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Re-Evaluating the E-Rate Program for the Anxious Generation

by

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I. Introduction and Summary

In many schools across the country, educational technology policy can be best described as incoherent. On the one hand, over thirty states now require districts to ban or restrict student use of cell phones during school hours.¹ These restrictions are driven by an increasing awareness that such devices distract students, impeding learning and eroding both attention spans and mental health.² On the other hand, almost 90 percent of public schools issue each student a personal laptop, tablet, or Chromebook for educational use.³ This comes despite the fact that teacher surveys show that students routinely use these devices to play games, watch videos, or scroll social media, the very activities that cell phone bans aim to prevent.

The Federal Communications Commission's E-Rate program encourages this incoherence. Originally designed to bring high-speed Internet access to libraries and schools at a time when few homes had such service, today the service subsidizes broadband connectivity to over 96 percent of the nation's public schools.⁴ The program spends billions annually on the assumption that digital connectivity improves education. But despite two decades of prompting by the Government Accountability Office, the Commission has never shown that E-Rate funding is necessary to keep each recipient school connected, nor has it proven that this connectivity in fact

enhances educational outcomes. This long-overdue analysis is critical not only because of the ailing health of the Universal Service Fund from which E-Rate subsidies are drawn, but also because of the growing evidence of the harmful effects of screen time on children and the threat that generative AI poses to the classroom environment.

Fortunately, the FCC's recent Notice of Proposed Rulemaking (NPRM) offers an opportunity to fill this gap and re-evaluate the program's relevance in the modern era. At a minimum, the agency's Office of Economics and Analytics should examine the current body of subsidy recipients to determine whether and to what extent E-Rate funds displace state or local funding that would otherwise be available to keep schools online. And the Commission should heed the GAO's longtime urging for the agency to establish outcome-based performance goals and metrics for the E-Rate program. Perhaps even more significantly, it should reverse the long-standing presumption that all activities that occur on school property serve an educational purpose and therefore should be eligible for federal support. Instead, applicants should be required to use cost-benefit analysis to show that a particular service would have the net effect of enhancing educational outcomes, and they should be required to consider more carefully how to mitigate the potential downsides of digital learning.

At a time when there is an increased focus on declining test scores for K - 12 students in America's public schools, and increased attention on reforming the outdated legacy Universal Service Fund, the FCC should be commended for initiating this examination of the Schools and Library subsidy program.

II. The Modern E-Rate Program's Unjustified Assumptions

There is a strong argument that the E-Rate program has outlived its original purpose. Established by the 1996 Telecommunications Act, the program was designed to help libraries and K-12 classrooms obtain access to advanced telecommunications services.⁵ At the time, less than twenty percent of American households had Internet access, primarily at slow dial-up speeds.⁶ As the official Congressional Conference Report on the Act explained, these schools and library provisions:

will help open new worlds of knowledge, learning and education to all Americans—rich and poor, rural and urban. They are intended, for example, to provide the ability to browse library collections, review the collections of museums, or find new information on the treatment of an illness, to Americans everywhere via schools and libraries. This universal access will assure that no one is barred from benefiting from the power of the Information Age.⁷

As a catalyst to bring high-speed access to these institutional outposts, it seems successful: the FCC reports that by 2005, nearly all American schools and 94 percent of instructional classrooms had Internet access, and by 2006, nearly all public libraries were connected and offering public Internet access.⁸ Moreover, almost all Americans have access to high-speed Internet at home, which obviates the need for schools and libraries to serve as community Internet outposts.

Today, E-Rate subsidizes the annual costs of maintaining this service. Eligible institutions may receive E-Rate-funded discounts on broadband service to a facility and internal connectivity services within a facility such as wireless access points, routers, and switches, if used for “educational purposes.”⁹ The Commission presumes that any activity occurring on school property serves an educational purpose. Discounts range from 20 to 90 percent of the cost, depending on the percentage of a school’s student population who are eligible for the National School Lunch Program (a proxy for poverty rates) and whether the school is in a rural area.¹⁰ Ninety-six percent of schools and seventy-three percent of libraries nationwide receive E-Rate assistance annually.¹¹ In fiscal year 2025 alone, these subsidies cost the Universal Service Fund over \$2.3 billion.¹²

The Commission’s new NPRM asks for comment on whether “the E-Rate program should be reexamined in light of the current state of school and library connectivity and current demand for program funds.”¹³ This inquiry is timely given the unsustainability of the Universal Service Fund (USF). E-Rate is the Fund’s second largest program. Like all USF programs, it is funded by a monthly surcharge on interstate and international telecommunications revenue. Although the cost of E-Rate and other USF programs has largely remained flat in recent years after a long period of annual growth, the revenue base supporting these programs continues to decline. As a result, the surcharge has grown, from 3 percent in 1998 to 42 percent for the fourth quarter of 2026. This worsening structural instability has prompted Congress to form a task force to examine the future of universal service. But in the meantime, and aside from the generic fiscal problems with the USF, the Commission is wise to consider whether the current version of the E-Rate program is justified.

E-Rate’s commitment to ongoing, annual support assumes that federal subsidies for Internet connectivity are still necessary to improve education. Underlying this assumption are two key questions that the Commission’s inquiry should answer. First, is E-Rate support necessary to keep every recipient school connected? There are almost certainly many schools across the country that depend on the federal subsidy to stay on the network, and the provision of larger discounts to more impoverished and rural districts likely improves the percentage of overall E-Rate funds going to such schools. But as noted above, over 96 percent of American schools receive E-Rate funds, and even wealthy districts receive discounts of at least 20 percent. For example, Williamson County Schools, in Tennessee’s highest-income county (median household income of \$135,000; poverty rate 4.5 percent) received nearly \$2 million in E-Rate commitments for funding year 2025.¹⁴ Given this reality, it is likely that at least some E-Rate funding merely displaces state or local funding that would be available to pay for network connectivity in the absence of federal assistance.

The second and perhaps more fundamental question is whether spending on connectivity improves educational outcomes. For over twenty years, the Government Accountability Office (GAO) has criticized the Commission for failing to establish performance goals and metrics to assess whether the program improves educational outcomes. In a 2005 report examining E-Rate, the GAO found “a key unanswered question, therefore, is the extent to which increases in connectivity can be attributed to E-rate” and noted the Commission itself “concluded that there was no way to tell whether the program has resulted in the cost-effective deployment and use of advanced telecommunications services for schools and libraries.”¹⁵

The limited academic literature gives reason to doubt E-Rate’s effectiveness. A 2019 study by economists Thomas W. Hazlett, Ben Schwall, and Scott Wallsten found that E-Rate spending had no measurable effect on student SAT scores in North Carolina from 2000 through 2013.¹⁶ A similar study by Wallsten and others four years later looked at E-Rate spending at the school level in Florida from 2016 through 2019.¹⁷ It similarly found no statistically significant relationship between subsidy amounts and school performance metrics overall, and a small but significant *negative* relationship with regard to middle schools and combination schools.¹⁸ These findings are largely consistent with an earlier California study showing that E-Rate spending increased the number of connected classrooms but did not translate into higher state achievement test scores.¹⁹

III. E-Rate and the Anxious Generation

The need to critically assess E-Rate’s performance is heightened by recent studies on the relationship between digital media use and adolescent well-being. Jonathan Haidt’s 2024 best-seller *The Anxious Generation* argues that the shift from play-based to screen-based childhoods prompted by the smartphone revolution has caused a sharp surge in teen anxiety, depression, and self-harm.²⁰ The Surgeon General has issued a public advisory that highlighted the relationship between screen time and behavioral difficulties, and physical and mental health challenges.²¹ And while the American Academy of Pediatrics has resisted adopting recommended screen time guidelines, it has warned that passive, low-quality screen use crowds out sleep, physical activity, and the in-person interaction that children and teens need to thrive.²² Ultimately, the work of Haidt and his contemporaries inspired legislation in over 30 states requiring schools to ban or restrict cell phone use during school hours.

Focusing on the educational context in particular, several studies suggest that classroom screen time correlates with declining academic performance. The Organisation for Economic Co-operation and Development’s (OECD) Programme for International Student Assessment (PISA), which measures math, reading, and science skills of fifteen-year-olds worldwide, found in its 2015 study of digital trends that “students who use computers moderately at school tend to have somewhat better learning outcomes than students who use computers rarely. But students who use computers very frequently at school do a lot worse in most learning outcomes, even after accounting for social background and student demographics.”²³

Neuroscientist Jared Cooney Horvath reads the 2012, 2015, and 2018 PISA surveys more starkly, as showing a straightforward inverse correlation between classroom screen time and standardized test performance.²⁴ He argues that the Trends in Mathematics and Science Study (TIMSS) shows the same pattern for fourth-grade math and science.²⁵ Horvath attributes this inverse relationship to the effect of devices on children’s ability to concentrate and focus. From a neurological perspective, multitasking is anathema to learning. Every time we move from one task to another, the Lateral Prefrontal Cortex must load a new “ruleset” to determine which information is important, and which is irrelevant, to the particular task.²⁶ Frequent task switching can adversely affect brain function in three ways. First, there is a fraction of a second when the brain stops processing information while one ruleset is swapped for another.²⁷ Second, there is a brief period of time when two rulesets conflict, so information is not processed accurately.²⁸ And

third, memories are more often processed by the striatum rather than the hippocampus, which makes them harder to access and use in the future.²⁹

Horvath argues that laptops, tablets, and smartphones train children to multitask, moving quickly from one app to another, and this pattern of behavior carries over into the classroom when handed an unrestricted device for personal use.³⁰ All of this translates into less: less time on task, and less retention of material learned. Horvath states that when using a computer for homework, students typically last approximately six minutes before switching to another task.³¹

Other data confirm that classroom device use is a persistent source of distraction. The 2022 PISA survey found that on average, 30 percent of students in OECD countries report getting distracted by using devices in most or every mathematics lesson. Moreover, 25 percent report being distracted by another student's digital device use.³² In a recent New York Times survey of 350 teachers, 36 percent reported that school-issued devices distract from schoolwork "a lot," and another 34 percent reported at least "a little" distraction. Over 60 percent report that students use devices in class for noneducational activities such as playing games and watching videos, and 16 percent report students accessing social media – even when content blockers are in place to prohibit such activity.³³

Of course, not all effects of digital devices are bad. While Horvath argues that the PISA data shows screen time is always detrimental to learning, the OECD's own framing is more qualified. As noted above, its 2015 report found that students who use computers moderately at school do better than those who rarely or never use such devices.³⁴ Its subsequent analysis of 2022 data distinguished between classroom device time spent on learning activities and that spent on leisure. While high leisure time was correlated with lower math scores, moderate learning screen time was associated with improved scores.³⁵ Professor Jean Twenge similarly attributes falling test scores to leisure use of electronic devices in school.³⁶

At a minimum, the data suggests that educational technology has ambiguous effects on student learning. This should prompt policymakers to reconsider E-Rate's heretofore unquestioned presumption that federal subsidies to America's schools and libraries will enhance student learning. To its credit, the Commission's NPRM highlights the screen time concerns raised by Horvath and others. E-Rate supporters argue that these concerns are irrelevant to the Commission's inquiry because E-Rate funds connectivity, not devices. But this objection fails to acknowledge that by subsidizing connectivity, E-Rate lowers the marginal cost of a high-screen educational model. The NPRM asks whether districts receiving higher E-Rate funds lean harder on one-to-one device policies and digital classroom learning. We simply do not know, but given the documented declines associated with classroom device use, it would be imprudent not to study the extent to which E-Rate contributes to the problem, or can help mitigate it.

IV. How Generative AI Complicates the Picture

The advent of generative AI further complicates the debate over the wisdom of device-based classroom learning. Several technology scholars, myself included, recognize the potential for significant educational gains from smart use of AI technology. In 1984, Professor Benjamin Bloom found that on average, students who receive one-on-one tutoring perform two standard

deviations better than those educated in a traditional classroom environment.³⁷ For the last four decades, educators have sought to solve Bloom’s “two-sigma problem” by identifying group learning models as effective as one-on-one tutoring. Generative AI offers perhaps the first realistic solution, by providing an inexpensive way to scale personalized instruction. Two recent studies show that AI use can raise university grades, particularly for lower-performing students, and compresses the grading curve.³⁸

But there is an obvious and significant downside as well. A student who simply asks ChatGPT to complete his math homework learns nothing. Without careful calibration and monitoring, connected classrooms just deliver students powerful answer engines that undermine learning. One study of 1000 high schoolers in Turkey showed that when given unrestricted access to generative AI for practice tests, student performed 48 percent better than those with no access. But when access was then removed for the final exam, those students performed 17 percent worse than the no-tech control group.³⁹ A third group, which used a generative AI-driven tutorial program that provided hints rather than answers, performed 127 percent better on practice tests and the same as the control group on the final exam.⁴⁰

Educators at all levels – including mine – are struggling with the disruptive effects of generative AI on the classroom. Traditional assessment relies on outputs such as problem sets, exams, essays, and term papers as evidence that students have learned the relevant material. AI divorces outputs from learning. A student can now produce a passable essay, a completed problem set, or a research paper in seconds, without the struggling and engagement through which learning occurs. The scale of this shift is already visible: a February 2026 Pew Survey found that 54 percent of teens have used a chatbot for schoolwork, that roughly one in ten do “all or most” of their work with chatbot assistance, and that 59 percent believe their classmates use AI to cheat “somewhat often” or “very often.”⁴¹ When unfiltered generative AI is readily accessible on school-provided laptops using federally subsidized Internet connections, it is unclear how much learning is occurring in America’s classrooms.

V. Recommendations

The absence of any evidence that E-Rate improves outcomes, the potential downsides of device-based learning, and the disruptive effects of generative AI together reinforce the importance of reevaluating the E-Rate program. The program was built for an era in which the return on connectivity was presumed positive. Policymakers focused on getting connections to schools and libraries, without considering how those connections were used. That presumption cannot travel unmodified into an era in which most students have high-speed Internet access at home, screen time can adversely affect adolescent mental health and academic performance, and the marginal use of a subsidized connection may be an AI-generated essay rather than a research database.

The current proceeding offers an opportunity to move from presumption to proof. Both the program and the recipients that it supports should embrace a culture of assessment that justifies subsidy requests based on need and expected gains and then measures and evaluates the results as a condition of renewed funding. This feedback would reveal best practices for the use of E-Rate funds, eliminate those projects likely to harm student learning, and lead to a more

comprehensive understanding of the pros and cons of digital education. Specific recommendations follow.

A. Initial Program Evaluation

As a first step, the Commission should heed the GAO's longtime call to establish performance goals and metrics for the E-Rate program. While the 2014 E-Rate Modernization Order adopted three performance goals (ensuring affordable access to high-speed broadband, maximizing the cost-effectiveness of E-Rate purchases, and streamlining the application process),⁴² none of these speak to program outcomes. The Commission should direct the Office of Economics and Analytics to design a mechanism to determine whether and how the program actually improves student education.

This would require the agency to identify useful outcome measures to indicate success. At the macro level, these could involve NAEP scores, state-level assessment results, or graduation rates. These prominent variables can be significant, but measuring the effect of spending on these ultimate achievement results takes time, and scores are impacted by confounding variables other than classroom connectivity. The Commission could also choose more moderate, intermediate measures, such as the amount of instructional use of category 2 capacity (as opposed to administrative or other non-instructional traffic), homework completion rates, or teacher-reported evaluations of the incorporation of digital tools into lesson plans. Each of these could help the Commission better understand whether, and to what extent, E-Rate-funded connectivity is successfully being used for educational purposes. Once settled, the Commission should require an applicant to provide the relevant data as a condition of funding.

One potential study could use a dataset already in its possession: the discount matrix. Each district's discount rate is determined mechanically, based on its National School Lunch Program eligibility percentage and urban/rural status. Schools just above and just below the discount-band cutoff are likely to be similarly situated regarding many factors that affect educational outcomes such as poverty levels, population density, and local tax base, yet receive different subsidy amounts. If schools just above the cutoff demonstrated better performance on the appropriate outcome metric, that would show the program has an effect. This is the type of regression discontinuity design study underlying the 2006 California study noted above.⁴³

The Office should also assess whether and to what extent E-Rate funding displaces state or local funding, as noted above. Economists have asked similar questions of other federal subsidy programs. In the education context, a widely cited 2004 study by Professor Nora Gordon found that a meaningful share of federal Title I education dollars displaced rather than added to local education spending.⁴⁴ The Commission could test whether the same is true of E-Rate, using a similar regression discontinuity design study to the one discussed above, substituting a measure of state or local technology spending as the appropriate variable. If E-Rate is additive, local spending should be relatively flat across schools above and below the cutoff. If local spending falls as the discount rate and E-Rate subsidies rise, some displacement is occurring that the agency should adjust for.

B. Reversing the Educational Purpose Presumption

Second, the Commission should reverse the long-standing presumption that activities that occur on school property serve an educational purpose. While many ed tech activities may enhance learning, the data discussed above show that this is not a universal truth. Many students spend classroom time on social media, watching videos for fun, and using generative AI to complete schoolwork. These activities not only fail to serve an educational purpose, but may also affirmatively harm the learning process.

Repealing this presumption would be a significant improvement. Applicants would then be required to explain precisely how they expect an E-Rate project to enhance learning. The Commission should require a cost-benefit analysis that acknowledges the potential harms of increased connectivity, such as misuse of digital devices by students. This recognition would prompt applicants to confront these harms and identify measures by which they might mitigate them at the local level. In this way, the application process gives the Commission some leverage to control the downstream use of federally subsidized connectivity, without having to become a national pedagogy regulator. Applicants should then be required to test their earlier predictions and prove the educational benefit of a past grant as a condition of securing future funding.

C. The Future of E-Rate

These assessments, on the macro and micro levels, should help guide the Commission's ultimate inquiry, regarding whether and how E-Rate should change to meet the modern educational environment. Because the universal service program is a creature of statute, the agency likely lacks authority to sunset the program entirely. But its current incarnation, including the annual budget, the 20-90 percent subsidy levels, and the categories of services eligible for support, is an edifice that the Commission built upon that statutory skeleton. If the Commission finds that the current structure is not serving an educational purpose, it may revise or right-size the program accordingly. And it should share these findings with Congress as part of that body's overhaul of the universal service program.

VI. Conclusion

In 2018, Congress passed the Foundations for Evidence-Based Policymaking Act. This bipartisan legislation requires federal agencies to build evidence generation into their operations, rather than treating program evaluation as optional or ad hoc. While the Act formally binds only executive branch agencies, guidance issued by the Office of Management and Budget encourages independent agencies such as the FCC to adopt the same practices and measure the effectiveness of programs within their charge. There is little reason why an agency trusted with billions of ratepayer dollars annually should ask less of itself than Congress asked of the Cabinet departments.

For almost thirty years, the Commission has failed to undertake this analysis for E-Rate and other universal service programs. As a result, we simply do not know whether the billions spent annually on classroom and library connectivity are in fact helping students learn. And in the current environment, the cost of not knowing is high, as the Anxious Generation continues to

exhibit the strains of a digital lifestyle, and AI threatens a Schumpeterian disruption of the educational model.

The current rulemaking proceeding reflects the first time the Commission has confronted this reality. Nothing in this record requires the Commission to abandon E-Rate, or to accept it unexamined. It requires only that the Commission finally ask the question Congress and the GAO have posed for decades and commit to answering it with evidence rather than assumption. After thirty years of funding E-Rate on faith, the next chapter should be grounded in proof.

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¹ See In re Ensuring Children's Safe Use of Screens and E-Rate Funded Services, Notice of Proposed Rulemaking, WC Docket No. 26-133 (FCC June 26, 2026) (hereafter "NPRM") ¶8 (citing Alyson Klein & Lauraine Langreo, *Should Schools Curtail the Use of Technology? Congress Fuels Debate* (Jan. 15, 2026),

<https://www.edweek.org/technology/should-schools-curtail-the-use-of-technology-congress-fuelsdebate/2026/01>

² NCES, *More than Half of Public School Leaders Say Cell Phones Hurt Academic Performance*, Press Release, Feb. 19, 2025, available at <https://ies.ed.gov/learn/press-release/more-half-public-school-leaders-say-cell-phones-hurt-academic-performance>.

³ Id.

⁴ Kevin Taglang, *Who Stands to Lose in the Current E-Rate Debate*, Benton Institute for Broadband & Society, available at <https://www.benton.org/blog/who-stands-lose-current-e-rate-debate>.

⁵ 47 U.S.C. §254(h)(2)(A).

⁶ U.S. Census Bureau, *Home Computers and Internet Use in the United States: August 2000*, available at <https://www.census.gov/content/dam/Census/library/publications/2001/demo/p23-207.pdf> (noting 18 percent of households had Internet access in 1997, the first year the Census Bureau collected data on Internet use).

⁷ H.R. Conf. Rep. No. 104-458, at 132–33 (1996).

⁸ In re Modernizing the E-Rate Program for Schools and Libraries, WC Docket No. 13-184 (FCC July 23, 2014). NPRM ¶ 23.

¹⁰ 47 CFR § 54.505(b).

¹¹ See Taglang, *supra* note 4.

¹² *Universal Service Administrative Company 2025 Annual Report* at 4, available at https://www.usac.org/wp-content/uploads/about/documents/annual-reports/2025/USAC_2025_Annual_Report.pdf.

¹³ NPRM ¶ 12.

¹⁴ E-Rate funds are committed figures, from USAC's Search Commitments Tool. See <https://opendata.usac.org/stories/s/E-Rate-Search-Commitments-Tool/jj4v-cm5x/>. Demographics are from the US Census: <https://www.census.gov/quickfacts/fact/table/williamsoncountytennessee/PST045224>.

¹⁵ Government Accountability Office, *Greater Involvement Needed by FCC in the Management and Oversight of the E-Rate Program*, GAO-05-151 (2005).

¹⁶ Thomas W. Hazlett, Ben Schwall, and Scott Wallsten, *The Educational Impact of Broadband Subsidies for Schools Under E-rate*, 28 *ECONOMICS OF INNOVATION AND NEW TECH.* 483 (2019).

¹⁷ Jakub Tecza, Scott Wallsten, and Yoojin Lee, *Do Broadband Subsidies Improve Students' Performance? Evidence from Florida*, Technology Policy Institute (May 2023), available at

https://bear.warrington.ufl.edu/centers/purc/docs/papers/2305_Tecza_do_broadband_subsidies_for_schools_improve_students_performance.pdf.

¹⁸ Id. at 10.

¹⁹ Austan Goolsbee & Jonathan Guryan, *The Impact of Internet Subsidies in Public Schools*, 88 REVIEW OF ECONOMICS AND STATISTICS 336 (2006).

²⁰ JONATHAN HAIDT, *THE ANXIOUS GENERATION* (2024).

²¹ U.S. Surgeon General's Advisory, *Surgeon General's Warning on the Harms of Screen Use* (2026), available at <https://www.hhs.gov/sites/default/files/us-surgeon-generals-advisory-warning-on-the-harms-of-screen-use.pdf>.

²² Tiffany Munzer et al., *Digital Ecosystems, Children, and Adolescents: Policy Statement* (2026), <https://publications.aap.org/pediatrics/article/157/2/e2025075320/206129/Digital-Ecosystems-Children-and-Adolescents-Policy>.

²³ Organization for Economic Co-Operation and Development, *Students, Computers, and Learning: Making the Connection* (2015), available at https://www.oecd.org/content/dam/oecd/en/publications/reports/2015/09/students-computers-and-learning_g1g57f3a/9789264239555-en.pdf.

²⁴ Jared Cooney Horvath, *We Gave Students Laptops and Took Away Their Brains*, THE FREE PRESS (Dec. 5, 2025).

²⁵ Written Testimony, Jared Cooney Horvath, Before the U.S. Senate Committee on Commerce, Science, and Transportation (Jan. 15, 2026), available at https://www.commerce.senate.gov/wp-content/uploads/media/doc/Horvath_Written%20Testimony.pdf.

²⁶ Jared Cooney Horvath, *The EdTech Revolution Has Failed* (Nov. 12, 2024), available at <https://www.afterbabel.com/p/the-edtech-revolution-has-failed>; see also Silvia A. Bunge, *How We Use Rules to Select Actions: A Review of Evidence from Cognitive Neuroscience*, 4 COGNITIVE, AFFECTIVE, & BEHAVIORAL NEUROSCIENCE 4 564(2004); Katsuyuki Sakai, *Task Set and Prefrontal Cortex*, 31 ANNUAL REVIEW OF NEUROSCIENCE 219 (2008).

²⁷ Horvath, *supra* note 26 (citing Marvane M. Chun & Mary C. Potter, *The Attentional Blink and Task Switching Within and Across Modalities*, In K. SHAPIRO (Ed.), *THE LIMITS OF ATTENTION: TEMPORAL CONSTRAINTS IN HUMAN INFORMATION PROCESSING* 20-35).

²⁸ Horvath, *supra* note 26.

²⁹ Id. (citing Karin Foerde, Barbara J. Knowlton, and Russell A. Poldrack, *Modulation of Competing Memory Systems by Distraction*, 103 PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES 11778 (2006).

³⁰ Id.

³¹ Id. (citing Larry D. Rosen, L. Mark Carrier, and Nancy A. Cheever, *Facebook and Texting Made Me Do It: Media-Induced Task-Switching While Studying*, 29 COMPUTERS IN HUMAN BEHAVIOR 948 (2013).

³² OECD, *PISA In Focus: Managing Screen Time: How to Protect and Equip Students Against Distraction* (May 2024), available at https://www.oecd.org/content/dam/oecd/en/publications/reports/2024/05/managing-screen-time_023f2390/7c225af4-en.pdf.

³³ Claire Cain Miller and Sarah Mervosh, *How Much Screen Time Is Your Child Getting At School? We Asked 350 Teachers*. NEW YORK TIMES, Nov. 12, 2025, available at <https://www.nytimes.com/2025/11/12/upshot/teachers-survey-chromebooks-class.html>.

³⁴ OECD, *supra* note 23.

³⁵ OECD, *PISA In Focus: Students, Digital Devices, and Success* (May 2024), available at https://www.oecd.org/content/dam/oecd/en/publications/reports/2024/05/students-digital-devices-and-success_621829ff/9e4c0624-en.pdf.

³⁶ Written Testimony, Jean Twenge, Before the U.S. Senate Committee on Commerce, Science, and Transportation (Jan. 15, 2026), available at <https://www.commerce.senate.gov/wp-content/uploads/media/doc/ScreensKidsSenateTestimonyTwenge1-12-26%20PDF.pdf>.

³⁷ Benjamin S. Bloom, *The 2 Sigma Problem: The Search for Methods of Group Instruction as Effective as One-on-One Tutoring*, 13 EDUC. RESEARCHER 4 (1984), available at <https://web.mit.edu/5.95/readings/bloom-two-sigma.pdf>.

³⁸ See Naomi Hausman et al, *Generative AI in Universities: Grades Up, Signals Down, Skills in Flux*, CENTER FOR ECONOMIC POLICY RESEARCH, available at <https://cepr.org/voxeu/columns/generative-ai-universities-grades-signals-down-skills-flux>; Carsten Bergenholtz et al, *Leveling Up or Leveling Down? The Impact of Generative AI on Student Performance in Business Schools*, available at <https://journals.aom.org/doi/10.5465/amle.2025.0029>.

³⁹ Hamsa Bastani et al, *Generative AI Without Guardrails Can Harm Learning: Evidence from High School Mathematics*, 122 PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES (2025), available at <https://www.pnas.org/doi/10.1073/pnas.2422633122>.

⁴⁰ Id.

⁴¹ Pew Research Center, *How Teens View and Use AI*, Feb 2026, available at [PI_2026.02.24_Teens-and-AI_REPORT.pdf](#).

⁴² Modernizing the E-Rate Program for Schools and Libraries, Report and Order and Further Notice of Proposed Rulemaking, FCC 14-99 (July 23, 2014).

⁴³ See Goolsbee & Guryan, *supra* note 19.

⁴⁴ Nora Gordon, *Do Federal Grants Boost School Spending? Evidence From Title I*, 88 J. PUB. ECON. 1771 (2004).