

**EARLY EVIDENCE FROM THE FIELD**  
**THE MAINE LEARNING TECHNOLOGY INITIATIVE:**  
**WHAT IS THE IMPACT ON TEACHER BELIEFS AND INSTRUCTIONAL PRACTICES?**  
**OCCASIONAL PAPER #3**

Katherine I. Sargent

Center for Education Policy, Applied Research and Evaluation  
University of Southern Maine

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**The Maine Learning Technology Initiative:  
What is the Impact on Teacher Beliefs and Instructional Practices?**

**Abstract**

The Maine Learning Technology Initiative (MLTI) is a statewide program that, according to the Task Force on Maine's Learning Technology Endowment, is intended to:

“...transform Maine into the premier state for utilizing technology in kindergarten to grade 12 education in order to prepare students for a future economy that will rely heavily on technology and innovation.” (Task Force on Maine's Learning Technology Endowment, 2001, p. vi).

One of the strategies Maine is using in preparing youth for the future economy is a statewide program to provide every seventh and eighth grade student and their teachers with laptop computers, and to provide professional development and training for helping teachers integrate the laptops into their classroom instruction. This paper examines the impact that the distribution of laptops to teachers and students in Maine is having on the beliefs and instructional practices of those teachers who are involved in the program. Seventh grade teachers who received laptops in the 2002/2003 school year were the focus of this evaluation. Data from surveys, case studies, interviews and classroom observations has been examined in order to more closely identify the laptop initiative's impact on teachers and teaching. Preliminary findings suggest that, since the implementation of the laptop program, the majority of teachers are taking tentative first steps toward implanting the laptops fully with existing curricula.

**The Maine Learning Technology Initiative:  
What is the Impact on Teacher Beliefs and Instructional Practices?**

Katherine Sargent

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***Introduction***

This report presents mid-year evidence from the Year One evaluation of the Maine Learning Technology Initiative. The Maine Learning Technology Initiative (MLTI) is a statewide program that, according to the Task Force on Maine's Learning Technology Endowment, is intended to:

“...transform Maine into the premier state for utilizing technology in kindergarten to grade 12 education in order to prepare students for a future economy that will rely heavily on technology and innovation.” (Task Force on Maine's Learning Technology Endowment, 2001, p. vi).

The initiative was established on the premise that technology and innovation will play key roles in Maine's economic future. Nearly 70% of business and information technology (IT) professionals nationwide report that their companies are concerned about the Digital Divide because they, and the U.S. economy in general, need more IT talent. According to the Children's Partnership (2002), by 2010, jobs in the computer and mathematical fields are expected to increase by 67%. However, Maine currently ranks 44<sup>th</sup> in the United States in the number of high-tech workers. New Hampshire, on the other hand, ranks 28<sup>th</sup> and Massachusetts ranks 4<sup>th</sup>. In terms of average high tech wages, Maine ranks 43<sup>rd</sup>, while New Hampshire and Massachusetts rank 14<sup>th</sup> and 3<sup>rd</sup> respectively.

***Implementation of the Laptop Program***

One of the strategies Maine is using in preparing youth for the future economy is a statewide program to provide every seventh and eighth grade student and their teachers with laptop computers, and to provide professional development and training for helping teachers integrate the laptops into their classroom instruction. A pilot project using this strategy was undertaken in spring 2002, in which seventh grade students and their teachers in nine Exploration Schools were provided laptops. A program of professional development for teachers

that introduced teachers to the laptop and basic computer skills also began during this time and is continuing, with increasingly sophisticated training focused more specifically on teachers' academic content areas. In the fall of the 2002-2003 academic year, the first full implementation phase of the MLTI began. In this current phase, over 17,000 seventh graders and their teachers in over 240 schools across the state have received laptop computers. Concurrently, the Department of Education has initiated a professional development network consisting of several new roles and regional positions.

Each of the 243 middle schools in the state nominated a Teacher Leader who then received training that would enable them to serve as a leader within their school for the MLTI. These Teacher Leaders now serve as contact and support personnel for the classroom teachers in the buildings where they teach.

A second role that has been created is that of Regional Integration Mentors (RIM). A RIM is a teacher within each of the nine superintendent regions in the state who, in addition to their regular teaching responsibilities, assists MLTI staff in the development of a statewide network of professional development related to technology integration in middle schools and within each region.

The most recent roles created in the MLTI professional development network are Content Mentors and Content Leaders. Content Mentors are specialists and statewide leaders in specific content areas; mathematics, science, language arts and social studies. Content Leaders are content specialists within each of the nine superintendent regions. These individuals serve as resources, along with the RIMs and teacher leaders within each region, to help organize, establish, and maintain the MLTI professional development network within each region and the state. These positions have been created to facilitate greater integration of curriculum and technology and as support for the transformation of teaching and learning in Maine's classrooms.

This report presents some early evidence on the effectiveness and impact of the implementation of the Maine Learning Technology Initiative (MTLI) on teachers and their beliefs and instructional practices. These findings are the result of work which began in June 2002 when Commissioner J. Duke Albanese, Maine Department of Education, asked the Maine Education Policy Research Institute (MEPRI) to conduct the first year evaluation of MLTI.

MEPRI was created in 1995 by the Maine State Legislature. It is a non-partisan research institute funded jointly by the Maine State Legislature and the University of Maine System. The

Institute conducts education policy research for the Legislature, and under grants and contracts, conducts a variety of studies and evaluations on education topics. Each year it publishes a Condition of Maine K-12 Education report, a report which documents changes in over 50 education indicators, and a Legislative District Education Report which describes school systems within each legislative district.

## **Methods and Procedures**

### Research Questions

In the area of Teachers and Teaching, four core long-term questions exist. These questions include:

*What is the impact on how teachers and students construct new knowledge?*

*What is the impact on teaching behaviors and instructional practices?*

*What is the impact on the content and rigor of curriculum and instruction?*

*What is the impact on teachers' professional development?*

Obtaining answers to these core questions will require a multiple-year evaluation. However, preliminary research has focused on determining how, and to what extent, pre-conditions or forerunners for long-range achievements are occurring in the Initiative. In other words, are the laptops being used at this early stage in such a fashion that will lead to changes in teacher practices in the future? This report is focused entirely on the question of the impact of the laptop program on teacher beliefs and instructional practices.

### Data Sources

Because collecting extensive evaluation evidence from all students, teachers, and schools participating in this initiative is cost and time prohibitive, a matrix sampling strategy has been used in the Year One evaluation for identifying different types of middle schools, student populations, educator populations, and communities. This permits different questions to be answered using representative samples. In addition, this strategy minimizes the intrusion of data collection strategies into the operation of schools, and the teaching and learning process.

The evaluation plan is using a mixed-methods approach to evaluation. Using multiple evaluation and research methodologies and varied sources of evidence provides a more comprehensive framework for triangulation of evaluation evidence, and increases the validity, reliability and generalizability of findings. *Surveys*, some of which are web-based, are being

used as a primary means of gathering data from large samples of students, educators and parents. *Case studies* of representative schools and student groups are being conducted. *Interviews, focus groups, classroom observations and analyses of school level documents, such as memos to parents, school policies, and including analysis of student work*, are essential data collection strategies. The evaluation team is also attempting to track the impact of the Year One program on student achievement and school level performance. However, more time will be needed to draw reliable conclusions on these aspects of MLTI.

Teachers received a mailed survey which was also available online. The survey was designed to collect a breadth of information on the use and impacts of the laptops. A copy of the survey instrument appears in Appendix A.

Site visits, interviews, and observations have been designed to provide more in-depth information on specific uses and impacts. Protocols for interviews, and observations conducted during site visits to the nine Exploration schools and eight additional middle schools were created and used by the staff of MEPRI to insure consistency in the data collection process.

### Sample

Data was collected from two primary sources in order to determine what changes had occurred in teacher beliefs and practices: the MLTI teacher survey from December 2002 and teacher interviews conducted during case study visits conducted from December 2002 through February 2003. Additional data was collected from classroom observations conducted during site visits and surveys of Teacher Leaders conducted by RIMs in each region. Some information has also been taken, where appropriate, from the MLTI website, Maine Learns ([www.mainelearns.org](http://www.mainelearns.org)), which invites teachers and parents to post success stories related to MLTI.

Of the 2,231 teachers involved in the program, 723 chose to complete a survey, resulting in a return rate of 32%. The survey was mailed directly to teacher leaders in each school. The teacher leaders were directed to distribute the surveys to staff participating in the MLTI and to encourage participation.

Teacher interviews were conducted as a component of case study visits to a total of seventeen schools, including the nine demonstration schools and eight additional schools. The demonstration schools were chosen by the state MLTI coordinators. Additional schools were chosen to represent elements that are common to a number Maine schools, but uncharacteristic

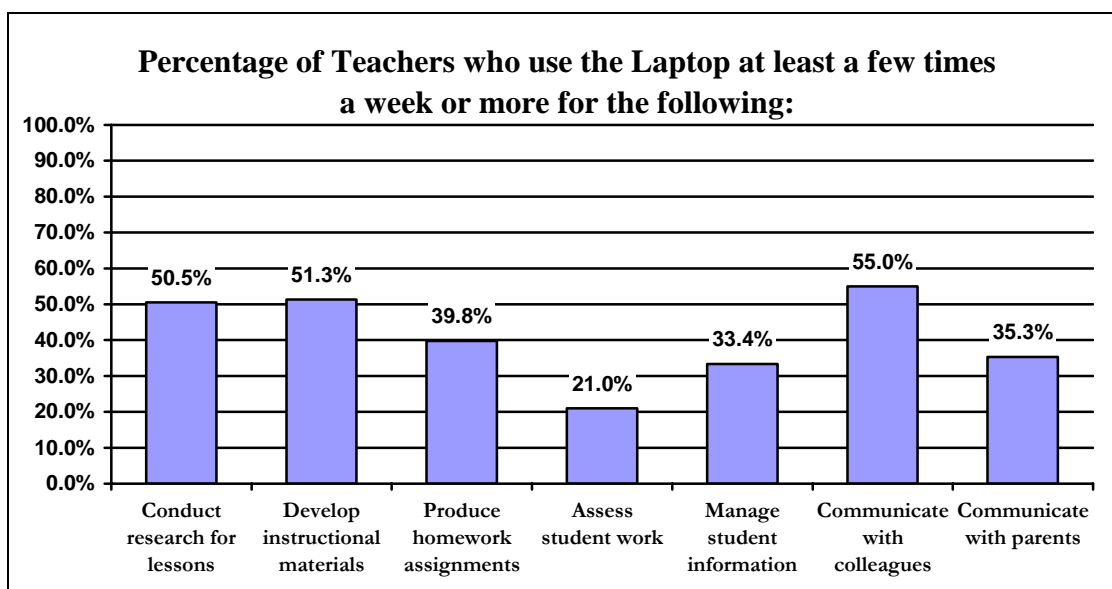
of the demonstration schools. These qualities included low enrollment and high poverty as indicated by free and reduced lunch data for the state.

## Results

### Preliminary Findings

A teacher survey was used to determine the uses and impacts of the laptops in the classroom. Seventh grade teachers, who were surveyed in December of 2002, reported that they were using laptops in many different ways, but most often in conducting research for lessons, developing instructional materials, and communicating with colleagues. As may be seen in Figure 1, approximately 50% of teachers who responded to the survey indicated that, on a six point scale of *Never* to *Every Day*, they use the laptop for these purposes at least a few times a week or more. Many teachers reported that they realize that these early uses merely scratch the surface of the possibilities for this technology, but they have been enthusiastic about these beginnings.

**Figure 1**



One of the most frequent uses of the laptops by teachers is in communicating with colleagues. Approximately 55% of the teachers surveyed reported that they use their laptop to communicate with colleagues at least a few times a week. For many teachers, the ability to communicate in a more efficient manner has opened new doors and allowed teachers to exchange curriculum and instructional information in new and exciting ways. The availability of

this learning tool has also encouraged and enabled teachers to form support networks as they learn to integrate technology. Those involved with the program find that they are collaborating more frequently and with a larger pool of colleagues. One teacher reported on the Maine Learns website:

*“I am currently working on a unit with a teacher in Milan, Italy. We are going to have our students collaborate on a project of some sort.”*

Teachers also reported that they were using their laptops to prepare for their classes through developing instructional materials (51%) and conducting research for lessons (51%). Teachers reported that they are accessing current information that, in many cases, is not available from textbooks.

*“I know that this year in science, I’m using [the laptop] instead of my textbook. My textbook has no information on standards that I’m supposed to be addressing, no environmental concerns, no ecology, nothing about plants and animals . . . So I’m using it [the laptop] in lieu of that, having students do self-directed projects on a given theme.”* (Teacher interview)

Teachers are also finding that the laptops can help them to convey information to students. For example, one teacher reported:

*“Like for research for example, before you had to go to the library, you might have one or two resources you could use, for everybody. You pretty much had to assign everyone the same topic. Now, I just did a research project and I probably ended up with at least twenty-five different topics and a host of different incredible resources...”* (Teacher interview)

In addition, because students have a wealth of information at their fingertips, teachers are expecting students to access content, and not simply rely on teachers to provide the answers.

*“...I let them go looking for information and they find their own. And they bring to class more information than I would have been able to generate myself and give them. What they bring to class is so much deeper and more than what I would have brought in.”* (Teacher interview)

Many teachers reported using the laptops to create homework assignments. However, in the early December survey, only about one in four teachers reported using the technology in



assessing student work. One teacher reported using the laptops to document student performance as a part of their local comprehensive assessment program. As reported on the Maine Learns website:

*“...Grade 7 students have been working to document the learning of other students in the school as part of the local assessment plan. They have begun to videotape students in different classrooms reading, writing, or doing math. Today the first QuickTime movies were saved to CD. Imagine video evidence of student learning—live exemplars to show the learning.”*

Generally speaking though, this teacher appears to be more of the exception, than the rule. Many teachers reported that they are just beginning to learn how to use the technology, and consequently, they have not yet tapped into this more advanced use for the technology. Teachers’ use of technology to capture and assess student performance data will be monitored more closely during the second half of the year.

Again, teachers view these early uses of technology as first steps in a long process of technology integration. This new opportunity has challenged all teachers, from the novice;

*“Every day is a challenge with laptops as it is all so new – first time I have really had access to a computer.”* (Teacher interview)

to the more advanced;

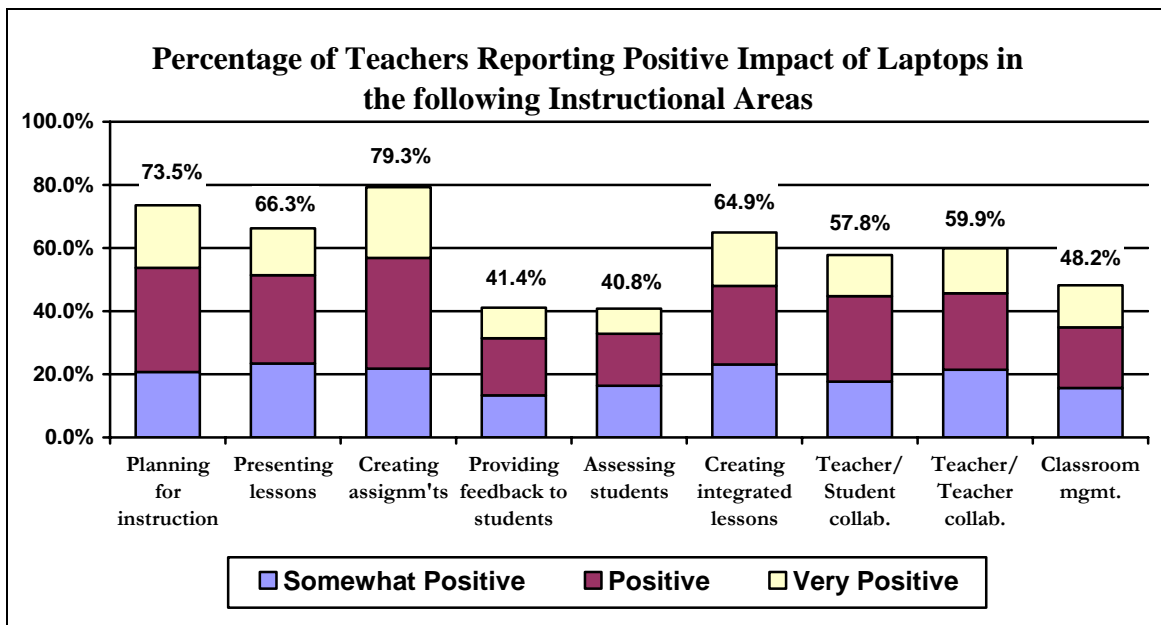
*“Constantly looking for new ways to use the computer in the classroom. It is really a new way of thinking – teaching style has changed. The typical projects are becoming obsolete.”* (Teacher interview)

One of the items on the teacher survey asked teachers to rate their skill level in the use of laptops for instruction on a five point scale ranging from *Novice* to *Expert*. Not surprisingly, those who rated themselves as *Advanced* or *Expert* laptop users (28% of the respondents) indicated a more frequent use of the laptop for instructional purposes than did those who rated themselves as *Novice*, *Beginner*, or *Intermediate* users. For example, 51% of all teachers responding reported that they use their laptop to conduct research for lessons a few times a week or more. In the subgroup of advanced technology users, 74% of teachers reported that they used their laptops for this purpose. This group of teachers also reported significantly higher uses of laptops to produce homework assignments (60% versus 40%) and to assess student work (36%

versus 21%). This evidence reinforces the idea that the process of incorporating the laptops into daily practice is developmental, and implementation and expertise will, in all likelihood, increase as teachers become more comfortable with the technology. This shift in teachers' beliefs and practices over time as they continue to experiment and reflect on how it is working is consistent with the pattern of implementation of educational reforms in general. Additionally, these findings correlate with national studies conducted by Apple Inc. (Classrooms of Tomorrow Research, 1995), which demonstrate that teachers experience five stages of development and change in their teaching beliefs and practices as they learn to integrate technology.

Given how teachers reported using the laptops in the early part of the school year, have they seen any positive impacts on their teaching? Figure 2 represents the responses of teachers to a survey item that asked them to rate the impact of the laptop technology on various aspects of instruction on a seven point scale ranging from *Very Negative* to *Very Positive*. As may be seen in Figure 2, many of the teachers surveyed indicated that the laptop was impacting their instruction in several positive ways.

Figure 2



Teachers are seeing the greatest impact of the MLTI on their work in planning and presenting lessons, creating integrated lessons, and creating assignments. Teachers reported that having the laptop as a tool enables them, in many cases, to expand their own knowledge and increase their efficiency. As teachers noted in interviews,

*“I have used a database to collect information about states. I use the Internet once a week in conjunction with the Kennebec Journal to find U.S. / world sites. And I have used the Secretary of State kids’ page to teach government.”*

*“When we [teachers] start thinking about creating units I can go to the different sites and start looking for support materials or resource materials. For the unit on the Constitution, that’s just what I did and within a half an hour we had some really good materials.”*

*“The laptop is such an integral part of all my management routines that I can’t imagine life without it. I use the web to find rich teaching resources.”*

Additionally, two-thirds of the teachers (66%) reported that they are seeing a positive impact on presenting lessons. Students are enthusiastic about the laptops, and look forward to lessons in which the technology is included. Often teachers believe they are better prepared with more up-to-date information. One teacher remarked in an interview,

*“The best things are seeing other lessons and ideas as well as having the students see updated and often virtual sites showing exactly what I’m trying to teach them. In other words, the laptops have been critical in many instructional situations.”*

Teachers feel the laptops are very helpful in developing integrated lessons and extending learning. In many teacher interviews, teachers have described how they have been able to locate materials and information to use in developing interdisciplinary units—to help students see connections between different pieces of information and knowledge.

Teachers also often mentioned that fast and easy access to information benefits both the instruction they provide and students’ efforts to learn. For instance, one teacher reported on the Maine Learns website:

*“There are some days I just realize how helpful the laptops are... For years, I’ve had kids test local water bodies and then analyze the data and draw conclusions. This meant lots of work back in the classroom—doing the testing and graphing, finding and printing copies of scientific data they can use for their analyses, and finally writing the conclusion in essay form. In the “old days,” by the time we got*

*to the essay writing, the most important part of the whole unit, the kids had often lost momentum.*

*This year, after we did the sampling, we returned to class and it quickly became clear that 1-1 wireless access changed everything from there on out. They opened up a document, set up a small spreadsheet, entered data, clicked on 'make chart,' and poof, there it was.*

*Then I sent them to one of two great websites. Here they found the scientific data with which to compare their own numbers. No photocopying on my part; instead instant, easy, and independent access to accurate information. Finally, they typed up the essay in their document. With the laptops, graphing and accessing data is so fast it got us to the real heart of the lesson with energy to spare."*

One teacher leader responding to a questionnaire from her RIM put it this way:

*"We write. We did before we got these machines but now there's an immediacy and fluidity to our exchanges [teacher to student] that only these tools provide. We research. We did before, but now we use 'NoteStar' and 'RubricMaker' (my kids have made their own). ...There's success to be had here that builds comfort, confidence, and courage for bigger and more abstract things later."*

Once again, a higher percentage of teachers who ranked themselves as *Advanced* or *Expert* technology users indicated that the laptops were having a positive impact on various areas. For example, 74% of all teachers responded that MLTI had a positive impact on planning for instruction. However, 88% of "advanced" or "expert" technology users reported this same impact. These advanced or expert technology users also reported significant positive impacts on teacher to teacher collaboration (78% versus 60% in the less experienced group of teachers), teacher to student collaboration (75% versus 58%), and assessing students (57% versus 41%).

Having immediate access to online resources has allowed teachers to expand the resources they use in the classroom and extend learning. From planning for instruction to presenting lessons, teachers are reporting a significant positive impact on their teaching because they have access to much more information, access is immediate and the laptop provides the tools for distributing and presenting information to students.

Interviews with teachers revealed consistent information about teachers' use of their laptops to find new resources, integrate these new resources in the curriculum and present new

lessons. In addition, the interview responses of many teachers indicated a more profound change in their concept of themselves as a teacher and their definition of the act of teaching.

*“I think the biggest thing is teachers moving from being the keeper of knowledge to the facilitator of what’s happening in the classroom.”* (Teacher interview)

*“I see the teachers becoming more facilitators and directors, instead of having to have the information, the answers. More and more the kids are becoming the owners and the directors of their learning. They have options of where to go [to get information].”* (Teacher interview)

*“I guess my mind shift has moved from being someone who thought that memorization, knowing facts, those sorts of things, to knowing where to get those things. It’s been a real shift of thinking for myself and my colleagues.”* (Teacher interview)

These data suggest that the introduction of one-to-one wireless laptops that allow students easy and immediate access to a broad range of information may result in a change in the definition of the role of teacher that emphasizes guiding students’ inquiries and assisting them in evaluating new information. More data will need to be collected to confirm this possibility.

## **Discussion**

This study examined early indications of changing teacher beliefs and instructional practices as a result of the implementation of the Maine Learning Technology Initiative in 243 schools with seventh grade classrooms in Maine. It is important to note that, because this program is truly in its infancy, the amount and nature of changes need to be kept in perspective. Furthermore, formal evaluation of the program began only eight months prior to this report.

Findings from the early stages of full implementation indicate that teachers are taking initial steps toward meaningful integration of the laptops into the curriculum. However, the process is tentative, with the majority of teachers indicating that they use the laptops to increase the efficiency of their current practices. These uses include conducting research for lessons, developing instructional materials and communicating with colleagues. Teachers also indicated

that the most common uses of laptops by students were word processing and conducting research. These findings correlate with Apple Classrooms of Tomorrow research. In these studies, Dwyer et.al (1990) found that in early stages of implementation, teachers tended to concentrate on learning to use the technology, mostly to "...replicate traditional learning activities." These studies also indicated that teachers went through an evolution in terms of their beliefs and practices, but that these changes did not occur in the early stages of implementation.

A number of teachers did report that their role in the classroom had changed, because they were willing to become facilitators of learning. Although further research is needed to confirm the significance of this, other studies found a similar transformation in the climate of laptop classrooms. In a study by Rockman Et Al (2000), teachers who were provided with laptops were compared with a group of teachers who were not provided with laptops to aid in their instruction. Over time, those teachers with laptops reported significantly higher levels of allowing themselves to be taught by students, using authentic assessments and encouraging students to explore their own research topics. In addition, the majority of laptop teachers decreased the frequency of direct instruction used in their classrooms from "almost every day" to "about once a week" during the course of the study. These factors were seen as early indicators of constructivist teaching practices.

Teacher comments on the MEPRI teacher survey often highlighted the fact that changing one's classroom so dramatically involves a significant evolution. For some teachers, a huge leap of faith and a major philosophical shift are necessary in order to move toward a more student-centered environment, especially when many teachers are still uncomfortable with the ins and outs of technology.

Analysis of the MEPRI teacher survey data also found that teachers who ranked themselves as more advanced users of technology were using the laptops significantly more than those teachers who felt that they were beginners. It remains to be seen whether teachers will pass through this stage of more frequent use before moving into stages in which the laptops are used for more innovative practices in the classroom. However, it appears that most teachers would prefer to take small steps in order to master the technology and avoid getting in over their heads, so to speak.

An additional point of interest found in other studies was that of the conditions under which teacher beliefs and practices actually occurred. In a study of two laptop teachers, Dwyer

et.al (1990) found that a supportive atmosphere was one of the most important variables in the success of teacher implementation of programs similar to MLTI. Teachers who were encouraged and supported by administrators and other personnel showed more significant changes in their own beliefs and practices when compared with teachers who did not have similar levels of support.

This seems to be accurate also for MLTI teachers. In schools where support is lacking, teachers report a number of delays in deployment, gaining access to email accounts and obtaining the necessary peripheral equipment to allow students to fully use the laptops. Teachers are discouraged by this, and in some cases, have allowed MLTI to take a backseat to one of the many other initiatives underway in the state. Unless administrators see the benefit of the laptop program and fully support its implementation, some teachers will not get on board. Although this involves a very small number of teachers, it is unfortunate that all teachers cannot benefit fully from the successes that are occurring within MLTI.

Teacher support for the program has also waned slightly for those who remain abreast of the state's budget concerns. Many teachers went into the 2002-2003 school year believing that this would be the only year of full implementation for MLTI. That uncertainty will most certainly continue through the 2003-2004 school year. This is unfortunate, because in many cases, the program is not fully embraced because it is believed to be a passing novelty. Although there is probably no realistic way to remedy this problem, it is true that some educators feel more comfortable waiting to see the fate of the program before making major changes to their classrooms and curricula.

Overall, many teachers remain enthusiastic about the Maine Learning Technology Initiative and look forward to learning more through sustained training efforts. Many school staff view this as revolutionary change, as noted by teachers during interviews,

*“I think the computers are the best thing that has happened to education in the last 20 years. I hope this initiative will continue to be used and improved.”*

*“As we evolve within the program and stretch its limits, its application will only be limited by our imagination.”*

It seems that, in order for teachers to be able to stretch the limits of this program, they need a supportive environment. Teachers also need to be allowed to progress through the

developmental stages necessary in order for real and lasting change to take place. Further research studies, and a continuation of this longitudinal study, are necessary in order to determine whether long-term substantial positive change has taken place as a result of the MLTI.



## References

- Dwyer, D.C. (1990). Apple Classrooms of Tomorrow: Teacher Beliefs and Practices. Part I, Patterns of Change: The Evolution of Teachers' Instructional Beliefs and Practices in High-Access-to-Technology Classrooms – First – Fourth Year Findings. Retrieved March 1, 2003 from the World Wide Web:  
[www.apple.com/education/k12/leadership/acot/library.html](http://www.apple.com/education/k12/leadership/acot/library.html).
- Dwyer, D.C. (1990). Apple Classrooms of Tomorrow: Teacher Beliefs and Practices. Part II, Support for Change: The Evolution of Teachers' Instructional Beliefs and Practices in High-Access-to-Technology Classrooms – First – Fourth Year Findings. Retrieved March 1, 2003 from the World Wide Web:  
[www.apple.com/education/k12/leadership/acot/library.html](http://www.apple.com/education/k12/leadership/acot/library.html).
- “Maine Learns!” website. Available: [www.mainelearns.org](http://www.mainelearns.org).
- Rockman Et Al (2000). A more complex picture: Laptop use and impact in the context of changing home and school access. Retrieved March 1, 2002 from the World Wide Web:  
[rockman.com/projects/laptop/laptop3exec.htm](http://rockman.com/projects/laptop/laptop3exec.htm)

## **Appendix A**

### **Teacher Survey Instrument**

**MAINE LEARNING TECHNOLOGY INITIATIVE (MLTI)**

Teacher Survey

**Directions:** Please complete and return this survey by December 6, 2002 in the enclosed pre-addressed postage-paid envelope. Your opinions are very important in completing a thorough evaluation of the MLTI. Please know that any information you provide in this survey is considered strictly confidential and absolutely no information will be given that may identify you to your school or the Department of Education. If you have any questions, please feel free to contact Dawn Lane at 207-228-8221 or by email [dawnm@usm.maine.edu](mailto:dawnm@usm.maine.edu), Paula Gravelle at 207-780-5497 or by email [gravelle@usm.maine.edu](mailto:gravelle@usm.maine.edu), or David Silvernail at 207-780-5297 or by email [davids@usm.maine.edu](mailto:davids@usm.maine.edu).

School Name: \_\_\_\_\_

How long have you had your laptop? \_\_\_\_\_ week(s)

How long have your students had their laptops? \_\_\_\_\_ week(s)

**Section I. Your Use of the Laptop as a Tool**

Listed below are some ways in which you may be using your laptop in your work. Please indicate how frequently you use your laptop for your work in each area listed.

On average, how frequently do you perform the following tasks using your laptop:	Never	Less than once a week	Once a week	A few times a week	Once a day	Often during the day
Conducting research that contributes to lesson plans and curriculum design	1	2	3	4	5	6
Developing instructional materials and / or presentations	1	2	3	4	5	6
Producing homework assignments	1	2	3	4	5	6
Assessing student work	1	2	3	4	5	6
Managing student information	1	2	3	4	5	6
Communicating with colleagues inside and outside the school	1	2	3	4	5	6
Communicating with parents and students	1	2	3	4	5	6
Other: _____	1	2	3	4	5	6
Other: _____	1	2	3	4	5	6

Please describe a way in which you have been able to integrate the laptops into your classroom activities (i.e. created a lesson, online quizzes, using iMovie in student presentations, etc.)

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## MAINE LEARNING TECHNOLOGY INITIATIVE (MLTI)

### Teacher Survey

#### Section II. The Laptop's Impact on Teachers and Teaching

Listed below are some areas which may have been affected by your use of the laptop. Please indicate the impact of the laptop program on you and your classroom practices in the following areas.

Impact Areas	Very Negative	Negative	Somewhat Negative	Neutral	Somewhat Positive	Positive	Very Positive
Planning for instruction	1	2	3	4	5	6	7
Presenting lessons	1	2	3	4	5	6	7
Creating assignments	1	2	3	4	5	6	7
Providing feedback to students	1	2	3	4	5	6	7
Assessing students	1	2	3	4	5	6	7
Creating integrated / interdisciplinary lessons	1	2	3	4	5	6	7
Teacher / Student collaboration	1	2	3	4	5	6	7
Teacher / Teacher collaboration	1	2	3	4	5	6	7
Classroom management	1	2	3	4	5	6	7
Other: _____	1	2	3	4	5	6	7
Other: _____	1	2	3	4	5	6	7

#### Section III. Your Students' Use of the Laptop as a Tool

Listed below are some ways in which your students may use their laptop in the classroom. Please indicate how frequently your students use their laptop in your classroom for each area listed.

How often do students in your classroom use the laptop to do the following:	Never	Less than once a week	Once a week	A few times a week	Once a day	Often during the day
Word processing of papers	1	2	3	4	5	6
Taking notes on the computer	1	2	3	4	5	6
Managing / analyzing information	1	2	3	4	5	6
Researching information	1	2	3	4	5	6
Completing assignments / taking tests	1	2	3	4	5	6
Doing drills to increase their competency (educational drill software, online quizzes, FunBrain, etc.)	1	2	3	4	5	6
Creating culminating projects to show what they have learned (web pages, multimedia projects, videos, etc.)	1	2	3	4	5	6
Other: _____	1	2	3	4	5	6
Other: _____	1	2	3	4	5	6

**MAINE LEARNING TECHNOLOGY INITIATIVE (MLTI)**  
Teacher Survey

**Section IV. The Laptop’s Impact on Students and Learning**

Listed below are some areas that may be impacted by the use of laptops in the classroom. For each area please indicate the impact you think that the laptops will have/have on different student groups.

Areas	Traditional Students					At-Risk Students					High Achieving Students					Special Education Students				
	Declined	Slightly Declined	No Effect	Slightly Improved	Improved	Declined	Slightly Declined	No Effect	Slightly Improved	Improved	Declined	Slightly Declined	No Effect	Slightly Improved	Improved	Declined	Slightly Declined	No Effect	Slightly Improved	Improved
Participation in class	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Interaction with you	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Interactions with other students	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Preparation for class	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Attendance	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Behavior	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Motivation	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Engagement / interest levels	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Ability to work independently	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Ability to retain content material	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Multi-tasking	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Other: _____	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Other: _____	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

**Section V. Professional Development**

How would you rate your overall skill level in the use of the laptop for instruction:

- \_\_\_\_\_ Novice
- \_\_\_\_\_ Beginner (i.e. word processing, email)
- \_\_\_\_\_ Intermediate (i.e. Spreadsheets, PowerPoint, etc.)
- \_\_\_\_\_ Advanced (i.e. integrating technology into class work)
- \_\_\_\_\_ Expert (i.e. can teach staff how to operate various programs and supportive technology)

**MAINE LEARNING TECHNOLOGY INITIATIVE (MLTI)**

Teacher Survey

Below are listed different types of professional development and/or support for laptop use. Please indicate the appropriate response for each activity listed.

Professional Development Activity	Not Available	Available, But Did Not Participate	Not Effective	Somewhat Effective	Effective	Very Effective
Maine State Department of Education/MLTI sponsored workshops	1	2	3	4	5	6
Local workshops/seminars on how to use the laptop	1	2	3	4	5	6
Local workshops/seminars on integrating the laptop into curriculum	1	2	3	4	5	6
Help-desk technical support provided by the district, in-school specialists, or others	1	2	3	4	5	6
Apple Help-Desk	1	2	3	4	5	6
Informal help from colleagues	1	2	3	4	5	6
Self-taught	1	2	3	4	5	6
Other: _____	1	2	3	4	5	6
Other: _____	1	2	3	4	5	6

**Section VI. Demographic Information**

1. How many years have you been teaching? \_\_\_\_\_ years

2. Highest Level of Education Completed: (please check one)

- |   |  |
|---|--|
| <input type="checkbox"/> Bachelor's Degree              | <input type="checkbox"/> Master's Degree plus credits  |
| <input type="checkbox"/> Bachelor's Degree plus credits | <input type="checkbox"/> Certificate of Advanced Study |
| <input type="checkbox"/> Master's Degree                | <input type="checkbox"/> Doctorate                     |

3. Concentration area in which you teach: (check all that apply)

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Science               | <input type="checkbox"/> Foreign Languages | <input type="checkbox"/> Mathematics                 |
| <input type="checkbox"/> English/Language Arts | <input type="checkbox"/> Social Sciences   | <input type="checkbox"/> Fine Arts                   |
| <input type="checkbox"/> Technology            | <input type="checkbox"/> Special Education | <input type="checkbox"/> Physical Development/Health |
| <input type="checkbox"/> Gifted/Enrichment     | <input type="checkbox"/> Library Services  | <input type="checkbox"/> Guidance                    |

4. Please list the grade levels that you teach: \_\_\_\_\_ (grades)

5. Do you teach in a multi-age/grade classroom?  Yes  No

**MAINE LEARNING TECHNOLOGY INITIATIVE (MLTI)**  
Teacher Survey

**Section VII. Comments and Suggestions**

Please describe successes you have experienced with the MLTI.

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Please describe any challenges you have experienced with the MLTI.

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Please include any other comments that you think may help us in assessing the impact of the MLTI and laptop program.

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THANK YOU FOR YOUR ASSISTANCE.