

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th St. SW
Washington, DC 20554

May 20, 2013

Dear Ms. Dortch,

MiCTA is a non-profit, member-based organization headquartered in Saginaw, MI. Founded in 1982 to meet the telecommunications needs of Michigan's public universities, MiCTA has expanded its membership nationally to include public and private higher education institutions, K-12 schools and school districts, libraries, state and local governments, health care organizations, other non-profits and charities. MiCTA provides group-purchasing and legislative/regulatory advocacy services, conducts research, offers professional development opportunities, and supports technological advancement by making grants to its members.

I. Introduction: What Is Mobile Learning and What Is Its Impact?

Literally, hundreds of definitions of mobile learning (mLearning) circulate in education and educational technology literature today. Some definitions focus on technology and devices, while others focus on results. Clearly, the definition of mLearning is contextual; there is no one single definition that encompasses the concepts, processes and results that combine to create a "learning-on-the-go" experience.

For our purposes, we will adopt the following definition of mLearning, which looks at the intersection of technology and the learning process. In 2006, Mike Sharples from the Centre for Educational Technology and Distance Learning at the University of Birmingham (UK), defined learning-on-the-go as such:

"...a process of 'coming to know' by which learners in cooperation with peers and teachers, construct transiently stable interpretations of their world."¹

In the past sixty years, technology changes trended from the macro to the micro, from the passive to the active, from the systemic to the individual, and so did their adaptation to education. Educational technology has evolved from stationary televisions and cameras in specially wired classrooms to smaller, more mobile technologies. Wi-Fi equipped computers and tablets, in turn, have evolved to highly portable technologies like smart phones, personal digital assistants (PDA) and tablets. Constant, reliable connectivity to the Internet is widely (but not universally) available via wireless and 4G networks.

In this new technology landscape, device portability may not be as important as the learner's ability to connect, communicate, collaborate, and create using readily available tools resident on these devices. With this variety of always-available tools and resources, mobile learning vastly improves the opportunity to personalize learning.

Mobile learning in classrooms often has students working interdependently, in groups, or individually to solve problems, to work on projects, to meet individual needs, and to allow for student voice and choice. We see the greatest strength of mobile learning, however, outside of the classroom. With access to so much educational and relevant content all the time and everywhere, students find plenty of opportunities for formal and informal learning. These technologies are changing learning from a “just in case” to a “just in time” paradigm. They also elevate the student from being a mere consumer of classroom content to being a content consumer, creator and collaborator in his or her own highly personalized learning environment.²

Adoption of mobile educational technologies has shifted the focus of education from the traditional teacher-centric model, where teaching took place entirely in classrooms during the designated school day to a new learner-centric model, where students access and discover information, online courses and course materials everywhere and all the time. Students are not the exclusive beneficiaries of this change. The Foundation for Excellence in Education³ reports that blended learning, which combines traditional teaching and mLearning approaches, improves teacher satisfaction, collaboration and professional development outcomes. In short, this shift to technology-enhanced, learner-centric education improves both learning *and* teaching.

In the context of a connected, portable educational atmosphere, learning becomes an interactive, negotiable, communicative, collaborative exercise that transmits meaningful information and skills to the learner, provides better assessment data for the teacher, and places learning squarely in the "real world." This type of learning isn't reserved for college students. mLearning is making an impact on all students in our K-12 schools. States like Michigan and Florida now mandate online learning experiences as a high school graduation requirement.

mLearning also holds the real potential to support differentiated learning for students with a wide range of learning abilities; provide comprehensive, personalized instruction; and help cash-strapped schools and school districts deal with increased class sizes, reduced funding, teacher shortages and other challenges. The S.T.E.P.S. program, a school-to-work transitional program for special needs students between the ages of 18 and 25 in the Rochester Community Schools in Rochester, MI provides an example. These special needs students use tablets in their workplaces to document their skills, maintain contact with their classroom teachers and interact with other S.T.E.P.S. students who have not yet entered the workplace.

According to Dale Anne Hopkins, an Instructional Technology Program Consultant at Rochester Community Schools, "Some of the S.T.E.P.S. students take the tablet to their job site off campus, and it has helped them tremendously with staying on task and being able to accurately complete job tasks. Students report they have a sense of pride when they get to take them out of the building."

These benefits are underpinned by the ability of both the student and the teacher to access competent broadband services both during *and* after the traditional school day. Under current FCC program rules, E-Rate funded Internet access does not adequately support the migration toward mobile learning that is taking place in K-12 classrooms around the country today.

mLearning services, specifically Internet access, should not be restricted to on-campus-only use. Several compelling reasons to support off-campus wireless Internet access as an E-Rate eligible service exist, but it is important to understand why off-campus wireless Internet access is not permitted under the current program rules.

II. The rationales for excluding off-campus wireless Internet access

There are four primary reasons the E-Rate program does not currently fund off-campus wireless Internet access for program-eligible entities. Briefly, they are:

A. E-Rate Funding Priorities

Under current program rules, telecommunications services and basic conduit access to the Internet are the program's highest funding priorities. On-campus wireless Internet access is included on the list of eligible services, while costs associated with off-campus use must be accounted for and returned to the program. This is because on-campus wireless Internet access is presumptively educational in nature⁴. Conversely, off-campus wireless Internet access does not share this presumption, even when it clearly supports the student's educational objectives.

B. There Is A Cost Associated With Off-Campus Use

The E-Rate program assumes that Internet access is generally metered, and therefore off-campus wireless Internet access represents additional use. Additional use increases the monthly cost to the subscriber and ultimately to the E-Rate program.

C. Internet Access Provided through the E-Rate Program Must Be CIPA-compliant

All Internet access purchased with program funds must be certified as being CIPA-compliant. Off campus wireless Internet access cannot be certified as being CIPA-compliant.

D. The Program Already Addresses The Need For After-Hours Internet Availability

Considering the modifications made to the E-Rate program in 2011, schools may now choose to open their doors to community members (including their own students) for after-hours Internet access.

III. Off-campus wireless Internet access to services that support mLearning should be permitted

MiCTA and its program-eligible members believe that there are many compelling reasons to reconsider the eligibility status for off-campus wireless Internet access. Among them are pedagogical, technological and practical circumstances that successfully challenge the assumptions on which the current program rules are based.

A. Many students have already adopted mobile devices and are using them for schoolwork

Nielsen reported that as of July 2012, nearly 60% of all US children between the ages of 13 and 17 had a dedicated smartphone. Students who have already adopted smartphones and other mobile devices are primed to use them in a variety of both educational and non-educational environments⁵.

The number of active mobile devices in the United States now exceeds 500,000,000. In the first three months of 2013, US households adopted 18 million new tablets and 9 million new smartphones. At the same time, the number of actively connected PCs has remained the same.⁶ Consumers are clearly migrating to mobile devices and away from PCs. A 2013 study by the NPD Group shows that 37% of study participants now use mobile devices to perform online functions that they used to perform using a PC.⁷

A study conducted by the Verizon Foundation found that more than one in three middle school students (39%) uses a smartphone to complete homework assignments, and nearly as many (31%) use a tablet to complete school assignments. Further, more than one in four students (26%) reported that they use their smartphones regularly (more than once per week) to do homework.⁸

Adoption is also supported by the lower costs of a cell phone compared to a desktop or laptop computer. Unlike computers, where socioeconomic factors created a wide digital divide that hindered access, cell phones are more affordable and may narrow the divide. Teens from low-income homes where a computer may not be present are more likely to use their phones to access the Internet. For example, 41% of teens living in homes with less than \$30,000 annual incomes use their cell phones to go online. Also, black and Hispanic teens are more likely to use their cell phones to go online compared to white teens (Lenhart, et al., 2010)⁹

Despite the accumulating body of evidence that suggests that participants at all levels of K-12 education are turning toward learning on the go, we could find very little reliable data that quantifies the degree to which this adoption has taken place and is taking place. In its role as a technological and legislative advocate, MiCTA recognizes the importance of knowing the state of mobile learning adoption in the United States. To advance the goal of quantifying the adoption rate of mobile learning, MiCTA is in the process of drafting a survey to be distributed to state Departments of Education and other professional organizations comprised of K-12 leaders to assess adoption among K-12 schools and school districts nationwide.

B. In large numbers, schools and school districts are already adopting some form of mLearning

Currently, two states require their students to complete online coursework to become eligible for high school graduation. Further, integrated mLearning strategies may allow schools and school districts to meet the economic and strategic challenges that dominate today's K-12 educational landscape:

- Replacing traditional printed textbooks with electronic texts¹⁰
- Successfully coping with increased class sizes through blended learning models that rely on both classroom and Internet-based instruction¹¹
- Pressure to close old buildings and consolidate services for populations
- Rapid population shifts into and out of school districts
- Reduced state funding and sudden changes to K-12 funding models¹²
- The increased need to reach special student populations (special education students, home-schooled students, homeless students, children of migrant parents, etc.)^{13,14}
- Student retention
- Personalized learning

C. Mobile devices can be "locked down" for educational uses regardless of the device's physical location

One justification for denying off-campus wireless Internet access is the inability to certify that off-campus wireless Internet access is being used for educational purposes. The highly sophisticated state of current mobile device technology no longer supports the presumption that students' off-campus Internet activity is casual. Mobile device management software enables administrators to lock down mobile devices into a specific configuration. In fact, a mobile device issued by the school can be configured to behave off campus exactly as it would on campus.

Mobile device management allows (and blocks) the use of the same applications, whether the device is on-campus or off-campus. This is an important point. Mobile device management software can ensure that all Internet access by a mobile device meets the same usage standards everywhere and all the time.

D. Off-campus wireless Internet access does not increase program costs, and limiting Internet access to on-campus use only will not reduce program costs

The assumption that more use begets increased cost, and less use reduces the cost has become faulty. Many carriers now offer unlimited data plans or very generous data plans. Metered usage is simply not part of the current service-pricing model.

With unlimited data plans, off-campus wireless Internet access does not result in discrete cost increases to the subscriber. The monthly cost of Internet access is the same regardless of where and when the student accessed the Internet service. Because off-campus use produces no net cost increase, and restricting access to on-campus use does not produce cost savings, the goal of recapturing the cost of ineligible services is effectively nullified under the current program rules, while the goal of supporting education has become frustrated.

Even when schools adopt a "bring-your-own-device" (BYOD) model for mobile device usage, Mobile Device Management (MDM) software can be employed to ensure that students' personal mobile devices use only approved applications during school hours. Extending this model to off-campus use, mobile device management can ensure that students using E-Rate paid Internet service with their own devices receive CIPA-compliant access when accessing educational resources.

With regard to device security, modern mobile devices uniformly contain GPS technology, so they can be located precisely in real-time. District-owned mobile devices that are lost or stolen may be located, erased and rendered useless to any unauthorized user. This guarantees that unknown users cannot gain access to E-Rate paid Internet service or the school's academic resources.

E. Off-campus E-Rate funded Internet access is already given to students at public libraries

Libraries are E-Rate program-eligible entities. While they are required to provide CIPA-compliant access to their patrons, there is no presumption of "meritorious use" for library patrons, as there is for school students. As library patrons, K-12 students can already access most Internet sites from their local public libraries – including those sites that lack demonstrable educational merit.

This is important because the presumption of educational merit underpins the justification for disallowing off-campus wireless Internet access. On-campus usage enjoys the conclusive presumption that Internet access is educational in nature. Therefore off-campus usage must not be educational.

Effectively, the E-Rate program already allows K-12 students to access non-educational Internet sites through CIPA-compliant library connections. Changing the eligibility status of off-campus wireless Internet access for K-12 users would essentially provide library-style Internet access to eligible users.

F. mLearning extends the learning day

A 2010 study conducted by the Kaiser Family Foundation found that teens spend an average of 7.5 hours per day consuming media. This consumption includes watching television, accessing the Internet, using social media applications, playing video games and listening to music. This natural tendency to consume information lends itself to mobile learning, blended learning and interactive learning opportunities.

The learning day is not limited to the traditional school calendar. Jamey Fitzpatrick, Director of the Michigan Virtual University (including the Michigan Virtual High School) reports that about 5,000 high school students in the state enroll in online summer classes. Not only does mobile learning extend the learning day, it also extends the learning year.

G. When learning takes place outside of the classroom, Internet access permits students to interact with "field teachers" and mentors.

Further, online collaboration tools mean that students can work on group projects simultaneously online or separately as their time permits. Independent reviewers can monitor group progress, provide guidance and

support to work groups as needed. Subject matter experts can be called into the student's learning environment to explain, reinforce, coach, provide real-world applications and mentor students throughout the learning process.

H. mLearning applications permit students to discover layers of important, related information from diverse sources outside of the classroom

mLearning strategies allow teachers to bring the classroom to the "real world" when the real world cannot be brought into the classroom. Teachers can use software to design and implement content-rich, guided learning experiences that combine information with relevant artifacts on a mobile device.

For example, a teacher may design a learning experience around artifacts on display at a local museum. The artifacts cannot leave the museum, but students can visit the exhibit; use a mobile device to discover relevant information from multiple sources; and interact with museum curators and academic experts to place the artifact into context in a way that would not be possible by simply visiting the museum exhibit.

I. Internet access isn't uniformly available throughout the country

The lack of consistent access makes it more difficult for some students to find alternative Internet access after school hours. Even when schools make Internet access available to students after-hours or open Wi-Fi access is available from non-school sources, students still face several challenges to making meaningful use of these opportunities. These challenges include:

- Poverty, which may preclude a student's ability to purchase basic mobile devices used in a mLearning program or a school's ability to make Internet access available
- Reliable after-hours transportation into a Wi-Fi service area whether on-campus or commercial
- Availability of open Wi-Fi networks within easy physical access
- Availability of Internet access through local public libraries
- Open Wi-Fi access that does not provide sufficient bandwidth to support mobile applications
- Unsecured, non-CIPA compliant connectivity

By providing off-campus wireless Internet access, school districts that include access-poor areas can help ensure continuity of access and quality for students in their educational programs.

IV. Conclusion

There are no compelling pedagogical or technological reasons remaining to support the continued ineligibility of off-campus wireless Internet access. The notion of the "school day" – as metered by the clock and calendar - has been replaced by the "learning day," a rich, time-independent milieu that favors cooperative learning, subject exploration and mastery, and personalization for each student.

In the changing K-12 environment, educational experiences take place wherever and whenever they are enabled. The school building is no longer the gatekeeper of meritorious educational experiences, and a growing body of a student's academic work can be and is being completed off-campus and outside of the designated school day.

The adoption rate of mobile devices in the US means that many US K-12 students currently have the hardware devices required to access the Internet. Despite the penetration rate of mobile devices, however the Internet remains an underused conduit for learning. The E-Rate program is now presented with an opportunity to cultivate and encourage the continued adoption of mobile learning by adding off-campus wireless Internet to its

Eligible Services list. Without such funding, some schools may be hesitant to adapt their curricula to support mobile learning opportunities.

On behalf of its members, MiCTA offers the following recommendations to help all program-eligible entities align the benefits of mobile learning with the availability of E-Rate funding.

- A. Place off-campus wireless Internet access on the Eligible Services List, with the provision that off-campus wireless Internet access must meet the same standards that on-campus wireless Internet access does. These standards include permissible access for activities with demonstrable educational merit, and CIPA-compliance.
- B. Require carriers seeking E-Rate reimbursement for off-campus wireless Internet access to provide E-Rate users with unlimited Internet access for mobile wireless devices. This does not require carriers that do not currently offer unlimited data plans to change their service delivery model for individual and/or commercial subscribers. Instead, this approach acknowledges that there should be a public policy exception for critical, publicly supported functions like education.
- C. Require participating schools to develop a "conditional use" device management plan for those students who choose to use BYOD devices. Students who supply their own mobile devices must opt into the device management plan on-file with the school. As a condition of funding, the school will certify that the device management plan is expressly consistent with E-Rate program Internet usage guidelines. Users who do not accept these conditions of use, as well as devices that cannot be managed appropriately under the school's device management policy will not be permitted to connect to E-Rate funded off-campus wireless Internet access.
- D. The E-Rate program should require recipients of funding for off-campus wireless Internet access to track off-campus access and usage of the school's academic resources to the extent possible.

¹ www.socialscience.t-mobile.hu/2005/Sharples_final.pdf page 2, Accessed 5/9/2013

² Comparison of Mobile Learning and eLearning”

<http://uwstoutmobilelearning.wikispaces.com/Differences+between+Mobile+Learning+and+eLearning>

³ <http://www.digitalllearningnow.com/wp-content/uploads/2013/05/Conditions-and-Careers-Final-Paper1.pdf>

⁴ DA 11-1181, Federal Communications Commission, Learning On The Go Order adopted July 11, 2011, Footnote 3, Page 1, http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-11-1181A1.pdf

⁵ <http://www.nielsen.com/us/en/newswire/2012/young-adults-and-teens-lead-growth-among-smartphone-owners.html>

⁶ <http://www.connected-intelligence.com/about-us/press-releases/internet-connected-devices-surpass-half-billion-us-homes-according-npd-group>

⁷ <http://www.connected-intelligence.com/about-us/press-releases/37-pc-users-migrate-activities-mobile-devices-according-npd-group-0>

⁸ <http://www.thinkfinity.org/servlet/JiveServlet/previewBody/10549-102-2-18289/Research%20on%20Mobile%20Technology.pdf>

⁹ Lenhart, A., Ling, R., Campbell, S., & Purcell, K. (2010). *Teens and mobile phones*. Washington, DC: Pew Research Center.

¹⁰ <http://www.electronista.com/articles/12/03/30/apple.others.gather.at.washington.summit/>

¹¹ http://hechingerreport.org/content/education-nation-in-arizona-desert-a-charter-school-competes_9687/

¹² <http://www.cbpp.org/files/9-1-11sfp.pdf>

¹³ <http://www.crcmich.org/PUBLICAT/2010s/2012/rpt378.html>

¹⁴ <http://www.auditor.leg.state.mn.us/ped/pedrep/sped.pdf>