Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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

COMMENTS FROM THE ALLIANCE FOR EXCELLENT EDUCATION ON THE NOTICE OF PROPOSED RULEMAKING FOR MODERNIZING THE E-RATE PROGRAM FOR SCHOOLS AND LIBRARIES

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I. INTRODUCTION AND SUMMARY

The Alliance for Excellent Education (Alliance) appreciates the opportunity to submit comments in response to the Federal Communications Commission's (Commission) Notice of Proposed Rulemaking (NPRM) seeking to review and modernize the E-rate program. The Alliance commends the Commission's comprehensive review of the E-rate program and views the modernization and expansion of E-rate as vital to the nation's education system and, as such, to the nation's economic future. The Alliance urges the Commission to take swift action on this NPRM and calls on the Commission to have the appropriate policies and priorities in place to implement E-rate reform by School Year (SY) 2014–15.[1]

In order for the United States to sustain its position as the world's leading economic power, its system of education must be rapidly and dramatically improved. Digital learning is becoming a recognized game changer in the field of education reform; however, too many schools and classrooms lack the connectivity needed to harness the promise of technology.

The Alliance will begin its comments on the NPRM by providing a broad overview of the state of education and the role of technology in education reform. Then it will offer specific recommendations to strengthen E-rate. The recommendations will focus on the need to expand funding for the program as well as ways to modernize it in order to make E-rate more effective in supporting twenty-first-century learning environments. Complementing these recommendations, the Alliance is pleased to submit recommendations in partnership with the Council for Chief State School Officers and the Foundation for Excellence in Education under a separate filing. Specific references to these joint recommendations are included in this submission, as the Alliance would like to draw particular attention to the recommendations made within this separate filing in the areas of encouraging consortia and simplifying the E-rate program.

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

II. ABOUT THE ALLIANCE FOR EXCELLENT EDUCATION

The Alliance for Excellent Education (Alliance) is a Washington, DC–based national policy and advocacy organization created to help all middle and high school students receive an excellent education. The Alliance focuses on America's 6 million most-at-risk secondary school students—those in the lowest achievement quartile—who are most likely to leave school without a diploma or to graduate unprepared for a productive future. The Alliance's mission is to promote high school transformation to make it possible for every child to graduate prepared for success in life.

The Alliance works to encourage the development and implementation of federal and national policies that support effective secondary school reform and increased student achievement and attainment. It works to synthesize and distribute research and information about promising practices that inform national education policies. The Alliance provides sound, objective, nonpartisan advice that informs decisions about policy creation and implementation. Working with decisionmakers at all levels, the Alliance develops state and federal policy recommendations and advocates to policymakers in the state and federal governments. The Alliance's audience includes policymakers at the federal, state, and local levels, as well as education organizations; corporate, labor, and funding communities; media; parents; administrators; teachers; students; and a concerned public.

To encourage public awareness and action that support effective secondary school reform, the Alliance hosts events and webinars, makes presentations at meetings and conferences across the country, produces reports and publications, and issues regular releases that provide national and state-level data and information about the impact of improving educational achievement and attainment levels for secondary school students. The Alliance publishes a biweekly newsletter, *Straight A's*, which provides information on public education policy and progress in an accessible format. The Alliance hosts a popular, regularly updated website, www.all4ed.org, which provides extensive information and data on secondary school policies and reform initiatives. The Alliance also conducts numerous informational webinars on topics of educational reform.

In 2011, the Alliance created the Center for Secondary School Digital Learning and Policy (Center) to focus specifically on how technology and digital learning can offer innovative ways to ensure that all students—especially those most at risk and disadvantaged—graduate from high school prepared for success.

The Alliance held the first Digital Learning Day in 2012, a national celebration with more than 26,000 teachers and millions of students participating. During the Digital Town Hall that was held in conjunction with that event, then Commission Chairman Julius Genachowski and U.S. Secretary of Education Arne Duncan announced the Digital Learning Playbook, a guide for educators and administrators in K–12 school districts to provide digital learning opportunities for students.

In 2013, the Alliance announced Project 24, a new effort to assist school districts in developing a plan to use technology and digital learning to help drive new twenty-first-century student-

centered instruction models leading to improved college and career readiness for all students. Currently 1,300 school districts representing 20 percent of U.S. students are participating in some way.

The Alliance was founded in 1999 by the Liselotte and Gerard Leeds family, who created an independent and diverse board of directors that is currently chaired by Washington, DC, philanthropist Daniel Leeds.

III. THE ROLE OF E-RATE IN PROVIDING A TWENTY-FIRST-CENTURY EDUCATION

Education leaders are facing the confluence of three challenges that together call for innovative, technology-enhanced approaches to school reform.

A. Increasing Need for High Student Achievement

Too many students fail to graduate from high school ready for college and a career. More than 20 percent of the students in the United States do not graduate on time, if at all.[2] Among those who do graduate, only one-quarter are prepared for college.[3] One-third of students must take remedial courses when they begin their postsecondary education,[4] meaning that they are paying college prices for the high school education they should have received.

This poor preparation is taking place at a time when the economic demand for a highly educated workforce has never been greater. By 2018, two-thirds of the nation's jobs will require some level of postsecondary education; however, projections indicate that there will be a shortage of 3 million individuals with the required postsecondary credentials to fill these positions.[5] Already, even with today's historically high unemployment, 3.6 million jobs remain unfilled, in part because candidates lack the requisite knowledge and skills to meet the needs of employers.[6] The demands of the knowledge-driven economy are far outpacing the production of students who are prepared for the workforce.

To respond to this rapidly rising demand for a higher-skilled workforce, every state now has raised its graduation standards to require that every student graduate from high school ready for college and a career. This seismic tremor in education means developing more and richer learning experiences and providing them to all students in an efficient and

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[2] R. Stillwell and J. Sabel, *Public School Graduates and Dropouts from the Common Core of Data: School Year 2009–2010: First Look (Provisional Data)* (NCES 2013-309) (Washington, DC: U.S. Department of Education, National Center for Education Statistics, 2013), http://nces.ed.gov/pubs2013/2013309.pdf (accessed February 13, 2013).

[3] ACT, *The Condition of College and Career Readiness* (Washington, DC: Author, 2013).

[4] Computation by NCES PowerStats on February 14, 2011, using U.S. Department of Education, National Center for Education Statistics, 2007–08 National Postsecondary Student Aid Study (NPSAS:08).

[5] A. Carnevale, N. Smith, and J. Strohl, *Help Wanted: Projections of Jobs and Education Requirements Through 2018* (Washington, DC: Georgetown University Center on Education and the Workforce, 2010).

[6] U.S. Bureau of Labor Statistics, "Job Openings and Labor Turnover Survey," news release, February 12, 2013, http://www.bls.gov/news.release/pdf/jolts.pdf (accessed February 13, 2013).

engaging manner. Only the innovative and effective applications of technology supporting teachers will accomplish this major objective.

B. Shrinking Budgets

States and districts must meet the demand for a more effective education system in the midst of declining resources. Between 2008 and 2012, thirty-five states reduced per-pupil K–12 expenditures.[7] Moreover, the U.S. Congress has shown little interest in providing new funding for education.

C. The Future of Teaching

It is well understood that teachers are the most important school-based factor influencing student achievement. However, access to effective teaching remains widely uneven and inequitably distributed across the country. The teaching profession faces multiple challenges while serving at the front line of improving outcomes for students. For example, there continues to be high turnover and frequent layoffs in the field of teaching: nearly 300,000 teaching positions have been lost since 2008. Additionally, today's typical teacher has just one to two years of experience, compared to fifteen years in 1987.[8]

Also, states report shortages of certified teachers in many subject areas. As detailed in a report issued by the Alliance in 2012 on the importance of digital learning, "[I]n 2007–08, nearly 60 percent of public school classes in high school physical science were taught by a teacher who did not major in that subject area. The challenge of finding certified teachers is particularly difficult in rural areas. The state of Georgia, for example, has 440 high schools but only 88 physics teachers. Even Minnesota, which is considered a high-achieving state, has only 182 certified physics teachers for its 971 high schools."[9] In addition, the need for certified teachers is a major equity concern. According to the 2009–10 Office for Civil Rights Data Collection, only 29 percent of high schools serving a majority of students of color offered calculus, compared to 55 percent of schools with the lowest African American and Hispanic enrollments.[10] Only effective online learning and other forms of technology will be able to provide all students with the content and instruction they require.

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[7] P. Oliff, C. Mai, and M. Leachman, *New School Year Brings More Cuts in State Funding for Schools* (Washington, DC: Center on Budget and Policy Priorities, updated September 4, 2012), http://www.cbpp.org/files/9-4-12sfp.pdf (accessed February 13, 2013).

[8] R. Ingersoll and E. Merrill, University of Pennsylvania, original analyses for NCTAF of Schools and Staffing Survey.

[9] T. Schwartzbeck and M. Wolf, *The Digital Learning Imperative* (Washington, DC: Alliance for Excellent Education, 2012).

[10] U.S. Department of Education, Civil Rights Data Collection, 2009–10.

IV. THE COMPONENTS OF AN EFFECTIVE DIGITAL LEARNING STRATEGY

When used effectively as a part of a comprehensive strategy to enhance teaching and learning, technology can be an effective tool to address the aforementioned challenges facing students and schools.

An effective digital learning strategy includes three key components: teaching, time, and technology. While the issues of teaching and time lie outside the scope of this NPRM, the integration of teaching, time, and technology are the foundation upon which the Alliance provides its comments to the Commission. Therefore, a brief discussion of these key elements precedes the Alliance's comments directly relating to the NPRM.

A. Teaching

It must be made very clear that technology is in no way a replacement for teachers. To the contrary, the most promising use of technology is by effective educators who implement digital learning strategies to personalize instruction and enhance the educational experience for the modern student. Technology can be used to create a learner-centered environment that utilizes data to establish learning goals, assess student progress, and provide students with a system of support. The effective application of various types of educational technology enables teachers to become true educational designers for each student's path to optimizing learning outcomes. One of the most optimal uses of technology to enhance education is through blended learning strategies that improve instruction and help students advance at their own pace based on competency and mastery.

Digital learning can also be an effective tool for strengthening educator effectiveness. Technology can increase professional learning opportunities by expanding access to high-quality, ongoing, job-embedded resources to improve student success. For example, pairing professional development with technology allows for peer-to-peer lesson sharing, combined with less emphasis on "sit and get" professional development sessions, eliminating the limits of geography and time. These ever-increasing resources offer teachers vast new opportunities to collaborate, learn, share, and produce best practices among educators in school buildings across the country.

B. Time

The confines of the traditional school day should not be a barrier to learning. Students learn at different paces, and the traditional education model that expects each student to learn the same material within the same time period under the same instruction is in need of substantial reform. Digital learning offers the opportunity for students to spend more time with course material they find challenging, or to advance at a faster pace once concepts are mastered. Technology affords students and teachers the ability to use time differently, including the ability to utilize extended learning opportunities outside of school to enhance academic achievement.

C. Technology

Hardware, software, online instruction, data systems, and services and support are all tools that can be employed as a part of a comprehensive digital strategy that more effectively uses time and concentrates on supporting teachers in providing effective instruction. A key factor in the delivery of effective digital learning is the need for all schools to have high-speed broadband access. Therefore, the modernization and expansion of E-rate is absolutely vital to the implementation of the technology-enhanced twenty-first-century educational experience needed to maintain America's competitive edge in the global economy.

It should be noted that the modernization and expansion of E-rate is fully consistent with and supportive of the traditional role played by the federal government in education to ensure equity in educational opportunity. This focus on equity is critical, as achievement and graduation rate gaps persist, while the population of traditionally underserved students rapidly increases.

The nation's changing demographics, combined with the increasing demand for effective education, make the importance of educational equity all the more important. Technology must not simply be a tool used by the affluent to enhance their success. The Commission has the responsibility and opportunity to help ensure that all students benefit from the effective use of technology through the modernization and expansion of E-rate.

V. EXPAND THE AVAILABILITY OF E-RATE

The Alliance applauds the Commission for reviewing how the goals of E-rate can be most effectively funded. America's competitiveness in the twenty-first-century economy requires a technology-supported, rigorous educational experience for the nation's students. The Alliance believes that E-rate's funding must be increased to meet today's needs and future demand, and urges the Commission to increase the current E-rate cap.

As articulated in the NPRM, the Commission adopted the $2.25 billion cap sixteen years ago in an attempt to estimate the level of demand for the program.[11] At that time, Google was a project called "BackRub" being developed by two Stanford graduate students and Facebook founder Mark Zuckerberg was twelve years old; the purchase by the Los Angeles Unified School District of 30,000 iPads to enhance instruction would have been an impossible prediction. Technology, and the promise it holds to improve student learning, has evolved considerably since the E-rate cap was adopted.

In addition, the program data clearly demonstrates that the E-rate cap has not kept pace with demand. The Universal Service Administrative Company estimates E-rate demand for the 2013 funding year to be $4.986 billion, more than twice that of the funding available under the cap.[12]

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[11] E-Rate NPRM, ¶ 174.

[12] M. Blackwell, "In the Matter of Schools and Libraries Universal Service Support Mechanism," memo from Universal Service Administrative Company to Julie Veach, April 22, 2013,

As noted in the NPRM, applicants have requested more funding than is available every funding year since the inception of E-rate.[13]

The precise level of future demand is uncertain. What is clear is that schools and libraries need a sophisticated and adaptable twenty-first-century technological infrastructure in order to advance student learning. To develop this critical infrastructure, the Commission is right to consider both a temporary and a permanent increase in the cap. A temporary increase in the cap could support one-time costs associated with building and investing in lasting infrastructural investments such as a fiber build out; a temporary increase could also support a pilot of various methods for building and sustaining connectivity to ascertain what methods are most effective and cost-effective. A permanent increase in the cap, perhaps at a lower level than the temporary increase, could be implemented in order to sustain and regularly upgrade the technological infrastructure as appropriate.

It is important that the cap be raised to a level sufficient to meet the demands known today, while simultaneously accommodating future needs that cannot yet be determined. The cost of connectivity could drop substantially over the next five to ten years, similar to the drop in the cost of long-distance telephone service. Similarly, new technologies with tremendous educational benefits could be developed, but with high costs to schools and libraries. The Commission should consider developing a process by which the cap could be regularly reviewed and adjusted in order to meet the demands of the time.

The Alliance appreciates the Commission's intention to explore whether or not cost savings resulting from E-rate reforms will be sufficient to meet the program's goals.[14] The Alliance agrees that cost savings may result from program simplification and modernization, and these savings can be applied to investing in increasing the connectivity capacity. However, it is unlikely that such cost savings will produce sufficient income to cover the cost of providing schools and libraries with the necessary technological infrastructure to support digital learning.

In addition, we oppose proposals that would repurpose funding from other vital Universal Service Fund (USF) programs in order to expand E-rate unless such funding is derived from reforms that do not in any way limit the availability of services to the programs' intended recipients.

VI. MODERNIZE E-RATE

The Alliance appreciates the thorough review the Commission is conducting to ascertain the most effective way to modernize E-rate. Below, the Alliance outlines several recommendations in response to the NPRM that it views as "high leverage" opportunities to modernize the program in order to achieve the goal of providing students with the high-speed broadband necessary for a twenty-first-century education.

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http://www.usac.org/_res/documents/sl/pdf/tools/news/FY2013-Demand-Estimate.pdf (accessed September 13, 2013).

[13] E-Rate NPRM, ¶ 174.

[14] E-Rate NPRM, ¶ 172.

A. Prioritize High-Capacity Broadband Connectivity

The Alliance supports the Commission's proposal to phase out support for outdated services such as pagers and directory assistance as suggested in paragraphs 92–94. In addition, the Alliance supports the phasing out of basic phone service over time. The Commission may consider allowing a certain subset of eligible entities to utilize E-rate funding for basic phone service, such as rural schools and libraries serving high percentages of low-income students and tribal communities, if the eligible entity sufficiently demonstrates the need to do so.

B. Facilitate the Formation of Consortia That Extend Beyond Schools and Libraries[15]

Twenty-first-century learning environments are not limited to the classroom. There is a growing understanding among educators that opportunities for learning should not be limited to the school building. Rather, "anytime, anyplace" strategies for learning are effective in providing students with a well-rounded, real-world educational experience that will prepare them for success in the modern workplace.

The NPRM recognizes the potential importance of purchasing consortia in facilitating cost savings. The Alliance encourages the Commission to consider the potential of consortia as part of a comprehensive education strategy. Education is the responsibility of the entire community, and various community organizations and institutions offer educational experiences that schools are unable or ill-equipped to provide on their own. For example, community-school partnerships enable students to apply classroom learning in real-world situations through service projects and other hands-on opportunities to utilize and build knowledge and skills. Further, the proliferation of work-based learning and project-based learning in schools means that many students are learning in other settings besides traditional schools, such as hospitals, museums, and small businesses.

Therefore, the Alliance recommends that the Commission facilitate the formation of learning consortia and partnerships that extend beyond schools and libraries and include nonprofit community organizations. As part of purchasing consortia, the Alliance recommends that E-rate discounts be extended to such nonprofit community organizations to assist them in delivering educational opportunities to students in partnership with schools and libraries, while prioritizing discounts to schools and libraries. This recommendation is consistent with the Commission's inquiry into the efficacy of expanding the reach of E-rate through wireless community hotspots, which the Alliance also endorses.[16]

C. Incentivize Consortia and Simplify E-Rate

E-rate is in need of commonsense reforms, including more transparency on issues of regional pricing, the strong encouragement of purchasing consortia to maximize cost-effectiveness, and simplification to increase access and efficiency. The Alliance is

[15] E-Rate NPRM, ¶ 184.
[16] E-Rate NPRM, ¶ 319–23.

pleased to have submitted comments in partnership with the Council of Chief State School Officers and the Foundation for Excellence in Education on these points and encourages the Commission's consideration of these joint recommendations.[17] While fully supportive of the recommendations by the previously mentioned organizations, the recommendations in this document are strictly those of the Alliance for Excellent Education.

D. Measure the Success of E-Rate Based on Capacity

Largely because of E-rate, nearly every classroom in America has access to the internet. Between 1996 (the year E-rate was signed into law) and 2005, the percentage of classrooms with internet access grew from 14 percent to 94 percent.[18] Moreover, according to the Government Accountability Office, 83 percent of public schools and 51 percent of library systems participate in the E-rate program.[19] As described by the Leading Education by Advancing Digital (LEAD) Commission, "[T]he E-rate program has been a hero for providing America's K–12 schools with access to the Internet; however, today, we face a critical issue of insufficient capacity, not access."[20]

The Alliance applauds the Commission for exploring what performance measures should be adopted to support the goal of ensuring affordable access to high-capacity broadband among schools and libraries.[21] Since the program's inception, the success of E-rate has been measured by the number of schools and libraries receiving support. It is time to change that goal from *participation* to *capacity*.

The Alliance suggests that new capacity goals be established that ensure that all students have access to the high-speed broadband needed to support quality digital learning. In determining capacity goals, the Alliance encourages the Commission to explore the possibility of having goals that are appropriate to the size of the eligible school or library. Among the measures that warrant consideration are the targets outlined by the State Education Technology Directors Association and President Obama's ConnectED initiative (100 Mbps per 1,000 users by SY 2014–15, increasing to 1 Gbps per 1,000 users by SY 2017–18),[22] as well as the targets recommended by Cisco (1 Gbps per 2,000 students by 2014, increasing to 4 Gbps per 2,000 students in 2018).[23]

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[17] Alliance for Excellent Education, Council of Chief State School Officers, and Digital Learning Now!, education coalition comments on WC Docket No. 13-184 submitted September 16, 2013.

[18] J. Wells and L. Lewis, *Internet Access in U.S. Public Schools and Classrooms: 1994–2005* (NCES 2007-020) (Washington, DC: U.S. Department of Education, 2006).

[19] U.S. Government Accountability Office, *Long-Term Strategic Vision Would Help Ensure Targeting of E-Rate Funds to Highest Priority Uses* (Washington, DC: Author, 2009).

[20] L. Bollinger et al., *Paving a Path Forward for Digital Learning in the United States* (Washington, DC: LEAD Commission, 2013).

[21] E-Rate NPRM, ¶ 20–40.

[22] White House Office of the Press Secretary, 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 (accessed September 10, 2013).

[23] Cisco, *High Speed Broadband in Every Classroom: The Promise of a Modernized E-Rate Program* (San Jose, CA: Author, 2013).

While the Alliance supports capacity indicators as measures of success for E-rate, the Alliance strongly opposes the use of educational outcomes for this purpose.[24] As described above, technological infrastructure is only one part of digital learning; effective instructional practices and effective use of time are central to digital learning. The LEAD Commission articulates this idea very clearly: "Digital learning is not about 'one to one' learning between a student and a device, it is about 'one to one to one' learning involving a teacher, a student, and a device."[25] Connectivity is critical; however, it is only one variable in the complex equation that produces student learning. Therefore, it would be inappropriate to include educational outcomes among the measures used to evaluate the success of E-rate.

E. Provide Special Consideration for Tribal Communities

As the Commission considers ways to strengthen E-rate, the Alliance encourages the Commission to consider ways in which it can provide special consideration for tribal communities and appreciates the many instances throughout the NPRM that questions are posed regarding the potential impact of proposed policies on tribal communities. As the Commission considers modifying the discount matrix, the Alliance urges the Commission to explore the potential impact of increasing the discount made available to tribal communities.

In addition, the Alliance urges caution as the Commission considers increasing requirements for matching funds, particularly in schools and libraries operated within tribal communities or serving large populations of Native students. The goal of increasing private contributions to the deployment of high-quality digital learning is laudable. However, such requirements would likely have the unintended consequence of causing fewer tribal communities to participate in the program. In 2011, the National Indian Education Study found that Native students score lower than other students in reading and math in grades four and eight.[26] Native high school students drop out of school at a much higher rate than many other student subgroups, and the Native high school completion rate is below 60 percent in many of the states with high Native populations.[27]

These vast disparities in education make it all the more difficult for tribes to educate their students and offer the twenty-first-century learning models available through technology. Due to the high burden tribes are already facing, efforts should be undertaken to not make it more difficult for them to access valuable funds such as E-rate. Should the Commission increase matching requirements for E-rate, the Alliance recommends exempting schools

[24] E-Rate NPRM, ¶ 40.
[25] Bollinger et al., *Paving a Path Forward for Digital Learning in the United States*.
[26] U.S. Department of Education, National Center for Education Statistics, Institute of Education Sciences, *National Indian Education Study 2011* (NCES 2012-466), http://nces.ed.gov/nationsreportcard/nies/ (accessed September 13, 2013).
[27] U.S. Department of Education, "Provisional Data File: SY2010–11 Four-Year Regulatory Adjusted Cohort Graduation Rates," http://www2.ed.gov/documents/press-releases/state-2010-11-graduation-rate-data.pdf (accessed September 13, 2013).

and libraries operated by the Bureau of Indian Affairs or individual tribal governments from the matching requirement.[28]

F. Ensure That Secondary Schools Primarily Serving Students from Low-Income Families Receive the Appropriate Discount

The E-rate discount an individual school receives is based on two indicators of need: the percentage of students eligible for free or reduced-price lunches through the National School Lunch Program (NSLP), and whether the school is located in a rural area. The former can pose a particular challenge for high schools, because NSLP eligibility is often an inaccurate measure of poverty. It is well recognized that free and reduced-price lunch eligibility provides an inaccurate and low count of poverty at the high school level because older students are less likely than younger ones to submit free and reduced-price lunch forms.[29] To ensure that high schools receive an accurate discount rate, the indicator of need used to determine the percentage of low-income students served should be based on the higher of two factors: the percentage of students eligible for NSLP or the percentage of students eligible based on the feeder pattern. The feeder pattern is calculated by applying the average percentage of students in low-income families of the elementary school attendance areas that feed into the secondary school to the number of students enrolled in secondary school. This measure is currently permitted by the U.S. Department of Education (ED) to be used to calculate the poverty level that determines the allocation of Title I funding, ED's largest K–12 program.[30]

G. Subject for Future Commission Exploration: The Possibility of a New "Priority Three" Supporting Hardware

As the NPRM describes, "[H]igh bandwidth connectivity to a school or library serves little purpose if students and patrons inside are not able to use it."[31] Moreover, the NPRM recognizes that E-rate funding has been insufficient to fund internal connections below the 88 percent discount rate.[32] Therefore, the Alliance reiterates its recommendation to raise the E-rate cap in order to support the twenty-first-century technological infrastructure necessary to bring the promise of technology to today's students.

Just as high bandwidth connectivity to a school or library is insufficient on its own, the combination of high bandwidth connectivity to a school or library and internal connections is insufficient to bring digital learning to students who lack the necessary hardware. Therefore, the Alliance recommends that the Commission explore the possibility of creating a new "Priority Three" that would allow eligible entities to utilize funds to purchase hardware. The combination of external/internal connectivity with

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[28] E-Rate NPRM, ¶ 165.
[29] Wayne Riddle, *Title I and High Schools: Addressing the Needs of Disadvantaged Students at All Grade Levels* (Washington, DC: Alliance for Excellent Education, 2011).
[30] U.S. Department of Education, *Non-Regulatory Guidance: Local Educational Agency Identification and Selection of School Attendance Areas and Schools and Allocation of Title I Funds to Those Areas and Schools* (Washington, DC: Author, 2003).
[31] E-Rate NPRM, ¶ 143.
[32] E-Rate NPRM, ¶ 83.

hardware constitutes the technological infrastructure needed to support effective digital learning.

The Alliance understands that adding hardware to the eligible services list (ESL) will considerably increase demand for E-rate. This is why the Alliance recommends that the Commission explore this possibility over time to determine the feasibility and likely impact of a new Priority Three. For example, it is likely that price points for both connectivity and hardware will continue to decrease. According to the LEAD Commission, over the last five years the cost of providing every student with connectivity and a device has dropped 75 percent.[33] As prices continue to decline, the opportunity to fund a new Priority Three may arise, albeit in the long term rather than within the next few years.

Additionally, to ensure that schools and libraries first meet the goal of having high-speed broadband access in the school and classroom, recipients seeking funding under the new Priority Three should be required to first demonstrate that they have sufficient high-speed broadband connectivity.

Moreover, adding hardware to the ESL has the opportunity to deliver the Commission's goal of increasing the cost-effectiveness of E-rate and providing incentives for public-private partnerships.[34] It is now common for cellular phone plans to be purchased with cellular phones as part of a single package. Adding hardware to the ESL could provide telecommunications providers with an incentive to create bulk-buying/leasing opportunities including both broadband connectivity and hardware. In exploring this possibility, the Alliance recommends that the Commission allow funding to be administered in such a way that the E-rate program will be responsive to the marketplace by permitting eligible entities to efficiently and effectively take advantage of opportunities for cost savings.

VII. CONCLUSION

America's ability to compete in the twenty-first-century global economy is dependent on the quality of its education system. Technology has revolutionized many facets of modern life, but the promise of digital learning is only beginning to be understood and implemented at scale in today's classrooms. A modernized and expanded E-rate program has the potential to dramatically enhance student outcomes in the short term, and economic outcomes in the long term. The Alliance appreciates the Commission's thoughtful and thorough process for upgrading this vital program, and is eager to support the Commission's efforts in any way possible. The Alliance urges the Commission to take swift action on this NPRM and calls on the Commission to have the appropriate policies and priorities in place to implement E-rate reform by SY 2014–15.

[33] Bollinger et al., *Paving a Path Forward for Digital Learning in the United States*.
[34] E-Rate NPRM, ¶ 45.