



**Michigan Technical Academy
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NSLP: 88.3%

E-Rate Discount: 90%

EDU2011 Pilot Program

WC Docket No. 10-222

TITLE: Interim Report

DEADLINE: February 24, 2012

Submitted To:

Regina Brown, Telecommunications Access Policy Division

Address: Wireline Competition Bureau-FCC
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REQUIRED INFORMATION

1. Project Benefits

- a. A description of how the wireless devices were integrated into the project's curriculum and objectives (including approximately how many times per week the wireless devices were used to access program materials remotely and how many wireless devices were used during this period of time).
 - i. Michigan Technical Academy provided netbook mobile learning devices to our entire student body in grades 5-8 for use during the academic year.

GRADE LEVEL(S)	CURRICULUM OBJECTIVE(S)	# STUDENTS	# TEACHERS
5	To increase educational productivity and proficiency with mobile learning devices (MLDs) that include student access to the Internet both in the classroom, at home, and anywhere learning takes place. To achieve a 10% increase in Math, Science, Social Studies, and ELA proficiency with the use of technology.	125	5
6	To increase educational productivity and proficiency with mobile learning devices (MLDs) that include student access to the Internet both in the classroom, at home, and anywhere learning takes place. To achieve a 10% increase in Math, Science, Social Studies, and ELA proficiency with the use of technology.	116	5
7	To increase educational productivity and proficiency with mobile learning devices (MLDs) that include student access to the Internet both in the classroom, at home, and anywhere learning takes place. To achieve a 10% increase in Math, Science, Social Studies, and ELA proficiency with the use of technology.	118	4
8	To increase educational productivity and proficiency with mobile learning devices (MLDs) that include student access to the Internet both in the classroom, at home, and anywhere learning takes place. To achieve a 10% increase in Math, Science, Social Studies, and ELA proficiency with the use of technology.	102	4

- ii. Device usage per week is still undetermined due to infrastructure and deployment delays. Intended usage for remote access would be 2-3 days per week with daily access in the regular school setting.

- b. If available, a detailed summary of any data collected by the school or library on the project's outcomes and achievement of the project's goals, including usage of

educational and research resources by students and library patrons and number of devices actually used.

- i. Data collected from the 2010-2011 academic year.

Homework Completion

Grade Level	Homework Completion (Before Implementation)	Homework Completion (After Implementation)
7	74%	87%
8	69%	91%

Student Discipline (average class per day)

Grade Level	Discipline Issues (Before Implementation)	Discipline Issues (After Implementation)
7	6	1
8	5	1

- c. If available, a copy of any results or summary of the results of any survey given to students, teachers, parents or library patrons to assess any aspects of the off-premises wireless project;

- i. Parents were surveyed to determine the accessibility of the internet for their children outside of the school environment.

300 parents completed the survey.

No Internet Access	Internet Access (Non-Wireless)	Internet Access (Wireless)
42.9%	16.3%	40.8%

2. Project Costs

- a. an analysis of the per student or per patron cost of the off-premises connectivity;
- i. Michigan Technical Academy services approximately 461 students as part of our wireless project for the 2011-2012 academic year.

Grade Level(s)	# of Students	# of Teachers
5	125	5
6	116	5
7	118	4

8	102	4
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- ii. 395 students were able to participate in the wireless pilot program as a result of E-rate support. The total cost of the “off-premises” connectivity is approximately \$360.00 per student, while the approximate per student cost as a result of E-rate support is \$36.00 per student; saving the school nearly \$324.00 per student.

3. Effectiveness of Protective Measures

- a. A detailed description of the measures, including specific software or filtering mechanisms that were taken to ensure compliance with the Children’s Internet Protection Act as well as a description of measures that were taken to protect against waste, fraud, and abuse.
 - i. To insure utilization of appropriate safety measures to meet the requirements of the Children’s Internet Protection Act, the district servers have been equipped with a Cisco ASA 5510 Firewall and a Lightspeed TTC web filter. Through the use of these devices, Michigan Technical Academy maintains the ability to filter the website requests of the students but also to monitor the traffic patterns of all users thus allowing for modification of the filter parameters as needed. To protect against waste, fraud and abuse the district has issued parental consent forms detailing the objectives of the project, expectations for usage both in and out of school along with consequences for misuse and damage or loss of the mobile learning device.
- b. A detailed description of what, if any, issues arose in ensuring that the wireless devices were used only for educational purposes.
 - i. We have been very fortunate that upon deployment of the mobile learning devices the district has not experienced any issues in regards to their use for educational purposes. As a safety precaution, all of the mobile learning devices have been imaged in such a fashion that restricts their operation to a “Remote Desktop” session thus forcing all usage to be regulated via our district server and content filter. While this may limit the functionality of the device when not utilizing the internet, it does insure that the device can only be utilized for our intended purpose as that of an educational tool to improve instruction.

4. Lessons Learned

- a. A description of any technical, operational, or administrative problems or issues associated with implementing the project (such as barriers in using the wireless

devices or difficulties with the service) and a description of how those issues were addressed or are being addressed.

- i. The project has experienced many delays hindering full implementation and forcing an adjustment to our yearly timeline. A majority of the delays revolved around infrastructure upgrades, installation of our new server, and aligning the web content filter device with the new server. The initial lack of cohesiveness between the server and the Lightspeed TTC device delayed our imaging of the mobile learning devices thus pushing back our initial release date to the students. This proved to be of major concern since this was to be our primary method for insuring the safety and security of the devices and their usage by the students. The issue of compatibility was resolved during the Holiday break and prior to the devices being distributed to the students.
- b.** A narrative of the lessons learned as a result of the off-premise wireless project (for example, based on what you learned from the project, how would you plan and implement your project differently if you were doing it over again?).
 - i. In reflection of our off-premise wireless project, we as a district have learned some valuable lessons in regards to our network infrastructure when undertaking a project of this magnitude. If given the opportunity of starting over, all server infrastructure upgrades should be done the prior year to implementation thus enabling proper evaluation of the network's capabilities for handling such an endeavor. To alleviate any potential technical issues in regards to the imaging process it becomes crucial to narrow the variety of models used for the mobile learning devices. Cohesiveness amongst the technical staff is critical to solving any miscellaneous issues that may arise through the implementation process and they must maintain the channels of communication to all stakeholders with any changes and issues that may delay or hinder the implementation process.