Before the Federal Communications Commission

Washington DC 20554

In the Matter of )

)

Inquiry Concerning Deployment of Advanced ) GN Docket No. 17-199

Telecommunications Capability to All Americans )

In a Reasonable and Timely Fashion )

**Comments of the Education & Libraries Networks Coalition (EdLiNC)**

1. **Introduction**

The Education and Library Networks Coalition (EdLiNC) [[1]](#footnote-1), a group comprised of the leading public and private education associations and the American Library Association that was formed in 1995 to advocate for the interests of schools and libraries in the Telecommunications Act of 1996, is pleased to provide these reply comments to the Commission’s Thirteen Section 706 Report Notice of Inquiry[[2]](#footnote-2). Since the enactment of the E-Rate as part of the Act, EdLiNC has pursued a mission of promoting and improving the E-Rate to fulfill its mission of accelerating the deployment of advanced telecommunications and information services in schools and libraries and has filed in every Commission rulemaking related to the program. EdLiNC also filed comments in the Commission’s recent Lifeline Modernization proceeding, focusing our proposals on elements of this rulemaking related to bridging the homework gap. As is reflected in our comments below, EdLiNC supports the existing E-Rate Modernization Order goals and urges the Commission to retain them. EdLiNC also urges the Commission to set benchmarks for fixed and mobile broadband that take into account the educational needs of k-12 students to gain robust online access in their homes.

1. **EdLiNC Urges the Commission to Retain the 2014 E-Rate Modernization Order’s Broadband Goals for Schools and Districts as They Remain Valid and Useful Today**

The Commission’s Thirteenth Section 706 Report Notice of Inquiry (NOI) contains a section devoted to reexamining the E-Rate program’s school and classroom broadband goals that the Commission itself adopted just three years ago.[[3]](#footnote-3) In the 2014 Modernizing the E-Rate Program for Schools and Libraries Report and Order, the Commission approved short-term (100 Mbps per 1000 students) and long-term (1 Gbps per 1000 students) broadband goals for the program. EdLiNC supported the adoption of these goals three years ago, not only because of their utility but also because the Commission intended them to be targets for schools and not mandates.[[4]](#footnote-4) Since the initiation of the modernized E-Rate, states, school districts and individual schools have relied on these new goals and striven to achieve them. A number of studies by non-profits – and even previous Section 706 reports – have used these goals as their basis for measuring broadband in schools and classrooms and for tracking progress towards these goals. EdLiNC endorsed these goals in 2014, asserts that they remain valid and useful now, and urges the Commission to allow them to remain in place.

As the 2014 Report and Order made clear, the short and long-term broadband goals adopted by the Commission were based on a report by the State Educational Technology Directors Association (SETDA). In the Order, the Commission deemed the SETDA goals “as reflecting schools’ bandwidth needs as they increasingly adopt digital learning strategies and one-to-one device initiatives.”[[5]](#footnote-5) While the Order also directs the Wireline Bureau to collect usage and demand data from applicants to be used “when refining the Internet connectivity targets,”[[6]](#footnote-6) we are unaware of any data thus far elicited from E-Rate participants that would suggest the need to refine these goals now.

Since 2014, organizations have used these goals to develop detailed and useful data that help schools determine their current broadband status and targets for growth – and that demonstrate that E-Rate modernization is working. For instance, the Consortium for School Networking (CoSN) and AASA: The School Superintendents’ Association (AASA), two organizations that represent E-Rate beneficiaries and that have joined forces in each of the past four years to produce an Annual Infrastructure Survey. Last year, CoSN and AASA, joined by MDR, surveyed 567 school district administrators, technology leaders and chief technology officers hailing from 48 states and the District of Columbia on a wide array of school district infrastructure issues. On the subject of “Network Speed and Capacity,” these groups not only measured the progress that school districts were making towards achieving the interim and long term E-Rate broadband goals but also projected bandwidth demands over the next 18 months and explained the reasons for demand increases. Specifically, the 2016 report found:

School systems are making substantial progress towards meeting the FCC Short-Term Goal of 100 Mbps per 1,000 students with more than two-thirds (68%) of schools systems reporting that all the schools in their system fully meet the minimum internet bandwidth recommendations. This number climbs to 80% of school systems having three-fourths of their schools at this immediate connectivity goal. This represents a significant improvement from 19% in just four years (2013). And, this progress is equally seen across urban, rural and suburban districts. This problem still exists, however, with 9% of survey respondents reporting this year that none of the schools in their system meet the short term broadband goal.

The bigger challenge is that school systems are lagging behind in meeting the more robust FCC Long-Term Goal of 1 Gbps per 1,000 students. More than half of all school systems (54%) replied that none of their schools meet this goal today, regardless of whether you are looking at urban, suburban or rural districts. School system leaders are divided on whether the long-term goal is too ambitious or about right.

Interestingly, more than one-quarter of survey respondents (27%) project significant need for growth of internet bandwidth over the next 18 months – a whopping 100% to 499% increase. And, another 4% project extremely high need for bandwidth growth of 500% or more. These projections are consistent with bandwidth estimates from last year…

What is driving this ever increasing need for bandwidth? School systems expect dramatic increases in the number of students with multiple devices. In 2016, 21% of school systems currently report two or more devices per students and expect that will increase in just three years when nearly two-thirds (65%) of all students will use two or more devices at school.[[7]](#footnote-7)

Another example of reliance on the E-Rate Modernization Order’s broadband goals comes from Education Superhighway (EH), a California non-profit, which found that, as of September 2017, 94% of school districts had attained the initial broadband goal. EH’s report shows a marked increase in adequate broadband from 2015, when only 30% of school districts had reached the initial goal. More than just a scoreboard, EH’s report also uses the E-Rate goals to show that more needs to be done to deliver adequate broadband to many schools. Nationwide, EH estimated that 6.5 million students in over 10,000 schools do not meet the initial goal. More importantly, EH used data collected from the E-rate’s Form 470s to pinpoint individual districts’ progress towards achieving 100 mbps per 1000 students and chart their paths towards reaching that goal. On its interactive Compare & Connect K-12 website, users can navigate to individual states and drill down for data on specific districts. For instance, in Liberal Unified School District, which is located in the southwestern part of the state and matriculates 4835 students in twelve buildings, EHs data reveals that the district has Wi-Fi in every classroom and is connected to fiber.[[8]](#footnote-8) However, the data also shows that the district’s Internet bandwidth is at 83 kbps per 1000 students, which is below the Commission’s interim E-Rate goal, and that it s monthly Internet access costs are $24.50 Mbps, which is more expensive than average.

Schools and school districts indicate that they find the current goals relevant and useful. Kevin Schwartz, the CTO of Austin Independent School District in Texas, stated: “The FCC goals helped us shine a light on the exponential growth and unsustainability of our (then) existing model. We drove down the cost of bandwidth and now have both the infrastructure and budget capacity for what we expect to see as a need around 2020.” Frankie Jackson, the CTO of Cypress Fairbanks Independent School District in Texas, agrees with Kevin Schwartz, calling the goals helpful for strategic planning.” Keith Bockwoldt, Director of Technology Services at Township High School District 214 in Arlington Heights, Illinois, also found value with the goals: “ These goals were used to help make decisions when reviewing bandwidth growth and cost of services. For now we have enough bandwidth to carry us through the next few years, even with a 3 devices to 1 student scenario. Bandwidth continues to be monitored and evaluated to determine future needs.”

For many districts, like the Highline Schools, an urban district near Seattle’s airport, the FCC’s goals are used as targets but individual usage has the most bearing on bandwidth purchases. Mark Finstrom, Highline’s CTO, states: “Our growth in data in the last 10 years has followed a trajectory of need. While our plan calls for us to be 22-25 Gbps in three years, usage will drive purchase. For me, the hardware we purchase is capable of 100 Gbps, some even greater…We moved from 2,000 devices 10 years ago to 25,000 devices today… Currently, our usage is sustained between 5-7 Gbps. The variance is wide due to assessments and new tool usage (additional devices and apps)…Our usage is up about 2% from the previous start of the year. We are now planning for BYOD (Bring Your Own Devices) and currently allow students to use their devices (cell, tablet, computer, games, watches, calculators, etc) that use bandwidth. At any given point, we may have 40,000 devices on the network… I expect our growth to exceed 50-60% of bandwidth use this year and will not be surprised to see 70% spikes with full BYOD and Internet of Things consumption.”

1. **EdLiNC Urges the Commission to Adopt Fixed and Mobile Broadband Service Benchmarks that Ensure K-12 Students Have Sufficient Bandwidth at Home to Complete Online Assignments, Conduct Research, Submit College, and Career and Government Service Applications, and Communicate with Peers and Teachers**

The NOI also seeks comment on speed benchmarks for fixed and mobile broadband services, specifically asking whether 23 Mbps/3 Mbps and 10 Mbps/1 Mbps are appropriate metrics for these services, respectively.[[9]](#footnote-9) EdLiNC strongly cautions the Commission against establishing fixed or mobile broadband service benchmarks that fail to ensure that k-12 students have sufficient bandwidth to go online in their homes to complete homework assignments, perform research, apply for college admission, internships or jobs, obtain government services, or simply communicate with their peers and teachers. Like Commissioner Clyburn, we are concerned that the proposed benchmarks might rule out students being able to use particular online services and, as she states in her Concurring Statement to the NOI, do “not even consider that multiple devices are likely utilizing a single fixed connection, or the multiple uses of a mobile device.”[[10]](#footnote-10) Whatever benchmarks the Commission settles on, we hope that it will take into account the educational needs of students in their homes.

The need for robust broadband at home for students continues to grow and home Internet access continues to challenge many students from low-income families. Recent data from Project Tomorrow’s 2016 Speak-Up Survey, which received responses from more than 500,000 students, teachers, administrators, parents and librarians nationwide, show that nearly half of high school students use the Internet daily or almost daily for homework assignments. Yet, according to the same survey, 49% of school principals say that ensuring student access to technology outside of school is a major challenge today – a figure that has risen significantly since 2010, when only 30% of principals had the same response.[[11]](#footnote-11) While two-thirds of districts reported allowing students on campus early or late to make use of their school networks and more than one-third provide Wi-Fi access in school parking lots, these are not complete solutions as 17% of students said they could not do homework because they lacked Internet access outside of school.[[12]](#footnote-12)

Project Tomorrow’s findings are buttressed by a 2016 Cooney Center survey of low-income families that found: “Fifty-two percent of parents with home Internet access say it is too slow, a quarter (26%) say too many people share the same computer, and one-fifth (20%) say their Internet was cut off in the last year due to non-payment.”[[13]](#footnote-13) It is worth noting that this study also found that 43% of families living below the poverty line and 26% of rural families lacked home Internet access.[[14]](#footnote-14) In other words, despite school and library efforts to help students gain Internet access and even free or low cost Wi-Fi options in fast food restaurants or coffee shops, some students still have no or very limited Internet options in their homes.

EdLiNC submits that the broadband metrics the Commission adopts in this proceeding will prove critical not only for helping measure connectivity for residences but also to shine a spotlight on those areas of the country where broadband access is inadequate or non-existent and where k-12 students struggle to gain access to the broadband they desperately need for their educations. Setting fixed or mobile broadband access numbers that are too low will suggest that the nation’s responsibility to connect all students has been satisfied, potentially leaving thousands upon thousands of low-income students on the wrong side of the digital divide. Therefore, we urge the Commission to think carefully about how much bandwidth each family with school age children will truly need, bearing in mind the need for high-speeds: for students to conduct online research and make use of bandwidth-intensive applications like digital textbooks; the demands on bandwidth from multiple users with more than one device; and the multiple different online services that might make simultaneous claims on home bandwidth.

1. **Conclusion**

EdLiNC appreciates the opportunity to file comments on this NOI and stands ready to further assist the Commission on these issues.

**Appendix A**

**EdLiNC Member Organizations**

**AASA: The School Superintendents Association**

**American Federation of Teachers (AFT)**

**American Library Association (ALA)**

**Association of Educational Service Agencies (AESA)**

**Association of School Business Officials International (ASBO)**

**Consortium for School Networking (CoSN)**

**International Society for Technology in Education (ISTE)**

**National Association of Elementary School Principals (NAESP)**

**National Association of Independent Schools (NAIS)**

**National Association of Secondary School Principals (NASSP)**

**National Association of State Boards of Education (NASBE)**

**National Catholic Educational Association (NCEA)**

**National Education Association (NEA)**

**National PTA (PTA)**

**National Rural Education Association (NREA)**

**National Rural Education Advocacy Coalition (NREAC)**

**National School Boards Association (NSBA)**

**State Educational Technology Directors Association (SETDA)**

**United States Conference of Catholic Bishops (USCCB)**

1. See Appendix A for complete list of EdLiNC members. [↑](#footnote-ref-1)
2. *Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, GN Docket No. 17-199, Thirteenth Section 706 Report Notice of Inquiry (2017) (Notice). [↑](#footnote-ref-2)
3. *Notice,* para. 39,40*.* [↑](#footnote-ref-3)
4. *Modernizing the E-Rate Program for Schools and Libraries, Report and Order and Further Notice of Proposed Rulemaking*, 28 FCC Rcd 8870, 8885, para. 34 (2014). [↑](#footnote-ref-4)
5. *Ibid*. [↑](#footnote-ref-5)
6. *Id*. at para. 36. [↑](#footnote-ref-6)
7. Consortium for School Networking. (2016) Annual E-rate and Infrastructure Survey, pp. 5-6. [↑](#footnote-ref-7)
8. Education Superhighway. (2017) Compare and Connect K-12, compareandconnectk12.org. [↑](#footnote-ref-8)
9. *Notice*, para. 18, 19. [↑](#footnote-ref-9)
10. *Notice*, Concurring Statement of Commissioner Mignon L. Clyburn. [↑](#footnote-ref-10)
11. Project Tomorrow (2017). 2016 Speak Up Survey Infographic: How America’s Schools are Addressing the Homework Gap: Speak-Up 2016 Findings, http://www.tomorrow.org/speakup/speakup-2016-addressing-homework-gap-september-2017.html [↑](#footnote-ref-11)
12. *Ibid*. [↑](#footnote-ref-12)
13. Rideout, V. J. & Katz, V.S. (2016). Opportunity for all? Technology and learning in lower-income families. A report of the Families and Media Project. New York: The Joan Ganz Cooney Center at Sesame Workshop, p.5. [↑](#footnote-ref-13)
14. *Id.* at p. 10. [↑](#footnote-ref-14)