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Public Interest Reply Comment on
Comprehensive Review of the Universal Service Fund
*Management and Oversight*¹

WC Docket No. 05-195

The Regulatory Studies Program (RSP) of the Mercatus Center at George Mason University is dedicated to advancing knowledge of the impact of regulation on society. As part of its mission, RSP conducts careful and independent analyses employing contemporary economic scholarship to assess rulemaking proposals from the perspective of the public interest. Thus, this comment on the Federal Communications Commission's (FCC's) Notice of Inquiry does not represent the views of any particular affected party or special interest group, but is designed to evaluate the effect of the commission's proposals on overall consumer welfare.

I. Introduction

In 2005 and 2006, researchers from the Mercatus Center at George Mason University offered suggestions for performance measures for universal service programs in this docket.² We focused on outcome measures, for two reasons. First and most importantly, outcome measures provide the most direct evidence of whether the programs are meeting their statutory objectives. Second, outcomes are often the most difficult thing to measure, and so we thought our comments might be of greatest use to the commission if they focused on outcomes.

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² Maurice McTigue and Jerry Ellig, *Public Interest Comment on Performance Measures for Universal Service Programs*, FCC Docket 05-195 (Oct. 17, 2005), available at http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6518169986; Maurice McTigue and Jerry Ellig, *Notice of Ex Parte Communication*, FCC Docket 05-195 (January 26, 2006), available at http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6518313841.

Outcomes are the actual benefits created, or harms avoided, for citizens. “*Outcomes are not what the program did but the consequences of what the program did.*”³ Outcome measurement is crucial if congressional and FCC decisions are to be based on actual evidence of the effects of universal service programs. An evidence-based approach requires objective analysis to determine whether, and to what extent, alternative approaches actually cause the intended outcomes—the results that citizens value and that (presumably) motivated the regulation.

Regulatory decisions that are not guided by evidence of actual or likely effects are best characterized as “faith-based” regulations. In the absence of actual evidence, the regulator simply takes on faith that undertaking activity X will produce result Y.

The FCC’s 2007 decision in this docket adopted some performance measures that focus on activities, processes, and outputs. But it did not, by and large, adopt outcome measures. We commend the FCC for revisiting the issue of outcome measures in the current Notice of Inquiry.

Congress directed the FCC to develop universal service programs that would promote affordable access to communications services for a variety of customers. However, affordable access should not be an end in itself. The ultimate public benefits created by affordable access are the economic, social, educational, and health outcomes that occur because low-income consumers, rural consumers, educational institutions, and health care providers have affordable access to communications technology. Congress presumably enacted universal service legislation in the belief that affordable access would create those public benefits.

The Telecommunications Act of 1996 lists factors the Federal-State Joint Board on Universal Service and the FCC are supposed to take into account when deciding what services are eligible for support. Two items on this list provide some insight into the ultimate economic, social, educational, and health outcomes universal service is supposed to achieve. Congress directed the joint board and commission to consider what telecommunications services “are essential to education, public health, or public safety,”⁴ which implies that the supported services are supposed to advance education, public health, and public safety outcomes. The joint board and commission are also directed to consider services that “have, through the operation of market choices by consumers, been subscribed to by a substantial majority of residential customers.”⁵ This implies that universal service subsidies for residential services are supposed to advance the economic, social, educational, and health outcomes that consumers who are not receiving subsidies seek to achieve when they subscribe to these services.

³ Harry P. Hatry, Urban Institute, *Performance Measurement: Getting Results* (1999) at 15.

⁴ Telecommunications Act of 1996, Sec. 254(c)(1)(A).

⁵ Telecommunications Act of 1996, Sec. 254(c)(1)(B).

Logically, affordable access cannot cause public benefits to occur unless it results in an increase in subscription or connectivity, above the levels that would exist in the absence of the universal service programs. Performance measures, therefore, should be based on the following causal chain:

1. Universal service programs cause affordable access.
2. Affordable access causes an increase in subscription or connectivity.
3. Increased subscription or connectivity improves economic, social, educational, and health outcomes.

Effective performance measures for universal service programs should address all three links in this chain. Some measures should demonstrate how the programs have affected the availability and affordability of some specified level of service. Other measures should show how the programs have affected subscription or connectivity. Finally, a third set of measures should examine the extent to which the programs have affected the ultimate economic, social, educational, health, and cultural outcomes.

Our most recent and specific suggestions for outcome measures can be found in our January 26, 2006 *ex parte* letter filed in this docket. After reviewing others' comments, we note widespread support for some of the intermediate outcome measures we proposed that are related to access, affordability, and subscribership or connectivity. Some commenters, however, proposed to count the number of subsidy beneficiaries, which may provide useful information but could not be regarded as a substitute for outcome measures. Finally, several commenters demonstrated such strong opposition to the measurement of ultimate outcomes for the schools and libraries program that they deserve a response.

II. Support for Intermediate Outcome Measures

In our January 2006 letter, we suggested ways that the FCC could measure access, affordability, and subscribership or connectivity. Reviewing the comments in the record, we have found widespread support for measurement of access, affordability, and subscription or connectivity among the commenters who discussed performance measures. Numerous commenters offered similar or complementary ideas. As best we can tell, few commenters explicitly argued that the FCC should *not* measure these things—unless they also said that measuring access, affordability, or subscribership is not sufficient, and additional measures are needed. Thus, of the 35–40 commenters who chose to discuss performance measures, there appears to be strong support for measuring the types of intermediate outcomes we suggested in our original comment.

One of the few voices that appears to oppose measurement of program outcomes is a 2005 comment by Alexicon Telecom Consulting. While stating that the USF should have outcome, output, and efficiency measures, the comment backpedals on the concept of measuring outcomes of USF programs:

Absent evidence that programs or mechanisms are not producing benefits—which has never been proven or creditability verified—to what end beyond further bureaucratic cost and relatively meaningless effort would such performance measures serve?

It would seem that the lack of any specific negative public interest group reactions noted to date relating to existing USF programs and mechanisms supports the contention that the goals of the 1996 Act are currently being adequately met, and that economic efficiency and adequate performance standards are being currently satisfied by existing USF programs and mechanisms. We therefore suggest that the Commission focus its' [*sic*] efficiency and performance measurement quest to the administration of USF, not specifically toward the USF programs and mechanisms themselves.⁶

Alexicon reiterates its opposition in a more recent filing, stating that current rules, goals, and measures are sufficient, opposing “quantitative goals and measures related to universal service deployment and/or specific consumer services,” and suggesting (with little accompanying explanation) that such measures might be barriers to competition.⁷

These comments ignore substantial scholarly research, cited in our earlier comments, that raises questions about the effectiveness of some of the USF programs. More importantly, by presuming that the program must be achieving results unless someone can prove a negative or a public interest group complains, Alexicon has it precisely backward. USF contributions increase consumers' bills for interstate telecommunications services by approximately ten percent. Consumers deserve an evaluation of whether the USF programs are delivering the intended public benefits.

Fortunately, the vast majority of commenters recognize the importance of measuring outcomes. As the following examples show, support for outcome measures based on access, affordability, subscribership, or connectivity can be found in comments addressing all four USF programs: high cost, low income, rural health care, and schools and libraries (E-Rate).

A. High cost

- In discussing rural service, TCA suggests that the commission should measure service availability and comparability of rural and urban rates.⁸
- Dobson specifically notes that performance measures should show how availability of service has changed as a result of the high-cost program.⁹

⁶ Comments of Alexicon Telecommunications Consulting (Oct. 18, 2005) at 10-11.

⁷ Comments of Alexicon Telecommunications Consulting (Nov. 13, 2008) at 6.

⁸ Comments of TCA (Nov. 13, 2008) at 6-7.

- FTI Consulting suggests measuring the number of people who have access to telephone service as a result of high-cost subsidies.¹⁰
- The Universal Service Administrative Company (USAC) suggests measuring rate comparability.¹¹
- General Communication, Inc. (GCI) argues that rate comparability and subscribership are the most appropriate outcome measures for the high-cost programs.¹² “Over time, the use of subscribership figures and comparisons among the several states will allow the Commission to more carefully determine best practices in designing universal service programs. Equally important, these metrics will allow the Commission to determine whether particular funding levels actually affect consumers’ use of subsidized services. This critical information will allow the Commission to reduce subsidization to the minimum necessary to achieve the goal of universal service—a form of efficiency that the courts have also recognized is one of the statutory requirements of the Act.”¹³
- Qwest suggests that the commission should measure the percentage of high-cost areas that have basic voice service that is reasonably comparable to that in urban areas at reasonably comparable rates.¹⁴ If the commission decides to subsidize broadband, then the company suggests the commission should track availability of broadband.¹⁵
- The Organization for the Promotion and Advancement of Small Telecommunications Companies argues, “[I]t is important that any broadband-related performance measures and goals focus on more than just broadband availability; they should also seek to achieve urban-rural comparability in the quality and speeds of the broadband being offered, as well as the rates being charged to high-cost rural consumers.”¹⁶
- The National Exchange Carrier Association notes, “Studies that examine the extent of telephone penetration, deployment of advanced service facilities, rate disparities and other factors relating to universal service can provide valuable

⁹ Reply Comments of Dobson Cellular Systems and American Cellular Corporation (Dec. 19, 2005) at 21-22.

¹⁰ Reply Comments of FTI Consulting, Inc. (Apr. 11, 2006) at 5.

¹¹ Comments of the Universal Service Administrative Company (Oct. 18, 2005) at 93.

¹² Comments of General Communication Inc. (Nov 13, 2008), Appendix at 9, 11-12.

¹³ Id. at 14 (footnote omitted).

¹⁴ Comments of Qwest Communications International, Inc., Nov. 13, 2008, at 4.

¹⁵ Id at 5.

¹⁶ Comments of the Organization for the Promotion and Advancement of Small Telecommunications Companies (Aug. 13, 2008) at 15.

information for the Commission and the Joint Board in evaluating policy alternatives.”¹⁷

B. Low income

- Verizon argues that the success of the low-income programs should be measured by the percent of low-income households that have phone service—not merely the number of subscribers receiving subsidies.¹⁸
- GCI suggests that for the low-income programs, the FCC should measure “subscribership and actual consumer usage patterns”¹⁹
- Qwest implies that the commission should measure the percentage of the target group—low-income consumers—who have basic telephone service.²⁰

C. Rural health care

USAC suggests that the FCC should cooperate with the Department of Health and Human Services’s Office for the Advancement of Telehealth, which is supposed to assess the extent to which the projects it funds improved the availability of specific health and clinical services.²¹ This is a good example of measuring an intermediate outcome: To what extent did USF funding make health services more widely available in rural areas? An even better evaluation of ultimate outcomes would assess whether improvement in the availability of services led to better health outcomes or lower costs.

D. E-rate

- The American Library Association suggests that it is more productive to focus on outcome measures than on output measures.²² GCI also expresses strong support for outcome measures.²³
- The State E-rate Coordinators Alliance notes that performance measures for the E-rate program need not be significantly different from the access measures used for other USF programs: “In order to measure progress toward ‘access,’ we urge the Commission to use consistent metrics across all the customer bases for telecommunications and Internet. A separate set of connectivity metrics for

¹⁷ Comments of the National Exchange Carrier Association Inc. (Nov. 13, 2008) at 8.

¹⁸ Reply Comments of Verizon (Dec. 19, 2005) at 4.

¹⁹ Comments of GCI (Nov 13, 2008), Appendix at 14.

²⁰ Comments of Qwest Communications International, Inc. (Nov. 13, 2008) at 5.

²¹ Comments of the Universal Service Administrative Company (Nov. 13, 2008) at 71.

²² Comments of the American Library Association (Nov. 13, 2008) at 7.

²³ Comments of General Communication Inc. (Nov. 13, 2008) at 2.

education should not be applied. Instead the FCC should look at the larger context of broadband and Internet penetration to various customer bases including education.”²⁴

- The Education and Library Networks Coalition comments, “The Commission should measure the degree to which students, educators, and library patrons have access to advanced communications services.”²⁵
- USAC argues that connectivity is an appropriate measure for the schools and libraries program; in addition, performance measures should assess what kinds of things schools and libraries can do with the technology that they could not do without it.²⁶
- The International Society for Technology in Education and the Consortium for School Networking argue that the FCC should not just measure connectivity, but also network speeds.²⁷
- The American Association of School Administrators and the Association of Educational Service Industries support performance measures based on speed and bandwidth, and cite numerous commenters who offered similar views.²⁸
- The West Virginia Department of Education says the FCC should measure the extent to which administrators, teachers, and students have access to advanced communications services and the speed at which schools are connected.²⁹ The Council of Chief State School Officers offers a similar suggestion, adding that measuring the number of students affected would also be helpful.³⁰
- The California Department of Education’s Information Technology Office notes, “California believes that the outcome measures not only should include measures of connectivity, but also measures of access. Access includes bandwidth, performance, and reliability.”³¹

²⁴ Initial Comments of the State E-Rate Coordinators Alliance (Oct. 18, 2005) at 66.

²⁵ Comments of the Education and Library Networks Coalition (Aug. 13, 2008) at 8.

²⁶ Reply Comments of the Universal Service Administrative Company (Dec. 19, 2005) at 28-29.

²⁷ Reply Comments of the International Society for Technology in Education and the Consortium for School Networking (Dec. 19, 2005) at 7-9.

²⁸ Reply Comments of the American Association of School Administrators and the Association of Educational Service Industries (Dec. 19, 2005) at 2-3.

²⁹ Comments of the West Virginia Department of Education, Office of Technology and Information Systems (Oct. 18, 2005) at 3.

³⁰ Comments of the Council of Chief State School Officers (Oct. 18, 2005) at 3-4.

³¹ Comments of the California Department of Education Information Technology Office (Oct. 18, 2005) at 6.

- Miami-Dade Public Schools state that measuring connectivity is not enough; the FCC should measure access to educational resources.³²
- The Hispanic Information and Telecommunications Network suggests a more targeted outcome measure: “HITN is supportive of a measurement that captures how effectively E-Rate funding is reaching those in greatest need of funding. This could be the number of broadband connections that are achieved in rural and low-income areas.”³³
- The E-Rate Management Professionals Association suggested “that the Commission consider additional statistical surveys of beneficiaries to analyze not only the breadth of the program’s impact, but also the quality of that impact. As an example, a technology audit (for informational, non-punitive purposes) could be conducted to obtain information regarding what specific discounted services are deployed by schools and libraries and how successfully those technologies are addressing applicants’ organizational goals.”³⁴

III. McMeasures: Counting the Beneficiaries Served

Several commenters propose to measure the number of program beneficiaries served:

- For the high-cost program, for example, the National Telecommunications Cooperative Association suggests counting the number of subscribers in study areas receiving high-cost support.³⁵ USAC makes a similar suggestion.³⁶
- For the low-income program, USAC states, “The key measure of success of the Low Income program is whether eligible consumers are receiving support.”³⁷ USAC noted that the commission has already requested data on the number of households receiving Lifeline support compared to census data.³⁸
- For the E-rate program, the E-Rate Management Professionals Association suggests counting the number of affected people, among other things: “[P]erformance metrics indicating the number of students, teachers, administrators, and library patrons receiving the benefit of discounted services would be quite useful. However, an assessment of the relative quality of the

³² Comments of Miami-Dade County Public Schools (Oct. 18, 2005) at 20.

³³ Hispanic Information and Telecommunications Network Comments (Oct. 18, 2005) at 3.

³⁴ Comment of E-Rate Management Professionals Association (Nov. 13, 2008) at 11.

³⁵ Reply Comments of the National Telecommunications Cooperative Association (Dec. 19, 2005) at 6.

³⁶ Comments of the Universal Service Administrative Company (Oct. 18, 2005) at 92.

³⁷ *Id.* at 97.

³⁸ Comments of the Universal Service Administrative Company (Nov. 13, 2008), at 69.

connections (bandwidth, reliability and uptime, and frequency and intent of use) is equally as important as the raw number of connections and number of people using them.”³⁹

The number of program beneficiaries is important information for a variety of purposes, but it is only a starting point for measuring outcomes. By itself, this “McMeasure” (“billions and billions served”) is not an outcome and may not even be an accurate output measure.

GCI identifies one type of problem with merely counting program beneficiaries. GCI expresses concern that counting the number of students or library patrons served via subsidized internet connections would inherently bias efficiency measures against high-cost areas with very low population density, such as Alaska. (The California Department of Education makes a similar point in regard to small or rural school districts.⁴⁰) Instead, GCI suggests that the percentage of students or library patrons using the Internet would be a less-biased measure.⁴¹ Similarly for the rural health-care program, GCI suggests that measuring the relative proportion of the population using a supported service would be better than merely counting the number of patients using the supported service.⁴² Yet elsewhere, GCI explains how even percentage measures may sometimes be misleading in the unique context of Alaska.⁴³

These are good examples of problems that occur when decision makers examine raw averages or percentages without trying to determine *how much* of the observed outcome was caused by the universal service program. If, as GCI contends, high-speed links via satellite are the only economic way of delivering some services in remote Alaskan villages, then the subsidy likely causes a much higher percentage of the observed connectivity outcome (and various educational quality outcomes) in Alaska than in other places. A performance measure focused on the change created by the subsidies, rather than the number of subsidy recipients, would address GCI’s concern and more accurately identify the results of the subsidy.

Similarly, for the low-income program the number of subsidy recipients is an output, not an outcome. The outcome of the Lifeline program is not the number of households receiving subsidies, but rather the number and/or percent of households with phone service who would not have phone service if the program did not exist. Qwest recognizes this when it argues that that the commission should determine how many low-income subscribers are on the telephone network *because of* the subsidies:

³⁹ Comment of E-Rate Management Professionals Association (Nov. 13, 2008) at 11.

⁴⁰ Comments of the California Department of Education Office of Information Technology (Oct. 18, 2005) at 7-8.

⁴¹ Comments of General Communications Inc. (Nov. 13, 2008), Appendix at 16.

⁴² *Id.* at 20.

⁴³ *Id.* at 16.

Additionally, the Commission should craft a measurement of consumers who would not have telephone service but for Lifeline support. For the low-income program the Commission must measure more than just the number and percentage of consumers enrolled in the program. It must also analyze whether the program is increasing telephone subscribership in the low-income population nationwide.⁴⁴

There is no reason similar logic should not be applied to all of the universal service programs. The effect of the program on outcomes is properly measured by the *amount of change* in the measured outcome that is caused by the existence of the program.

The most accurate way of determining causality is to compare the actual outcome to the outcome that would have occurred in the absence of the program. In some cases, this comparison can be accomplished by examining the outcome measure before and after the program is adopted or by comparing outcome measures across similar places that have different levels of program funding. These relatively simple comparisons, however, are not always possible or illuminating—especially if a program is nearly universal or has been in existence for a long time. Careful counterfactual analysis, often based on econometrics or on careful selection of “treatment” and “control” groups, may be necessary.

FCC economists and outside researchers often conduct this type of analysis, and it is often an input into regulatory and policy decisions.⁴⁵ Counterfactual analysis is also a well-understood method for assessing program effectiveness. It allows one to determine how many of the people in the target population received the service as a result of the program’s existence.

IV. Measuring ultimate outcomes of the E-rate program

Perhaps surprisingly, an overwhelming majority of filings by organizations representing various segments of the education community oppose measuring the effects of the E-rate program on the ultimate outcome of interest and student learning. Most of these commenters do not oppose outcome measurement per se; they generally support measurement of connectivity, bandwidth, and, in some cases, access to educational services that the Internet enables. But they urge the FCC—sometimes in strikingly similar language—to avoid assessing whether the E-rate subsidies have actually improved student learning:

⁴⁴ Comments of Qwest Communications International, Inc. (Nov. 13, 2008) at 5.

⁴⁵ For example, the debate over public policy toward cable television has been heavily informed by FCC statistics, and FCC and GAO econometric analyses, of the effects of wireline cable competition on the price of cable service. See, e.g., FCC *Cable Price Report* 2005; U.S. Government Accountability Office, *Telecommunications: Direct Broadcast Satellite Subscribership Has Grown Rapidly, but Varies Across Different Types of Markets*, Report # GAO-05-257 (April 2005) at 31.

- While supporting the measurement of connectivity—an intermediate outcome—the Education and Libraries Networks Coalition staunchly asserts, “We do not support the use of performance measures, such as those that impact on learning outcomes, that are beyond the scope of the FCC’s authority to create a program that promotes access to advanced services. There are other agencies whose responsibility it is to undertake these specific studies. Performance measures for the E-Rate program should be based on connectivity.”⁴⁶
- The American Association of School Administrators and Association of Educational Service Industries assert that the E-rate program has education benefits, but they appear to oppose evaluating it as an education program, stating, “...E-Rate was designed to ensure access not performance.”⁴⁷
- The Council of Chief State School Officers states, “...[T]he Commission should not attempt to isolate the impact of E-rate supported services on student achievement, nor should it create program goals or performance measures tied to student achievement.”⁴⁸
- The California Department of Education’s Information technology Office argued, “It is virtually impossible to measure the results of providing improved communication tools in the classroom and libraries....It is difficult, if not impossible, to directly correlate technology with student achievement due to the large number of variables that must be controlled when doing valid, replicable research.”⁴⁹
- The National Rural Education Advocacy Coalition states, “Performance measures for the E-Rate program should focus on the level of connectivity for schools and libraries that participate in the program. Measures that go beyond that would be inappropriate for this program.”⁵⁰
- The Chicago Public Schools say, “... [W]e are concerned that the Commission may seek to determine and isolate the impact of the E-rate program on student learning. Unfortunately, there are a wide range of variables that go into each student’s educational achievements, ranging from parental involvement and pedagogical approach to the interaction between individual students and teachers.

⁴⁶ Comments of the Education and Libraries Networks Coalition (Nov. 12, 2008) at 7.

⁴⁷ Reply Comments of the American Association of School Administrators and the Association of Educational Service Industries (Dec. 19, 2005) at 4.

⁴⁸ Comments of the Council of Chief State School Officers (Oct. 18, 2005) at 2.

⁴⁹ Comments of the California Department of Education Information Technology Office (Oct. 18, 2005) at 7.

⁵⁰ Comments of the National Rural Education Advocacy Coalition (Oct. 18, 2005) at 2.

In the overall equation, technology plays a relatively small role, and within the realm of technology, E-rate is only a small part.”⁵¹

- The Private School Technology Coalition echoes arguments made by the various public school representatives: “The E-Rate program is a technology program that must be measured and evaluated as one. This is not an education program, but a connectivity program.”⁵²

The closest thing to a dissent from the education community is an assertion from the State Educational Technology Directors Association: “The E-Rate technology is helping schools improve student achievement and comply with the No Child Left Behind (NCLB) Act.”⁵³ While this association claims that the technology improves student achievement, it does not call for performance measures based on student achievement.

Our fellow educators’ attempts to dissuade the FCC from assessing whether the E-rate subsidies have ultimately improved the quality of education do not serve the purpose of advancing education. Admittedly, this evaluative task is difficult, but that is no reason for refusing to gather evidence of the program’s effects on the intended beneficiaries: America’s children. As one bumper sticker popular with educators suggests, “If you think knowledge is expensive, try ignorance.” Without evidence of the effect of subsidized services on learning, neither the FCC nor Congress can know whether the E-rate program achieves results that are valuable to the consumers who pay the tab. The cost of ignorance could be expensive indeed.

This argument applies to all of the universal service programs. As stated in our earlier comments, we believe that all of the universal service programs should be evaluated to determine whether they have produced the outcomes that are ultimately of interest to citizens. Because data on availability, affordability, and subscription/connectivity are likely more readily available, these measures could be developed first and tracked annually. To complement this tracking of intermediate outcomes, the FCC should develop an initiative to assess the longer-term effects of universal service programs on the broader public benefits that the programs are supposed to produce.

V. Conclusion

In previous comments, we suggested that the FCC should measure the outcomes of universal service programs by measuring access, affordability, and subscribership or connectivity. Among the commenters who discussed performance measures in this proceeding, there is broad support for these kinds of outcome measures.

⁵¹ Comments of the Chicago Public Schools (Oct. 18, 2005) at 9-10.

⁵² Comments of the Private School Technology Coalition (Oct. 18, 2005) at 3.

⁵³ State Education Technology Directors Association (SETDA) Response to the Federal Communications Commission’s Notice of Proposed Rulemaking on the Universal Service Fund (Oct. 18, 2005) at 1.

Several commenters suggested that the FCC should count the number of program beneficiaries, such as the number of lines in high-cost areas, the number of Lifeline funding recipients, or the number of students at schools receiving E-rate subsidies. While counting the number of people affected by the program can provide important information, it is only a starting point for evaluating outcomes. A valid outcome measure, although still intermediate, is the *change* in the number of subscribers or other affected people that occurs as a result of the subsidy.

Numerous commenters from the education community object to the idea that the FCC should attempt to measure the effect of E-rate subsidies on educational outcomes, such as student achievement. In contrast, we believe that the FCC should evaluate the effects of all USF subsidy programs on the ultimate economic, social, educational, health, and cultural outcomes that access to communications services is supposed to achieve. This should be part of a longer-term evaluation effort that could proceed on a separate track from the adoption of outcome measures focused on access, affordability, and subscription or connectivity.

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