/educational purposes within

three years."[90] The LEAD Commission has called for a national initiative to provide devices for

all students by the end of the decade.[91]

　　These trends form the basis of new models of learning that allow schools to expand

instruction beyond the traditional school day and building. They are also helping to enable

customized education – leveraged by technology – allowing students to learn in their own style,

at their own pace, anywhere and anytime.[92] Online and blended schooling are growing

dramatically, and can be full-time or part-time solutions. While only 10 percent of U.S. students

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[87] *See* Maine Learning Technology Initiative, About MLTI, http://maine.gov/mlti/about/index.shtml (last visited Sept. 13, 2013).

[88] *See* Guilford County Schools, Personalized Learning (PACE), http://www.gcsnc.com/education/components/scrapbook/default.php?sectiondetailid=366581 (last visited Sept. 13, 2013).

[89] *See* Liz Logan, A Surge in K-12 Mobile Tech Adoption in 2013, National Survey Says (July 17, 2013), https://www.amplify.com/viewpoints/a-surge-in-k-12-mobile-tech-adoption-in-2013-national-survey-says.

[90] *See* FCC, 2010 E-Rate Program and Broadband Usage Survey: Report, DA 10-2414, http://transition fcc.gov/010511_Eratereport.pdf.

[91] LEAD Recommendations at 2.

[92] DLN Roadmap at 3.

experience the benefits of digital learning today, that figure is growing each and every school year. The challenge is that the current E-Rate program is geared to supporting traditional brick-and-mortar schools and does not have a clear path to fund new models that increasingly rely on mobile devices and connectivity.

These new online learning models operate under some uncertainty as to what is and is not eligible. A good test case is the largest online school in the country, the Florida Virtual School ("FLVS"), which served over 300,000 course enrollments in the 2011-12 school year alone.[93] Yet, FLVS's eligibility to qualify for E-Rate discounts is unclear because it lacks traditionally defined school classrooms.

We recognize the Commission needs to strike a careful balance in supporting mobile learning through E-Rate in a way that does not conflict or overlap with other Universal Service Fund programs and related public/private partnerships aimed at providing affordable broadband to homes. However, new models of learning that are dependent on mobile learning devices and connectivity, such as online learning, blended learning, and flipped classrooms, should be better incorporated into the program. Ultimately, it would be a wasted opportunity if E-Rate reform did not better define how new learning models are eligible for funding: failing to do so could jeopardize or limit the ability of some states and districts to adopt these promising new learning platforms. This is exactly the type of learning that E-Rate should strive to support.

Creating a regulatory framework for E-Rate in the digital age should reflect the reality that even nationally recognized experts in education cannot predict what new and innovative learning technologies will emerge, and it would be unfortunate if greater investment in new models like blended learning and virtual schools were distorted by technology policy decisions at

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[93] Evergreen Paper at 14.

the FCC. The Commission should exercise caution to avoid overprescribing a process that would lead to the unintended consequence of denying entry to education entrepreneurs that may provide effective tools for teaching and learning.

CONCLUSION

Twenty-first century schools need twenty-first century communication technologies. The use of technology can empower teachers and provide students with access to high-quality, customized educational opportunities. Connectivity alone will not boost student achievement or deliver high-quality education, but it is the necessary predicate to real education reform and the widespread adoption of a host of digital learning solutions that hold great promise. The Education Coalition urges the Commission to take this once-in-a-generation opportunity to modernize and improve the E-Rate program to help schools and libraries harness the transformative power of technology.

Respectfully submitted,

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