

Maine's Learning Technology Initiative Provides Laptops for All Middle School Students

In September 2001, the Maine legislature adopted a groundbreaking plan to provide laptops to all students in the state's 241 middle schools. Now, with seventh graders finishing their first full year of using the computers, a study released by the Maine Education Policy Research Institute indicates the program has had a positive impact in the classroom.

Former Maine Governor Angus King is widely credited with establishing the laptop program. In 1999, King earmarked surplus budget money to support efforts to put computers in the hands of students, a move he saw as necessary to prepare students for the hi-tech future.

The Maine Learning Technology Initiative (MLTI) was officially established in 2001 as a first-in-the-nation effort to provide universal, one-to-one access to portable, wireless learning technology for all seventh and eighth grade students and teachers in the state. When the state legislature approved the initiative plan, they were careful to avoid making the program a state mandate. Instead, each school district was given the option to participate, and they universally chose to do so.

After reviewing bids from several computer companies, the Maine Department of Education signed a four-year, \$37 million agreement with Apple to provide portable, wireless computers, wireless networks, teacher training, and related services to equip seventh and eighth grade students and teachers. Funding for the ambitious laptop venture was provided through the \$30 million Maine Learning Technology Endowment, appropriated by the legislature, and from the Maine School and Library Network.

The MLTI Network

MLTI staff recognized that it was not enough to simply put computers in the hands of students and teachers. Across the state, the program is rounded out through technical support and professional development personnel to address the questions and challenges that arise through using the laptops each day.

Four main types of personnel serve as resources for the program, working to organize and maintain an MLTI profes-

sional development network within each region and throughout the state. They include:

- ★ *Teacher Leaders* – these personnel received training to serve as a leader within their schools for the MLTI. They serve as contact and support personnel for classroom teachers in the buildings where they teach.
- ★ *Regional Integration Mentors* – teachers within each of the nine superintendent regions in the state who assist MLTI staff in the development of a statewide network of professional development related to technology integration.
- ★ *Content Mentors* – specialists and statewide leaders in specific content areas, including math, science, language arts, and social studies.
- ★ *Content Leaders* – content specialists within each of the nine superintendent regions.

Nine “demonstration” schools inaugurated the laptop program in the spring of 2002, serving as training sites for professional development of teachers and as a laboratory for testing the reliability of the equipment. By the fall of 2002, approximately 20,000 laptops were distributed to schools for use by 7th grade students and teachers; and an estimated 16,000 more will be added in 2003-04 so that both 7th and 8th grades will be covered.

Results: Teachers, Students and Parents Weigh In

The Maine Education Policy Research Institute (MEPRI) is charged with tracking the effects of the laptop program on the state's education system. Through surveys of students, parents, and teachers in addition to case studies, interviews, focus groups, classroom observations, and analysis of school documents and student work, the Institute has observed largely positive feedback among teachers, students, parents, and administrators. In March 2003, MEPRI released a mid-year evaluation report detailing how the laptops are being used by teachers and students, and what kind of impact the program has had.

★ **Teachers:** Teachers reported that they use the laptops to develop instructional materials (51%), conduct research for lessons (51%), and communicate with colleagues (55%). Overall, 74 percent of teachers reported that MLTI had a positive impact on planning for instruction. And a full two-thirds (66%) of teachers reported seeing a positive impact on how they present lessons.

Teachers commented that the laptops help them locate more up-to-date information that is sometimes not available in textbooks. They also said they can now access information easier and quicker, and many feel that their lessons are more extensive because of the laptops.

★ **Students:** Students reported that they use laptops to research information (73%), complete assignments (65%), communicate with teachers and other students (63%), organize information (52%), and take notes (42%). Students also commented that they believe that laptops make schoolwork fun (89%) and that laptops are the preferred tool for doing their schoolwork (81%).

In interviews and focus groups, students said they've become more interested in their schoolwork and have increased the amount of work they are doing both in and out of school. Administrators have reported that the laptops have even impacted attendance rates, as students are more excited to come to school on days when they expect to be working with the computers.

★ **Parents:** Though some parents feel out of the loop because their children have not yet been able to bring the laptops home, 89 percent report a positive attitude about the laptop program. Many parents say their children are more focused and have more interest in school, and most who were skeptical at first now support the program.

Challenges

The laptop program is not without its problems, however, with most complaints surrounding technical difficulties such as problems staying connected to the network and frustrations over computers freezing, causing students to lose work. Some teachers are concerned over the lack of Internet resources for content areas like math.

MLTI staff is working to find creative solutions to common problems. One such solution is to have student support groups for technology problems. Some students who volunteer have received training to deal with basic applications and to learn troubleshooting techniques.

To address content concerns, Content Mentors and Specialists have begun hosting workshops for math teachers that provide specific pointers and instruction on where and how to find math-specific resources online.

Next Steps

Seventh graders who spent last year immersed in the laptop program can look forward to continuing their progress as eighth graders. This fall, the program extends to its full goal of providing the laptops for all seventh and eighth graders in Maine, building on the lessons learned in the 2002-2003 school year. Though not on the immediate horizon, state officials have expressed interest in eventually expanding the program to include high school students as well.

In the middle schools, most administrators and teachers agree that the laptop program could be even more effective if students were allowed to take home their computers for use with homework, but taking that next step will require administrators to first solve several problems, especially the two issues of insurance, and Internet filtering.

The laptops are automatically insured under the schools' regular policies as long as they remain on school property. But additional costs must be considered for insuring the laptops off of school property before students can take them home. There is also the problem of providing appropriately filtered Internet access after the computers are taken off campus and are no longer connected to the school's network. A \$4,800,000 gift to the program has been set aside to develop the MiddleMaine server for students to use at home, allowing the same restricted Internet access they have while at school.

Most teachers remain optimistic about how use of the laptops will evolve in the future and agree that they are simply scratching the surface of the potential. As one teacher reflected in an interview conducted by MEPRI, "As we evolve within the program and stretch its limits, its application will only be limited by our imagination."

Resource: *The Maine Technology Initiative: Teacher, Student, and School Perspectives Mid-Year Evaluation Report*. Prepared by the Maine Education Policy Research Institute. Online at www.usm.maine.edu/cepare/pdf/ts/mlti.pdf.

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