The Impact of Maine's One-to-One Laptop Program

on Middle School Teachers and Students

Phase One Summary Evidence

Research Report #1

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Foreword

The Maine Education Policy Research Institute evaluation team included nine part-time and fulltime researchers and analysts:

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This report has been written by two members of the evaluation team with assistance in collecting and compiling evaluation evidence from several members of the evaluation team. Various other team members, individually or in small writing teams, are preparing companion reports containing additional evidence and analysis of the impact of Maine's laptop program on schools, teachers, and students. These reports will be released in the near future.

Executive Summary

The initial phase of the Maine Learning Technology Initiative (2002-2004) has provided all 7th and 8th grade students and their teachers with laptop computers, and provided schools and teachers technical assistance and professional development for integrating laptop technology into their curriculum and instruction. Evaluation evidence collected and analyzed during this initial phase indicates:

➢ Teachers are using the laptops in a variety of ways, and most often in developing instructional materials, conducting research related to instruction, and communicating with colleagues.

➢ Teacher usage is 20 to 30% higher for teachers with more advanced technology skills, and higher for teachers who have participated in four or more professional development activities.

➢ Students report using the laptops most frequently in finding information (90%), organizing information (63%), and taking class notes (57%).

➢ Student usage of the laptops for completing class work is higher for students who may take the laptops home.

➢ Over 70% of the teachers surveyed reported that the laptops helped them to more effectively meet their curriculum goals, and individualize their curriculum to meet particular student needs.

➢ Over 75% of the teachers reported that having the laptops helped them better meet Maine's statewide learning standards, the Learning Results.

➢ More than 4 out of 5 teachers surveyed reported that students are more engaged in their learning, more actively involved in their own learning, and produce better quality work.

- More than 70% of the students surveyed reported that the laptops helped them to be better organized, to get their work done more quickly, and with better quality.

- Teachers reported that all types of students are more engaged in their learning and more motivated to learn, particularly at-risk and special needs children.

- A sample of ninth grade students who no longer have laptops reported that they get less work done without the laptops, and the quality of their work has declined without the laptops.

- Teachers and principals reported considerable anecdotal evidence that the laptops have had a very positive impact on student attendance, behavior, and achievement, although concrete evidence is still sparse.

- Teachers reported that the greatest obstacles in integrating the laptop technology more into their curriculum and instruction are the lack of technical support, the lack of more professional development opportunities, and the lack of time.

- Some teachers, students, and principals still report continuing problems with the technology, but these problems appear to have declined substantially after the first few months of the program.

- Superintendents reported some increases in costs with implementation of the laptops.

In summary, the evidence collected for this evaluation indicates that a large majority of Maine's middle schools have successfully implemented the one-to-one laptop program, and there is already substantial self-reported evidence that student learning has increased and improved. Additional research needs to be conducted in the coming years to document and understand the long-term impacts of the laptop initiative on teachers and teaching, students and learning, and on schools.

The Impact of Maine's One-to-One Laptop Program on
Middle School Teachers and Students
Phase One Summary Evidence

David L. Silvernail   Dawn M. M. Lane

Introduction

In 2002, Maine embarked on a bold new initiative, an initiative designed 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)

Entitled the Maine Learning Technology Initiative (MLTI), the initial phase of the MLTI (2002-2004) provided all 7th and 8th grade students and their teachers with laptop computers, and provided schools and teachers technical assistance and professional development for integrating laptop technology into their curriculum and instruction. This report presents some of the most salient evidence from the Phase One evaluation of MLTI. It presents evidence on both the use and impacts of the laptop technology on teachers and students. Additional analyses of more specific impacts will be released in subsequent reports and research briefs.

Background

The concept of the Maine Learning Technology Initiative began with a vision of former Governor Angus King to prepare Maine's students for a rapidly changing world. He believed that if Maine wanted to move ahead of other states, it would require a sharp departure in action from what Maine had done in the past.

In late 1999 and early 2000, a one-time state surplus provided Governor King the opportunity to propose that all middle school students and teachers in Maine be provided laptop computers. In the summer of 2000 the Legislature

and Governor King convened a Joint Task Force on the Maine Learning Technology Endowment and charged the task force with conducting an in-depth examination of the issues surrounding Governor King's proposal, and to recommend the best course for Maine to follow.

The task force concluded:

> *We live in a world that is increasingly complex and where change is increasingly rampant. Driving much of this complexity and change are new concepts and a new economy based on powerful, ubiquitous computer technology linked to the Internet.*
>
> *Our schools are challenged to prepare young people to navigate and prosper in this world, with technology as an ally rather than an obstacle. The challenge is familiar, but the imperative is new: we must prepare young people to thrive in a world that doesn't exist yet, to grapple with problems and construct new knowledge which is barely visible to us today. It is no longer adequate to prepare some of our young people to high levels of learning and technological literacy; we must prepare all for the demands of a world in which workers and citizens will be required to use and create knowledge, and embrace technology as a powerful tool to do so.*
>
> *If technology is a challenge for our educational system, it is also part of the solution. To move all students to high levels of learning and technological literacy, all students will need access to technology when and where it can be most effectively incorporated into learning.* (Task Force on Maine's Learning Technology Endowment, 2001, p. i).

In early 2001, the Task Force issued its report with the recommendation that Maine pursue a plan to deploy learning technology to all of Maine's students and teachers in the 7th and 8th grades, and then to examine expanding the program to other grade levels.

In late September 2001, the Department of Education issued an RFP for the MLTI and a contract was awarded to Apple Computer, Inc., and in late December 2001, the Department of Education and Apple formally began to implement the Maine Learning Technology Initiative. The initial phase began in Spring 2002, when through funds provided by the Gates Foundation Grant, an Exploration School was identified in each of the nine Superintendent Regions throughout the state of Maine. Seventh grade students and their

teachers in these nine Exploration Schools were provided laptop computers. Also at this time, a program of professional development for teachers began that introduced teachers to the laptop and basic computer skills.

Teacher training through professional development was believed to be paramount for the successful implementation of the laptop program. The first step towards developing a statewide network of teacher training was the identification of Regional Integration Mentors (RIM). One teacher from each Exploration School was selected to serve as the RIM for that region. In addition to their regular teaching responsibilities, RIMs helped to develop practices and procedures for laptop use within their Exploration School, as well as assist MLTI staff in the development of a statewide network of professional development related to technology integration in middle schools and within each region.

In the Fall of the 2002-2003 academic year, the first full implementation phase of the MLTI began. In this phase, over 17,000 seventh graders and their teachers in over 240 schools across the state of Maine received laptop computers. Concurrently, the Maine Department of Education initiated a professional development network consisting of several new roles and regional positions. In each of the 243 middles schools, both a Teacher Leader and a Technology Coordinator were nominated and received training to help serve as leaders within their schools for the MLTI. These Teacher Leaders and Technology Coordinators now serve as contact and support personnel for the classroom teachers in the buildings where they teach.

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 in Maine. 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.

With a mechanism for teacher training and professional development in place, the latest phase of the initiative began in the Fall of the 2003-2004 academic year. During this time both seventh and eighth graders and their teachers received laptop computers, totaling over 34,000 students and over 3,000 teachers. In addition to the network of MLTI roles within the state, various professional development opportunities continue to be offered, including Regional Content Meetings, MLTI Teacher Trainings, and Regional Meetings for Principals, Teacher Leaders, and Technology Coordinators.

Evaluation Design

In June 2002, the then Maine commissioner of education, J. Duke Albanese, contracted with the Maine Education Policy Research Institute (MEPRI) to conduct the Phase One evaluation of MLTI. MEPRI 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 for various state agencies such as the Maine Department of Education and the Maine State Board of Education.

Based on an analysis of available information and interviews with MLTI project staff and developers, the evaluation team concluded that changes resulting from the MLTI are expected in at least three major core areas: (1) Teachers and Teaching; (2) Students and Learning; and (3) School and Community. Some of the core long-term evaluation questions in each of these areas are as follows:

Teachers and Teaching Core Questions:
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' own professional development?

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Students and Learning Core Questions:

What is the impact on students' skills in acquiring and constructing new knowledge?

What is the impact on student achievement?

What is the impact on Maine's digital divide?

School and Community Core Questions:

What is the impact on school structure and leadership?

What is the impact on school culture?

What is the impact on families and communities?

Obtaining answers to these core questions requires a multiple-year evaluation. However, the evaluation team recognized that policymakers and others needed early evidence to inform their deliberations for continuation of the program. Accordingly, the team focused the Phase One evaluation on determining how, and to what extent, pre-conditions for long-range achievements were occurring in the Initiative. In other words, are the laptops being used in the early stage in such a fashion that will lead to greater student learning and achievement in the future? Thus, for the Phase One evaluation report, the evaluation team focused its evaluation strategies on obtaining answers to three key questions:

1. How are the laptops being used?

2. What are the impacts of the laptops on teachers and students?

3. What obstacles, if any, have schools, teachers, and students encountered in implementing the laptop program?

The evaluation team has used a mixed method approach in the evaluation; an approach that uses both quantitative and qualitative techniques in collecting and analyzing evaluation evidence. According to Frechtling and Shays (1997):

> *There is a growing consensus among evaluation experts that both qualitative and quantitative methods have a place in the performance of effective evaluations. Both formative and summative evaluations are enriched by a mixed method approach.*

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> *By using different sources and methods at various points in the evaluation process, the evaluation team can build on the strength of each time of data collection and minimize the weaknesses of any single approach. A multimethod approach to evaluation can increase both the validity and reliability of evaluation data.* (User Friendly Handbook of Mixed Method Evaluation, 1997, p. 1-8-9).

Evaluation evidence was collected using a variety of tools. These included:

1. <u>On-line and paper surveys</u>. Survey data was collected from teachers, students, principals, superintendents, technology coordinators, parents, RIMS, and teacher leaders. The surveys were designed principally to collect information on the nature and breadth of uses and impacts. A sample of surveys appears in Appendix A.

2. <u>Site visits</u>. Site visits were conducted in a sample of schools of varying size and geographic location. These site visits included interviews with school personnel, students, parents, and observations.

3. <u>Observation</u>. Classroom observation was conducted during the site visits. Additionally, members of the evaluation team attended and conducted observations of selected content and regional meetings.

4. <u>Document Analysis</u>. Various types of documents were analyzed by the evaluation team. These included school policies and procedures, school website documents, memos, lesson plans, student work, local school evaluation data, and content meeting evaluations.

Evaluation Data

Participants in the MLTI program were surveyed one to three times over a period of 15 months, depending upon the group. Table 1 reports the number surveyed and returned, and response rates for the three survey periods.

Return rates varied by group, ranging from a low of 11% to a high of 74% during the course of the three survey periods. Over 26,000 student surveys and 1700 teacher surveys were collected and analyzed. In addition, over the course of the first 15 months of the project, 39 site visits were conducted in 21 schools.

Table 1: Survey Response Rates

Survey	Fall 2002			Spring 2003			Fall 2003		
	# Surveyed	# Returned	Response Rate	# Surveyed	# Returned	Response Rate	# Surveyed	# Returned	Response Rate
Student	17,223	7,584	44%	17,723	5,837	34%	34,192	12594	37%
9th Grade Student	--	--	--	--	--	--	361	270	74%
Teacher	2,231	725	33%	2,231	241	11%	3,006	793	26%
Principal	238	162	68%	238	48	20%	238	78	33%
Superintendent	185	32	17%	185	21	11%	185	36	19%
Technology Coordinator	--	--	--	~238	104	44%	~238	110	46%
Parent	--	--	--	--	386	--	--	--	--

Table 2 reports the total number of interviews and observations completed during the site visits. Survey responses, site visit evidence, along with document analysis and observations and interviews by evaluation team members of regional professional development and technical assistance meetings, were the primary source materials used in preparing this Phase One summary evaluation report.

Table 2: Number of Site Visits, Interviews and Observations

Site visits	Interviews					Observations
	Students	Teachers	Technology Coordinators	Principals	Parents	
39	169	234	49	60	38	24

Findings

       This section of the report provides evaluation evidence addressing the three key questions in the Phase One evaluation:

       1. How are the laptops being used?

       2. What are the impacts of the laptops on teachers and students?

       3. What obstacles, if any, have schools, teachers, and students encountered in implementing the laptop program?

       Additional evidence on related questions is also embedded in this section of the report. It is important to note that the evidence presented here addresses a very limited set of questions, albeit important ones. Additional research is needed in the future to more fully understand the longer term impact of MLTI on instructional practices, the learning process, student achievement, and the nature of schooling.

How are the laptops being used?

       Teachers are using the laptops in a variety of ways in support of their instruction, and usage of the laptops has increased over the course of the implementation of MLTI. Figure 1 reports the percentage of teachers who use laptops at least a few times or more a week for various activities.

Figure 1: Percentage of Teachers who use the Laptop at least a few times a week or more to:
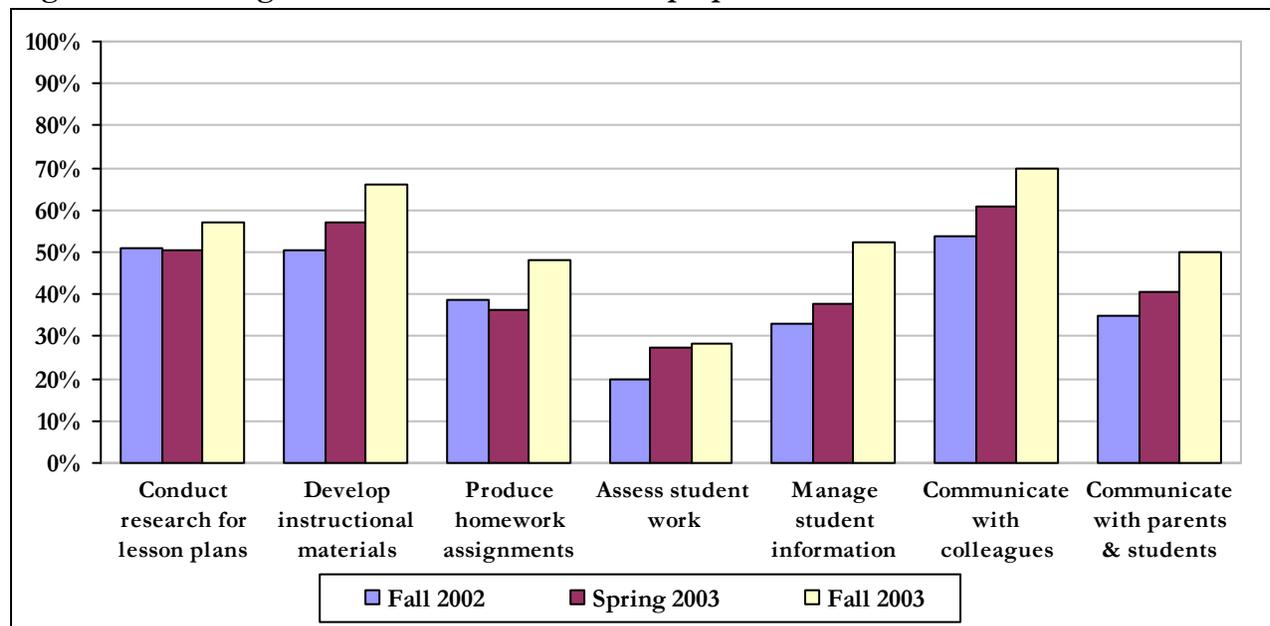
As shown in the figure, teachers use the laptops most often, relatively speaking, for developing instructional materials, conducting research related to their instruction, and communicating with colleagues. In each case, more than one-half of the teachers surveyed report using the laptops for these activities a few times a week or more. And use in these areas has increased over the 15 month period of the evaluation. Using the laptops for developing instructional materials has increased 15% to a present high of 65%, communication with colleagues has increased to approximately 70%, and using the laptop for instructional research has increased from 51% in Fall 2002 to 57% by Fall 2003.

The greatest increase in use is in the area of managing student information. In December 2002, when teachers were first surveyed about use levels, only one-third of the teachers reported using the laptops in the management of student information. By December 2003 this had increased to approximately 52%.

Using the laptops for assessing student work has also increased, but overall use levels in this area still lag considerably behind other areas. It has increased from approximately 20% to 28%, but teachers still report difficulty in using the laptops effectively in this area. For example, comments from two teachers are fairly typical of comments from many others:

> …something I haven't used in general is doing assessment on the laptop and having them email assessment work to me . . . We have emailed them some quarterly reports, like notes for their student led conferences. At the end of the first quarter we emailed them the documents to do that, then they printed out hard copies of them and put them in their portfolios to use as notes as they talk. We are still paper based I think. (Teacher Interview, Fall 2003)

> The biggest problem I have had is assessing the work that they do. When you get it back, looking at all that stuff on line and managing it and not filling up my First Class account has been difficult. I will often do something, type up a form instead of printing it out on hard copy and emailing it to them [students] and we have not had any problems with them not being able to get that. (Teacher Interview, Fall 2003)

The evidence suggests that many teachers still are under utilizing the technology for conducting and managing student assessment.

Overall, teachers' levels of use of the technology are related to factors such as teachers' experience and skill levels, and participation in professional development activities. As expected, laptop use is greater for seventh grade teachers, in almost all areas. Those teachers have one year more experience with the laptops than eighth grade teachers who received their laptops for the first time in Fall 2003. The one area where there is no difference between 7th and 8th grade teachers is in using the laptops to communicate with colleagues inside the school, across the state and country, and, in some cases, to communicate with international colleagues.

Use levels are also related to the technical skill levels of teachers. Teachers were asked to rate their skill levels from Novice to Expert, and teacher responses for Fall 2003 are reported in Figure 2. Teachers who rate their skill level as "Advanced" (i.e., able to integrate technology into class work) or "Expert" (i.e., can teach staff how to operate various programs and support technology) are using the laptops more often in instruction, assessment, and communication. On average, use levels for teachers who rate their skill level as

Figure 2: Skill Level of Teachers who use the Laptop at least a few times a week to:
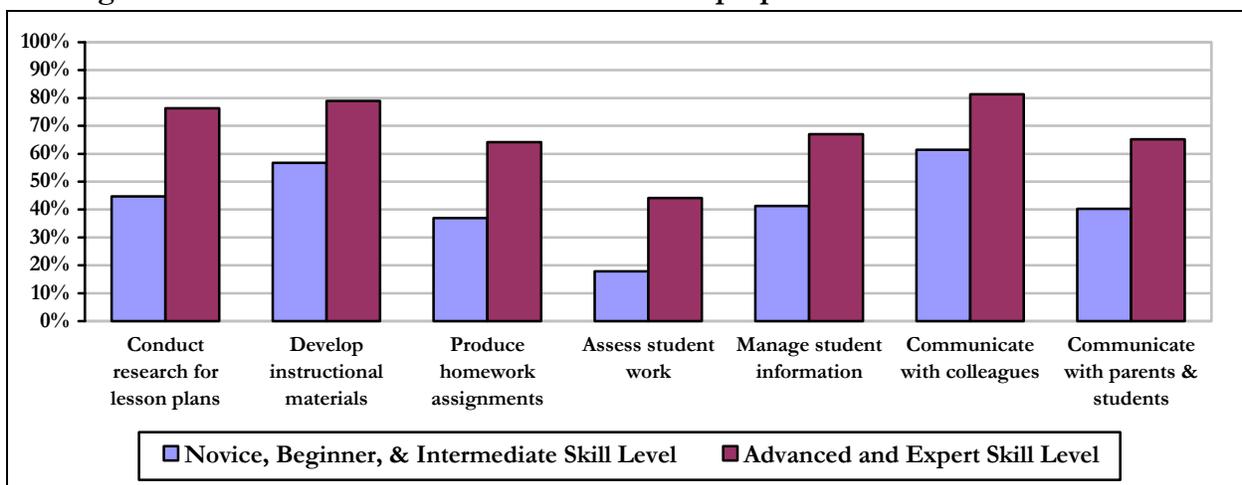
"Advanced" or "Expert" is 20% to 30% higher than those reporting lesser skill levels. This evidence suggests a major factor influencing use levels is the technology literacy levels of teachers.

The evaluation evidence suggests that a third major factor influencing use levels is involvement in professional development activities. Over 90% of the teachers surveyed indicated they had participated in at least one professional development program devoted to the use of laptops, and, on average, teachers reported participating in three professional development programs. As shown in Figure 3, teachers gave the highest ratings for receiving informal help from colleagues, and over one-half of the teachers reported more formal professional development programs were also effective.

Figure 3: Percentage of Teachers who responded "Effective" or "Very Effective" when asked to rate the following Professional Development activities:
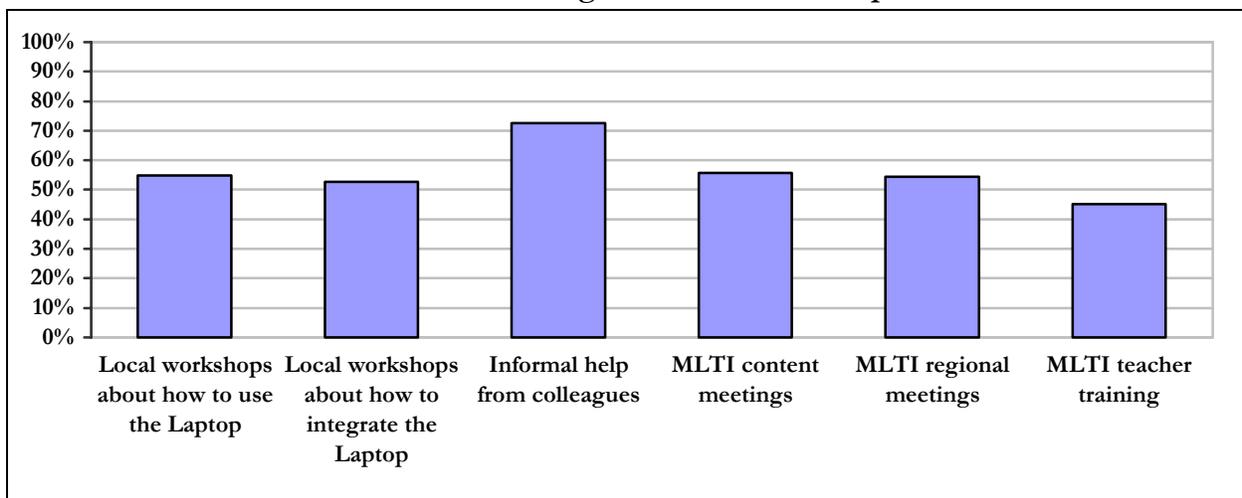
With the one exception of the MLTI Teacher Training workshop, 53% to 56% of the teachers rated local district and in school level workshops, content area meetings, and regional meetings "Effective" to "Very Effective" in helping them learn how to integrate the laptops into their instructional programs.

Additionally, the amount of participation in professional development programs are related to use levels. Figure 4 reports use levels for two groups of teachers; those who have attended fewer than four professional development activities, and those who have attended four or more activities. Use levels are higher in all areas for those who have participated in more professional development workshops and activities. For those who have participated more, use levels range from 6% (assess student work) to 15% (conduct research for lesson plans) higher.

Figure 4: Amount of Professional Development Activities attended by Teachers who use the Laptop at least a few times a week or more to:

Legend: Attended less than 4 activities | Attended 4 or more activities

Categories: Conduct research for lesson plans; Develop instructional materials; Produce homework assignments; Assess student work; Manage student information; Communicate with colleagues; Communicate with parents & students; Provide instruction with the Laptop
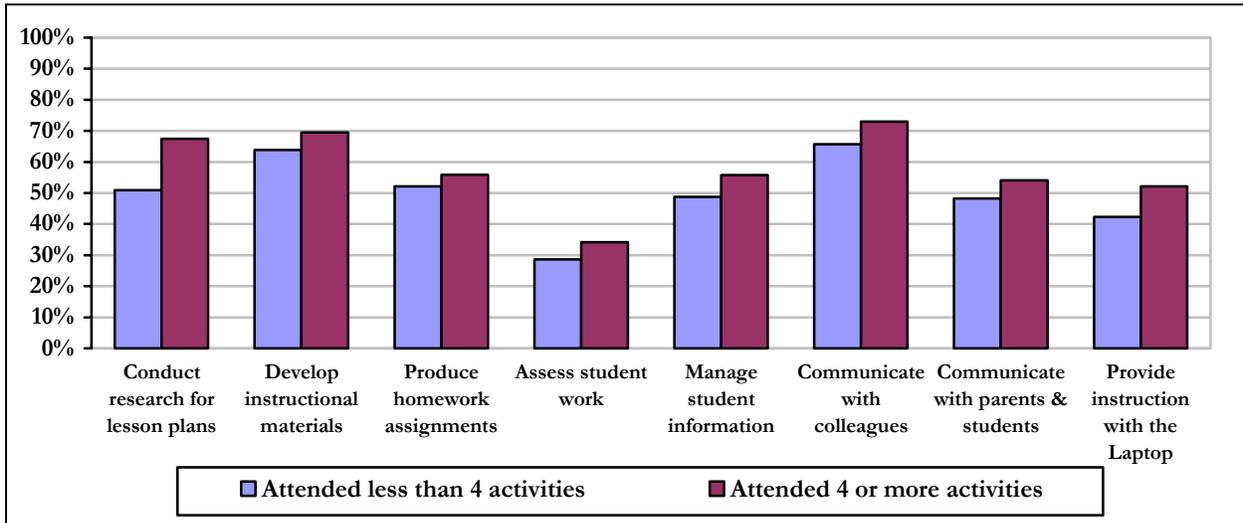
As expected, given the increased usage levels of teachers, student usage levels also have increased over the course of the first 15 months of the project. Figure 5 reports student usage in different subject areas. Overall, usage is highest in Language Arts classes (93%), Science classes (91%), and Social Studies classes (88%). Usage has increased in all five content areas, with the steadiest increase in the areas of Art and Music, and Language Arts.

Figure 5: Percentage of Students who use their Laptop for the following classes:

Legend: Fall 2002 | Spring 2003 | Fall 2003

Categories: Art/Music; Language Arts; Mathematics; Social Studies; Science
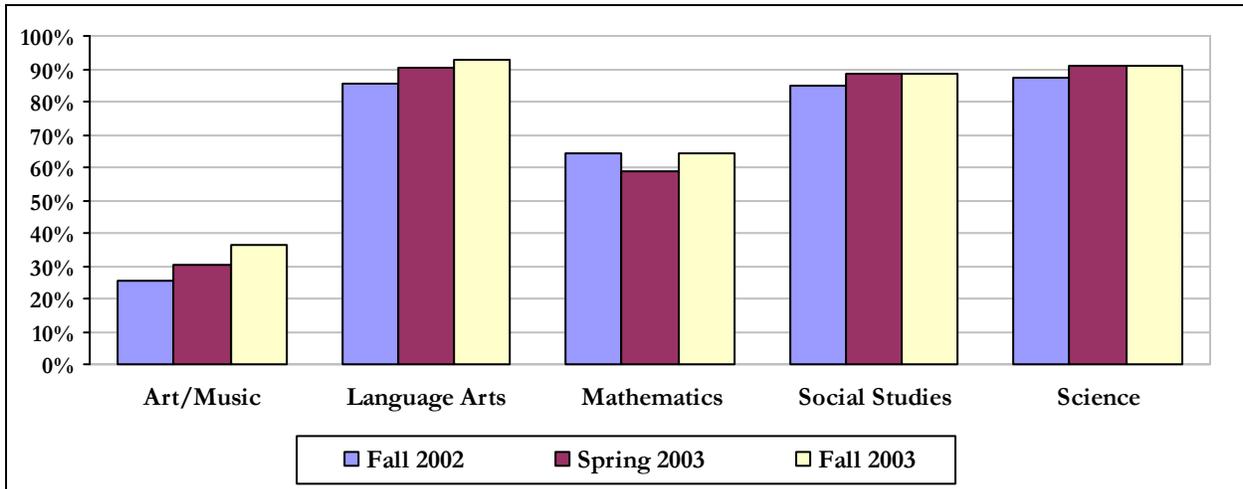
Figure 6 reports how students are using the laptops in their classes. By Fall 2003, areas where the laptops are used most often by students are in finding information (90%), organizing information (63%), and taking notes

(57%). Using them for taking quizzes and tests is lowest (36%), paralleling the information on student assessment usage levels by teachers. Usage has increased in all areas over the last 15 months, with the greatest increases seen in the areas of using the laptops for finding information, taking notes, and in working in small groups. Using the laptops for e-mail is also low (41%), relatively speaking, but this might be anticipated because only 51% of schools allow students to receive or send e-mail on their laptops.

Figure 6: Percentage of Students who use the Laptop at least once a week for the following:
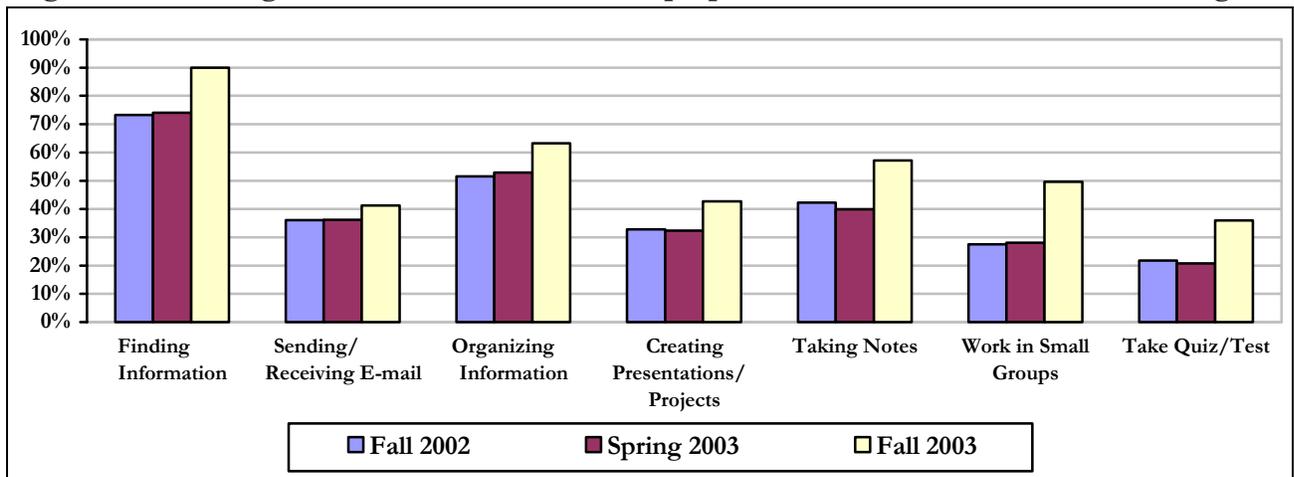
Finally, usage levels are higher in most areas for those students who may take their laptops home overnight and on non-school days. Figure 7 shows a comparison between those who may and may not take their laptops home. Generally speaking, usage is 5-10% higher for students who take them home.

Figure 7: Percentage of Students who use the Laptop at least once a week for the following:

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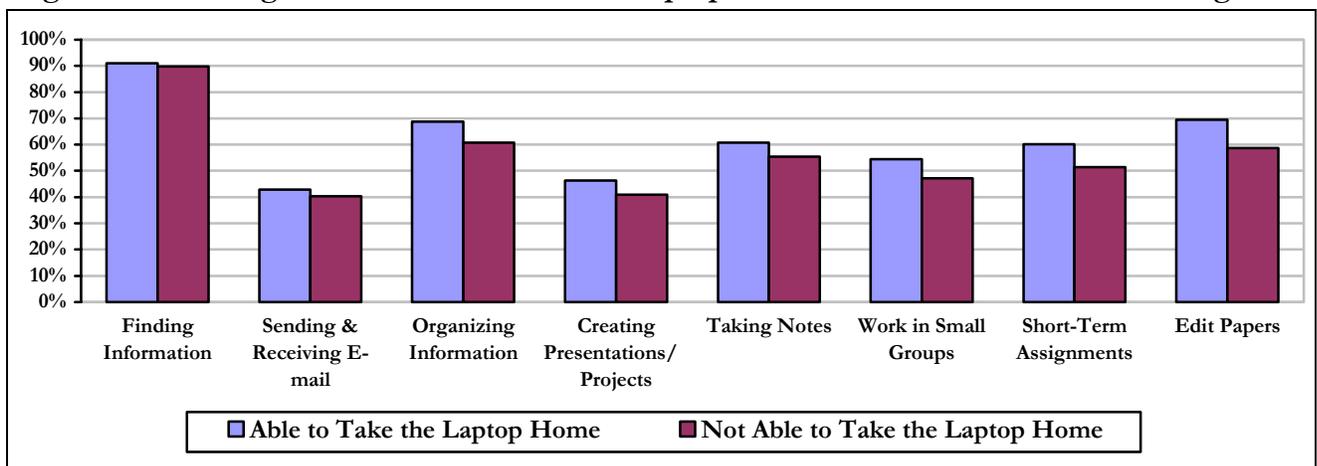
What are the impacts of the laptops on teachers and students?

Teachers report that the laptop program has had a substantial impact on their instruction. In Fall 2003, teachers were asked to indicate their level of agreement or disagreement about the impacts in several areas. Figure 8 reports agreement levels in seven key areas. Over 85% of the teachers surveyed

Figure 8: Percentage of Teachers who agree with the following statements regarding Teachers and Teaching:
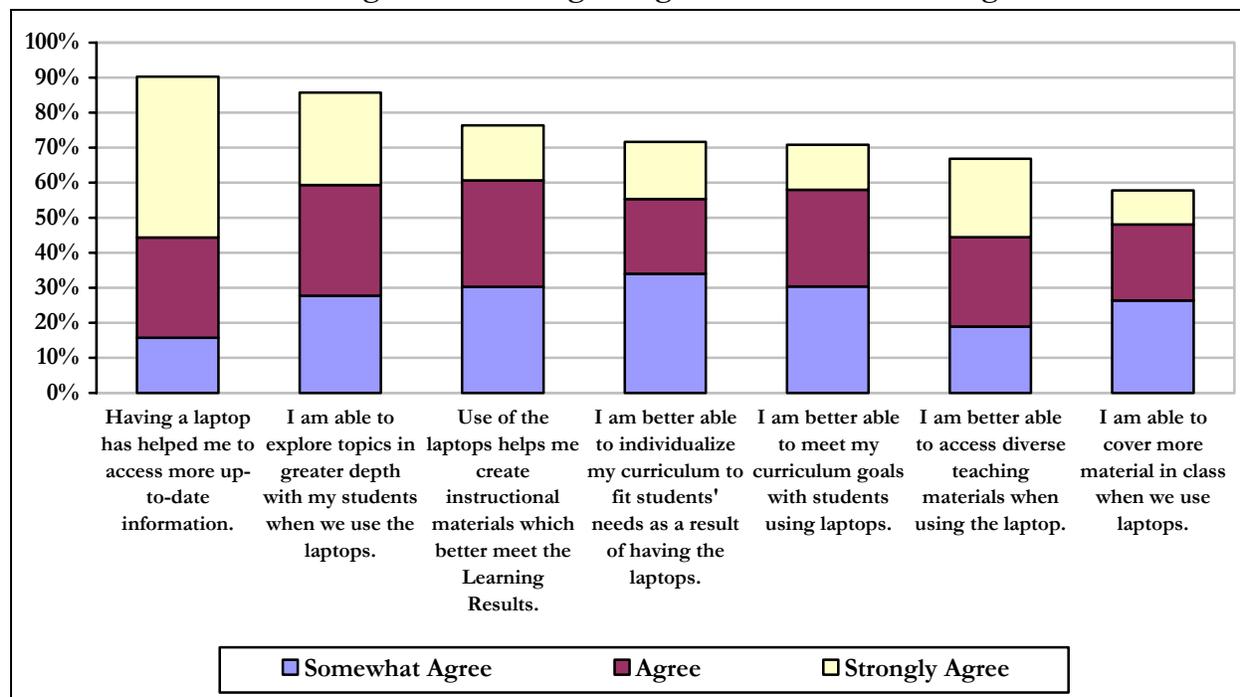
responded that they "Somewhat" to "Strongly" Agree that having laptops has helped them access more up-to-date information, and has helped them explore content in greater depth with their students. For example, one teacher reported:

> *The MLTI has completely changed my approach to teaching Science. The students have regular access to updated information on a daily basis. They use the computer to collect data, conduct research, investigate the validity of information, make cross references, etc. These tools have also allowed students to communicate and present material with more depth, knowledge and creativity. The programs provided on the laptops are easy to learn and students always help each other. I would never want to go back to teaching without them. We have come to depend on all they offer.* (Teacher Survey, Fall 2003)

Two other typical examples of comments made by teachers were:

The laptops have been an incredible teaching and learning tool. It's like having an interactive textbook that never becomes obsolete. Students have produced quality work that taps into higher level thinking, such as analyzing, comparing, contrasting, evaluating, and integrating. (Teacher Survey, Fall 2003)

I love being able to do research in the classroom spontaneously. An example was when a student did a report on Yasar Arafat. She mentioned that he was the leader of the PLO. I could tell that no one had any idea of what the PLO is. We went online and students were amazed to discover that the PLO is a terrorist organization and that Arafat has called for bombings and assassinations at various times. If we had not had laptops, they would not have been able to discover this quickly or on their own. That is a prime example of success. They were so excited to discover this on their own, not just have me (the know-it-all) tell them. (Teacher Survey, Fall 2003)

Over 70% reported that having laptops helped them to more effectively meet their curriculum goals, and individualize their curriculum to meet particular student needs. One teacher described the benefit of the laptops this way:

I would say the [benefit is the] quick access to information that the kids are able to get. It makes your class speed up and [students] are able to get information that used to take them a lot longer to retrieve. Projects are quicker, and we're able to cover more curriculum. I would say that's been the biggest asset for me. (Teacher Interview, Spring 2003)

Several teachers remarked about how the laptops have helped them individualize their curriculum and instruction more. One remarked:

I like the individuality that the laptops provide. Lockstep is not required. Students can explore… and create new and creative products to share their learning. (Teacher Survey, Fall 2003)

Another reported:

It has freed me up to be more individualized with the kids. I can't imagine going back. I went down to a conference to see what other folks are doing in other states and how they are attempting to do some of these best practices in middle level education. They are doing them but they are really hampered by not having the means to use this technology that we have. So, I guess I couldn't even

imagine having to go back to not having them. It would be sort of like the allegory of the cave. I know that I would not be able to do the things that I would like to do. (Teacher Interview, Spring 2003)

Additionally, more than 3 out of 4 teachers surveyed indicated that the laptops helped them better meet the Learning Results. In describing this impact, one teacher commented:

A text book, particularly a social studies textbook, becomes obsolete or very dry after a short period of time and because the world wide web and the wireless access that we have here, it's an almost unlimited amount of resources that we can access. It gives the teacher a lot more flexibility to find things that are relevant, that tie into the curriculum, that tie into the Learning Results, whereas before I felt more constricted in what I could do. (Teacher Interview, Spring 2003)

Another said:

I am not using one [a textbook] this year because of the laptops and because I find that I can accomplish my curriculum without using one. And so when I look at the Learning Results, I put together units that use the laptop as a tool to help accomplish those units. (Teacher Interview, Spring 2003)

Further analysis of this data indicates that the more experience the teachers have with the laptops, the greater the impact on their curriculum and instruction. Figure 9 reports some impacts for 7th grade teachers and 8th grade teachers, individually. In all cases, impact is greater for 7th grade teachers,

**Figure 9: Percentage of Teachers who agree
with the following statements regarding Teachers and Teaching:**

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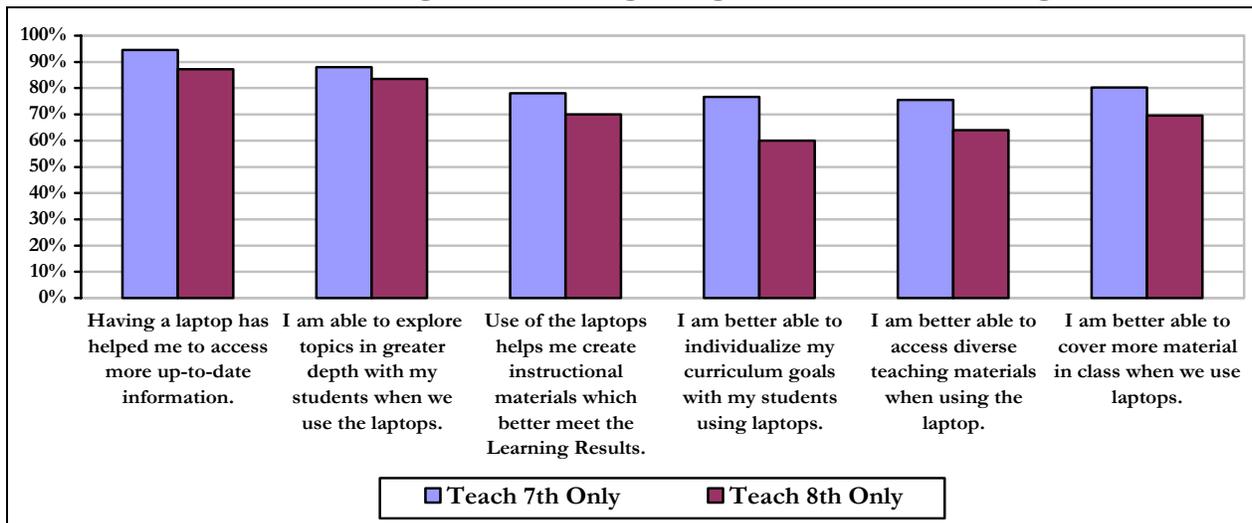
teachers who have been using the laptops over a year. For example, impact levels are 10 to 17% greater in the areas of: (1) being able to cover more material in class; (2) individualizing curriculum more; (3) getting better access to more diverse teaching materials; and (4) meeting curriculum goals.

The impacts on students and their learning have also been substantial. Figure 10 reports students' perceptions in several areas. As shown in the figure,

Figure 10: Students' Attitudes and Perceptions:
Percentage of Students who Agree with the following:
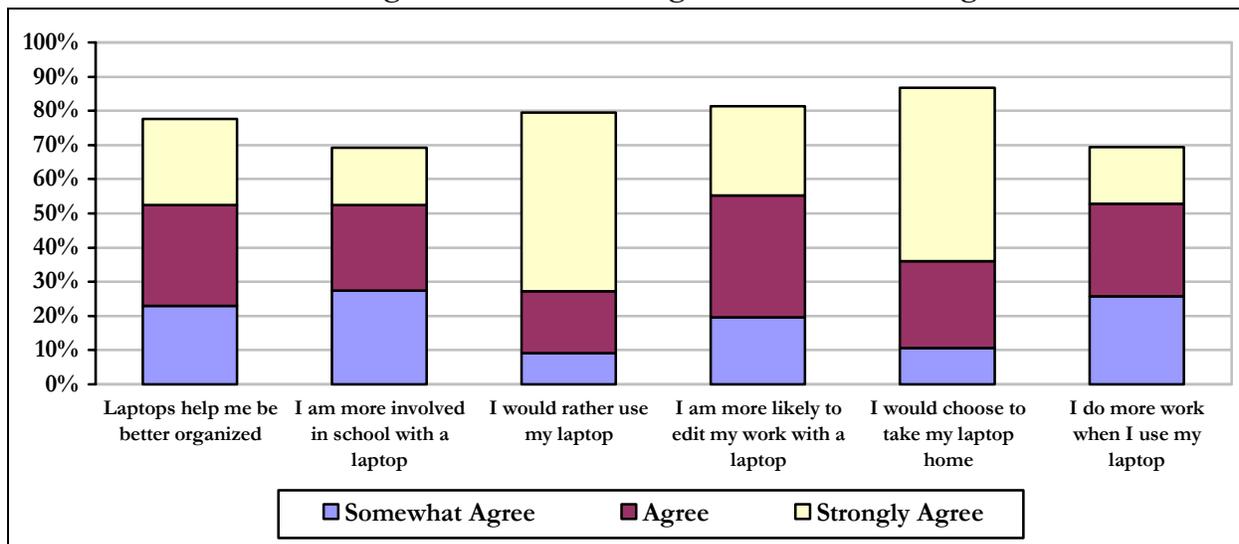
over 75% of the students surveyed in Fall 2003 indicated their laptops helped them be better organized, and that they are more likely to edit their work with laptops. Almost 70% indicated they do more work when they use their laptops, and are more involved in school and with their classmates. Typical student comments include:

> You can just click spell check. It checks and tells you what you spelled wrong and you can just look under it and say, oh, okay, I spelled that wrong. I've learned a few words and how to spell them from the spell check because I spelled them wrong and I just kind of learned. As I keep making the mistakes the spell check keeps coming up and I eventually start spelling it right. (Student Interview, Spring 2003)

> It's helped my writing a lot. That's probably my biggest improvement. Because I wouldn't really want to read it over and over and over again...like check every word...And now I have spell check and I have a thesaurus right on there. I'm big into poetry and

I like writing poetry. It's a lot easier to do that...write a little and use the thesaurus to find a better word. (Student Interview, Spring 2003)

I think it's . . . for me it's a lot more fun, because I usually just blank out and daydream when I'm looking at a book, not paying attention . . . I love working on the computer. It's right there in front of us and most of the information is colorful and alive. World Book has music in the background that plays. It's a lot of fun. Everyone talks about what we're working on now, instead of what our plans are this weekend. (Student Interview, Spring 2003)

Last year we had to go to the computer lab down the hall or we had to go down there by ourselves and if there was a class going on there or if there were people in there you were out of luck, you couldn't do your research. With these you just open up your laptop and boom, the Internet is there. Your e-mail is there and your slideshow presentation things are ready to be done and everything is just there. It's much simpler. (Student Interview, Spring 2003)

Figure 11 reports some additional student perceptions about the laptops.

Figure 11: Students' Attitudes and Perceptions:
Percentage of students who Agree with the following:
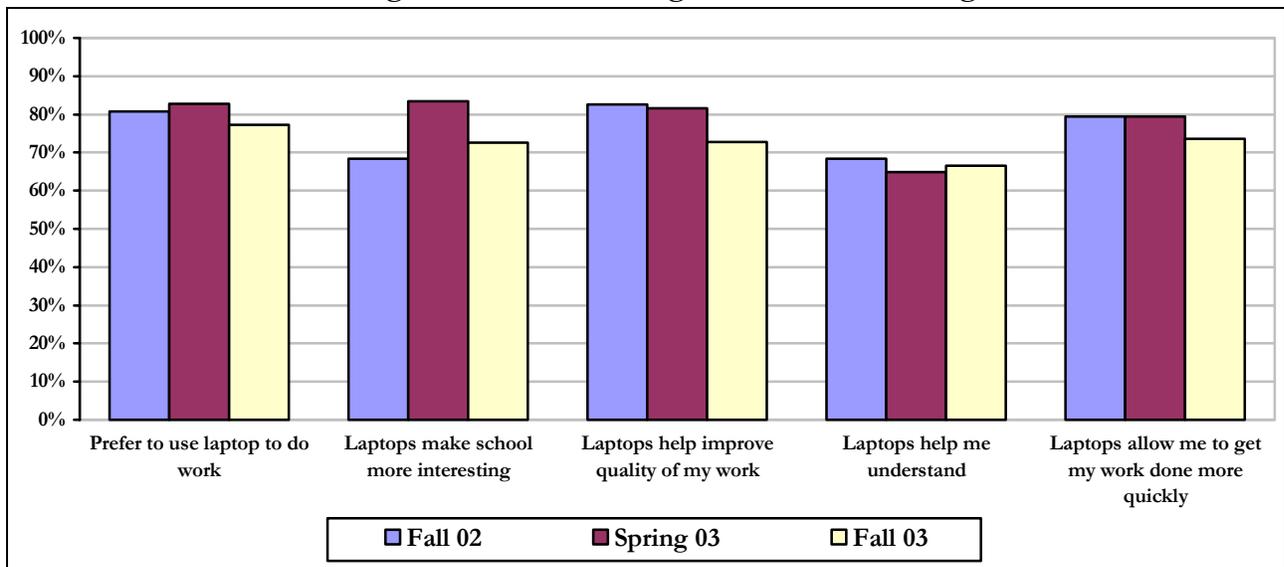
Teachers concur with these student assessments. One teacher commented:

Students are able to access the specific level of content that they are comfortable with. Sharing what they learn on line with classmates is absolutely top-notch instruction and learning, all at the same time. (Teacher Interview, Fall 2003)

And another remarked:

> *Use of the laptops to enhance writing skills for kids has been a great asset for me. Student ability to draft, revise, and edit written work has been greatly expanded with this program. Students can now also access information for use in written work much more easily than before.* (Teacher Survey, Fall 2003)

Although levels of agreement have fluctuated somewhat over the course of the Phase One evaluation, over 70% of the students report that they prefer to use their laptops, that the laptops allow them to get their work done more quickly and with better quality, and that the laptops make school more interesting. And two-thirds of the students report that the laptops help improve their understanding of what they are learning. Typical student comments include:

> *Well, I think that it makes them [classes] a lot more interesting because before hand we had to use mostly outdated textbooks and so the laptops are a lot more up-to-date and actually it does help you motivate, motivates us a little bit because it's a lot more interactive.* (Student Interview, Spring 2003)

> *I've always found it fun and now it's even more fun because I'm just learning even more. You learn what you are supposed to learn in class plus you learn more about computers. So you're learning 2 in 1 by accident. That's pretty cool. A lot of the people I know it's even better for them because now they're even more interested.* (Student Survey, Fall 2003)

> *When people do the same topic, you'll have some of the same information, but then someone will find this wicked interesting fact that no one else knows, and you'll be, "Wow, I didn't know that." And everyone will be kind of surprised that you found that.* (Student Interview, Fall 2003)

> *You are able to learn quicker because you actually have resources that you can use. Like if you don't understand math, we found a site that teaches us everything step by step.* (Student Survey, Fall 2003)

Interestingly, 7th grade students' perceptions are even higher, as shown in Figure 12. Consistently, 7th grade students agreement levels with the impact statements are approximately 10% higher than their 8th grade counterparts.

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Figure 12: Students' Attitudes and Perceptions:
Percentage of students who Agree with the following:
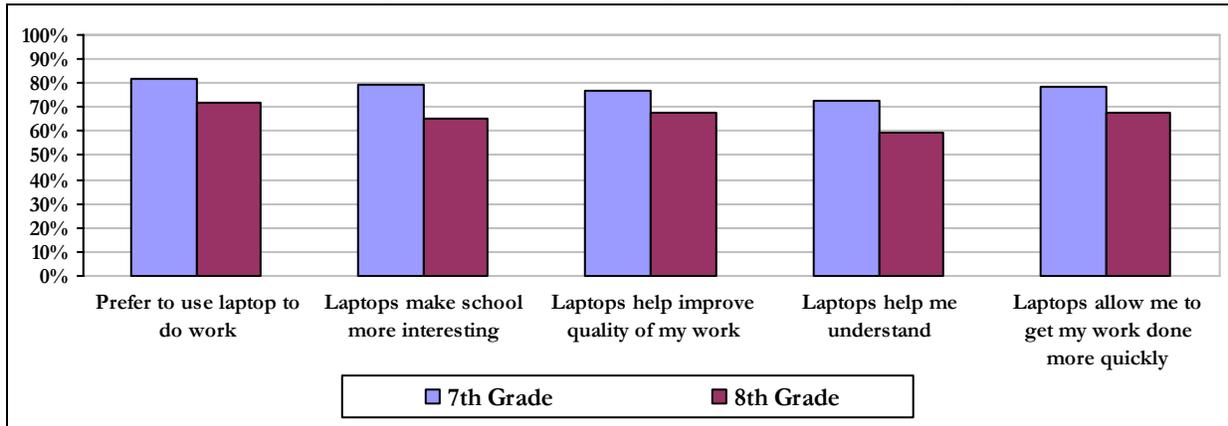
This suggests that some perceptions of the impacts of the laptops, like perceptions of many innovations, are somewhat artificially high initially, and that they become more stable and accurate over time. Given this phenomenon, it is particularly noteworthy that a majority of 8th grade students who have been using the laptops more than one year still believe the laptops improve the quality of their work, help improve their understanding of what they are learning, and make school more interesting.

Teacher opinions about the impact of the laptops on their students support students' perceptions, and, in some cases, are even more positive. As may be seen from the information in Figure 13, two-thirds of the teachers

Figure 13: Percentage of Teachers who agree with the
following statements regarding Students and Learning:
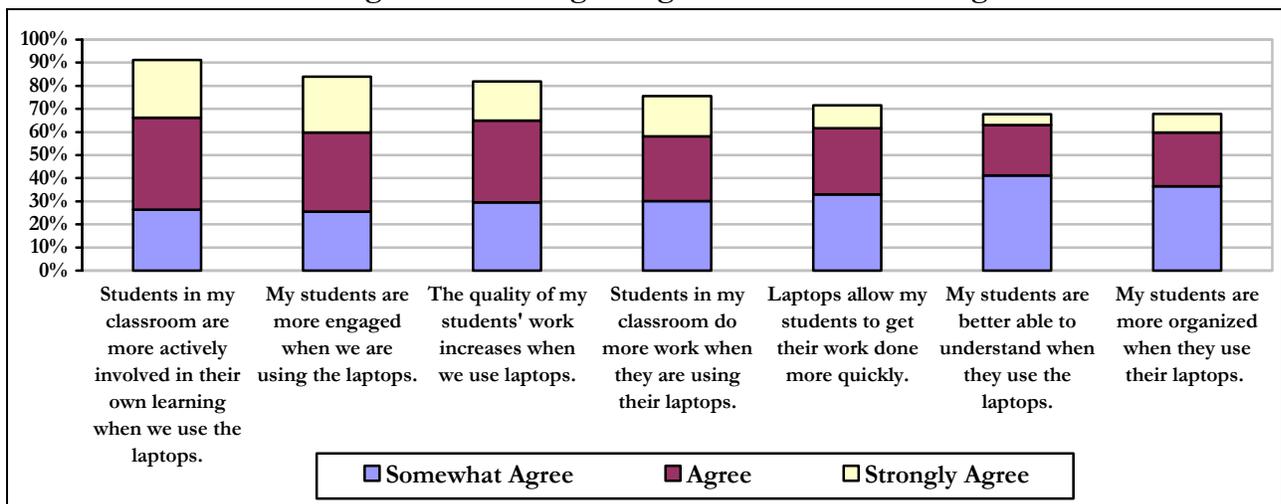
believe that with the laptops students are more organized, they do more work, and that their understanding improves. Furthermore, over 4 out of 5 of the teachers that teach with the laptops, report that students are more engaged in their learning, more actively involved in their own learning, and produce better quality work. Several teachers describe these impacts this way:

> *I've experienced the joy in watching my students discover facts about a certain topic that no one knew before. It's also wonderful to see all students engaged at the same time.* (Teacher Survey, Fall 2003)

> *I see students being able to create wonderful projects to demonstrate their learning. Success in creating quality work is building a sense of competence in many students which increases their engagement. We have a long way to go however, in truly integrating technology into our curriculum and instruction.* (Teacher Survey, Fall 2003)

> *The kids are excited to come to class and get to work on a project or writing piece if their able to use a laptop. Some have become pretty good teachers themselves as they help others in the classroom.* (Teacher Survey, Fall 2003)

> *One success story involved a complicated lab where a good deal of data was collected. From this data the students had to find their own group's average speed, their class average speed, and the entire team's average speed in the experiment. In the past using calculators, this took an entire day and then required homework. The results were not conclusive and often required redoing the averaging. This year the students used Appleworks to create a spread sheet for their group's data and used "auto average" along with the calculator to come up with the group average speed in a matter of minutes. … We were done in 30 minutes and our results were accurate. The students were pleased with the accuracy of their work, the swiftness of completing the task, and we could focus on what the results meant without struggling through the computational nightmare I had experienced in the past! It was fun! It was a great tool to move learning forward!* (Teacher Survey, Fall 2003)

Teachers report that these improvements in student engagement and participation are evident for all types of students. Figure 14 reports teacher perceived improvement in many areas for all students. Particularly interesting are the improvements teachers report for at-risk and special needs students.

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Figure 14: Teachers who reported Slightly Improved to Improved Impact on Students in the following areas:
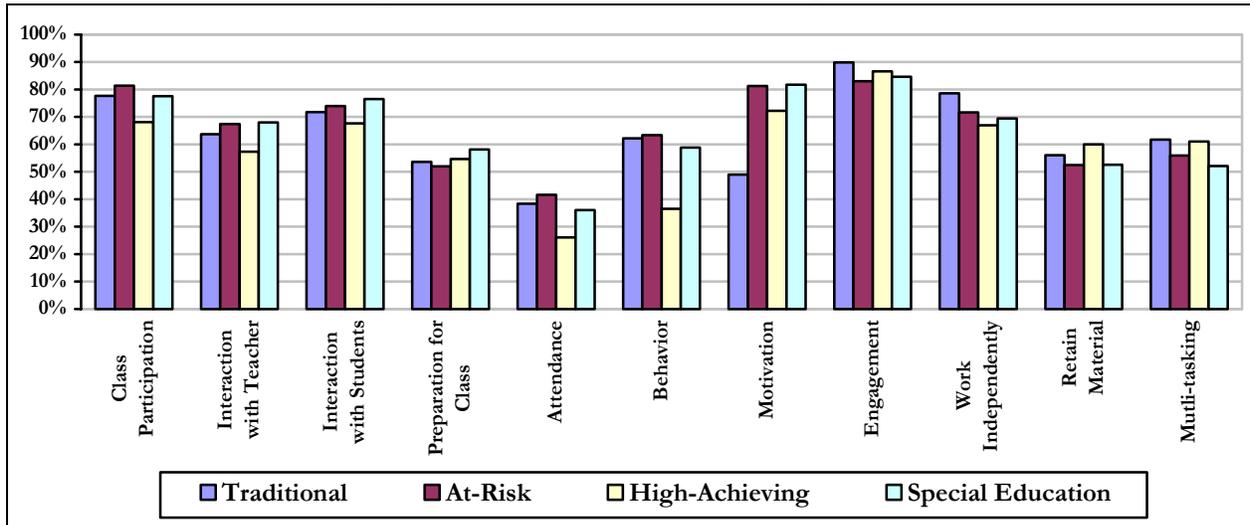
For instance, for at-risk students, teachers report their attendance and behavior has improved, along with their motivation, engagement, and class participation, all attributes known to be pre-conditions of learning. Also, important is the fact that over 70% of the teachers report that the levels of interaction between at-risk students and other students has improved. Typical teacher comments were:

> *I think that the kids who aren't typically successful in classrooms feel a little bit empowered. They know stuff about it [the laptops]; they interact with each other a lot-especially if there are questions. They've figured out that I'm fine with saying 'I don't know' so they're fine with asking each other and they can go around and help each other.* (Teacher Interview, Winter 2003)

> *It gives those kids who weren't involved before; they are right in there. It's a teaching and learning thing. It gives me the chance to allow them to shine, which I couldn't have done before. It would have been really hard to find things that I could have involved them in to get them interested in school. Now, they are here everyday and they like being able to help.* (Teacher Interview, Spring 2003)

> *Students who do not do well on paper/pencil tasks shine when using their laptops; multimedia projects allow opportunities for authentic assessment for students of all abilities to show what they have learned; online access to simulations, interactive sites, and real scientific and mathematical information makes the learning come alive for students and the teaching more rewarding too.* (Teacher Survey, Fall 2003)

> *Since we started using the laptops this year, I have students who are willing to work who did nothing beforehand. They are intrigued and willing to produce quality work. I, too, enjoy using this with them.* (Teacher Survey, Fall 2003)

Clearly, the laptop program has had many positive impacts on at-risk students as well as other students.

In the case of special needs students, the impacts are also substantial. The evidence in Figure 14 indicates teachers have seen improvement in motivation, engagement, and participation of special education students. And a separate survey of special education teachers supports these findings.

In May of 2003, a survey was mailed to all middle school special education teachers to gather information about their use of the laptops and their perceptions of the use of laptops by their special education students. Two hundred and ninety-three surveys were returned for a usable return rate of 39%. Special education teachers were asked to rate the impact of laptop computers on a scale that ranged from 1 = Declined to 6 = Improved. The data was combined into three categories of impact: Declined, No impact, and Improved, and the evidence indicated that all aspects of classroom performance were perceived to be improved as a result of the laptops. Figure 15 reports special education teachers' perceptions regarding the impact of laptops on students with disabilities to be in the areas of class preparation and participation, interaction with students, interaction with teachers, organization, and attendance.

Figure 15: Percent of Special Education Teachers' Ratings of Laptop Impact on Students' Performance in Selected areas:
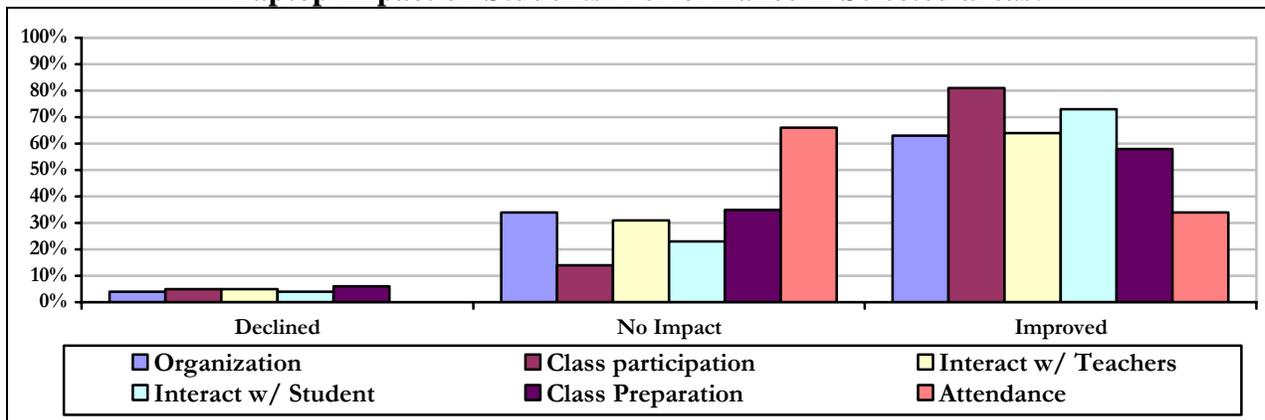
Typical teacher comments included:

> *I think one of the biggest changes I saw that first year was my kids that are ADHD. I had this one boy, two minutes was his attention span. The goal was to be able to focus for two minutes. We struggled to get him to focus for two minutes. When we did our research paper and we were using Inspirations and he had that computer screen up in front of him and had all that visual information, he was the first one to finish his report. It was probably the only quality piece we got out of him that year. He was a kid that a regular education teacher did not want to see at all come through their door, and he got invited to come into the regular ed classroom to teach the other students and teacher how to use it. I just didn't realize how important that visual piece was. When the screen is up, he can focus on that screen.* (Teacher Interview, Spring 2003)

> *As a Special Education teacher, the benefits from the implementation of the laptops into our curriculum have been overwhelming. The students are writing more, are becoming more independent in their researching and editing techniques and have taken an overall improved interest in learning. I can't imagine going back to the days when my entire caseload shared one computer in the back of the resource room. The electronic roadblocks and technical difficulties pale in comparison to the tremendous payoffs of this program.* (Teacher Survey, Fall 2003)

> *Last year, my students made iMovies on critical thinking of pseudoscientific topics. One special education student produced an absolutely beautiful movie with wonderful information, graphics and sound effects. She did it herself and was mighty proud. Her movie was shown as one of the examples for the entire team of students. It was so inspiring to see a student who regularly struggles, use a tool where her talents could shine through and she could feel positive and strong in the classroom. Thanks to laptops, she was able to do this on her own.* (Teacher Survey, Fall 2003)

The evidence clearly suggests that the laptops have benefited many special education students.

Another way of assessing the impacts of the laptops on students and learning is to examine the impacts once the laptops are no longer available to students. As indicated in the Background section of this report, 7th grade students in nine Exploration Schools received their laptops in Spring 2002. Most of these students were also given a laptop to use in the 2002-03 school

year, their 8th grade. But they were not given laptops in Fall 2003, the beginning of their high school year. These students were questioned in Fall 2003 about their continued use of computers and the impact of not having laptops. Surveys were collected and analyzed from 270 students, which represents 74% of this special subset of ninth grade students.

Figure 16 reports Fall 2003 use levels in different subject areas by all MLTI middle school students and the subset of 9th graders who attended the Exploration schools. As shown in the figure, usage is down for the ninth

Figure 16: Percentage of Students who use a Computer/Laptop for the following classes:
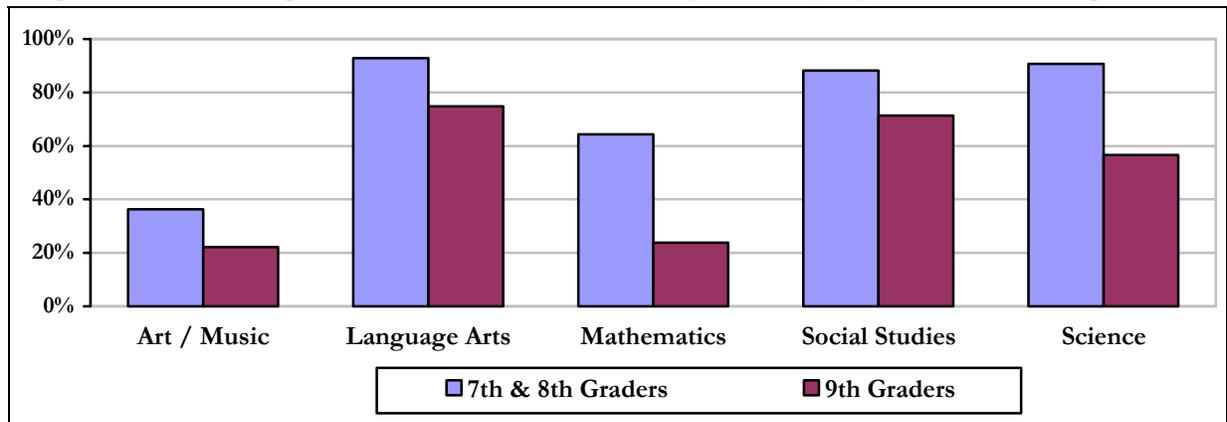
graders 15-20% in language arts, social studies, and art and music, but the greatest decline (over 40%) is in mathematics and science classes. And approximately one half or more of the 9th graders reported they did more work, quicker, and of higher quality when they had laptops.

Figure 17: Students' Attitudes and Perceptions:
Percentage of 9th Grade Students who Agree with the following:
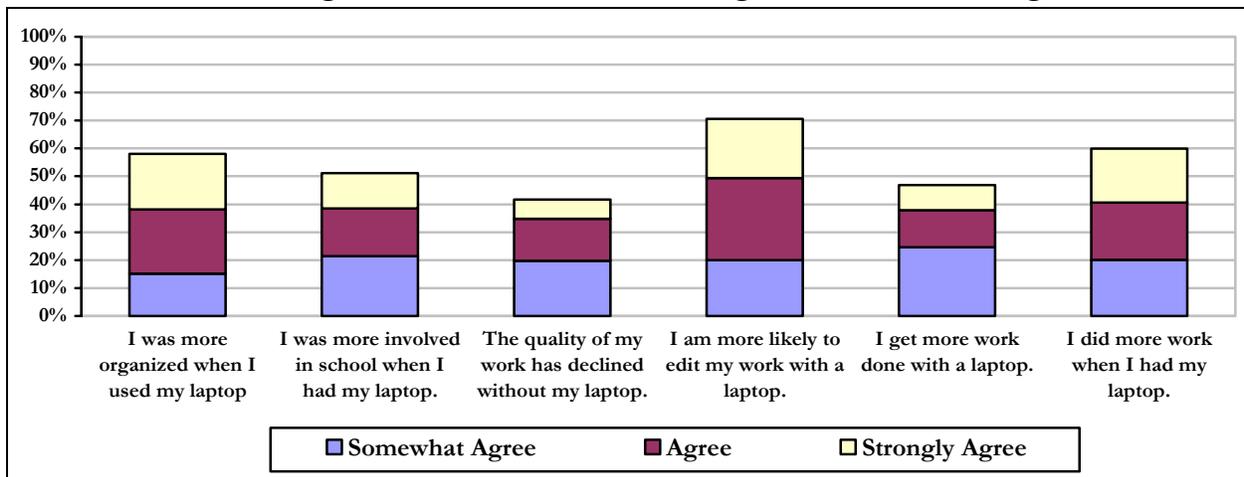
When asked why they would like to have a laptop in high school, typical comments included:

> I _would_ want laptops in school. As one of the main presenters / helpers with the laptop, I know a lot about the process. Now that I am in high school, I have _no_ time to go to the computer lab / library. So it is very hard to get work done in school. At home it is also challenging, because my computer is very old, and is not high quality. Plus, my family is always on it. Laptops make students able to get their work done no matter what, and are very good for students without computers at home. Plus with the high school ratio of students/teachers high, there is no time to get extra help. Laptops provide information when needed, and technology and learning will definitely rise with the laptops. (Ninth Grade Student Survey, Fall 2003)

> I would [want a laptop in school] because then it would be easier for me to do my work and I can be more concentrated on it [homework] and get better grades. Having the laptops was the best thing in school. You could go online anytime and not have to ask and go somewhere. You could use your laptop for anything needed and everything was done on time. (Ninth Grade Student Survey, Fall 2003)

> I would want a laptop because I became more involved with the class and the teacher. It's a lot easier to have a better understanding of the class as well. (Ninth Grade Student Survey, Fall 2003)

It is evident from these survey results that these 9th graders felt the quantity and quality of their school work had declined once they no longer had laptops.

Finally, what impact has the laptop had on attendance, behavior, and achievement? Information in the figures above indicates that teachers believe the laptops have influenced student attendance, behavior, and learning in very positive ways. Evidence from the principal surveys indicates that principals agree with their teachers. Approximately 30 to 40% of the principals report that the laptop program has had a positive impact on student attendance and behavior, and over 70% report positive impacts on student motivation and learning.

In addition to survey data, anecdotal evidence abounds regarding the positive impact the laptop program has had on student attendance, behavior,

and achievement. Typical comments obtained from interviews and surveys include:

> *I do see that behavior is excellent. They've [the students] shown a lot of respect for the laptops and when they're working with the laptops, they're on task as compared to some of the curriculum that is not using the laptops. I mean, you walk by the room when they are all on the laptops doing something and it's pretty impressive. . . I think that the laptops keep them more focused and therefore better behaved.* (Principal Interview, Spring 2003)

> *I think it's going to have a positive impact on student learning. We've noticed for instance those students that had attendance problems in the past. They don't appear to have attendance problems now.* (Principal Interview, Winter 2003)

> *My students love to help each other. Attendance has improved. Quality has improved. When one student learns how to do something different, knowledge spreads like wildfire.* (Teacher Survey, Fall 2003)

However, while anecdotal evidence has been readily available, the availability of <u>concrete</u> data regarding the initiative's impact in these areas is still sparse. During the Regional Principal, Technology Coordinator, Teacher Leader meetings held throughout the state in the Fall 2003, individuals were asked to fill out a short survey which asked schools if they were able to track data before and after the laptop (i.e., attendance trends, disciplinary referrals or detentions, and grades and achievement). Of the 154 schools who responded to the survey, 114 report that they were able to track data for at least one of these three areas. However, due to time constraints at the school level, as well as difficulties gathering non-computerized information, data was received by the evaluation team from only 8 schools. Of these eight schools, 5 have seen less absenteeism and a decrease in disciplinary referrals and 3 have seen improvements in academic achievement, as determined by grade point average and/or honor roll status. For example, one school noted a drop in disciplinary referrals from 61 during the 2001-02 school year to 47 during the following year. Another school reported a decline in absenteeism from almost

2100 total days absent in 2001-02 to just over 1400 days absent during the next school year.

Thus, although preliminary evidence suggests the laptops may be having positive impacts on student's academic performance, and numerous reports about the benefits of laptops in increasing student attendance, decreasing disciplinary issues, and improving academic achievement abound, the limited amount of concrete evidence to support these claims indicates substantial further research is needed in this area.

What obstacles, if any, have schools, teachers, and students encountered in implementing the laptop program?

As discussed above, implementation of the laptop program has had many positive impacts on teachers and students. But like all new innovations, schools, teachers, and students have encountered some obstacles. Most obstacles fall into one of three broad categories: (1) professional development, (2) logistics, and (3) expenses.

Professional Development: One message heard consistently by educators during the 15 month Phase One evaluation is the lack of sufficient time for teachers to become more skilled technically in using the laptops, and more skilled pedagogically in integrating the laptops into their instruction. A majority of the teachers surveyed feel they are supported in acquiring these skills, but that the time needed to acquire the skills is very limited. Information contained in Figure 18, on the next page, indicates that over 4 out of 5 teachers report that their administrators actively encourage and support professional development activities, and encourage teachers to integrate the laptops into their curriculum. In addition, 60 to 75% of the teachers report that their technology coordinator, teacher leaders, and the MLTI team have provided them assistance. Some typical comments made by teachers include:

> *He's [the principal has] been very encouraging. He's kind of a motivator for the teachers, providing us opportunities for learning about how we can use the laptop. He's the one who has encouraged many of the teachers here to go to these regional meetings and he's*

encouraged some of us to be participants as much as we can at the state level. (Teacher Interview, Fall 2003)

It's [the school is]an amazingly supportive place, I mean it really is, from the superintendent's office down, people try to make it work and try and make it good for the kids. We got those computers out the first day of school last year, same thing this year. (Teacher Interview, Fall 2003)

We need professional support in the classroom, not the "here to put the fire out" response from our one support person who arrives only when there is a problem. (Teacher Survey, Fall 2003)

The biggest challenge I've experienced is in finding the time to work with my laptop myself and plan for integration of laptops within my program. I need more time to keep my website updated and to research and experiment with new uses for the laptops by students. The tool is great, but I don't have time to fully explore its possibilities. (Teacher Survey, Fall 2003)

Figure 18: Percentage of Teachers who agree with the following statements Regarding supports in Technology Implementation:
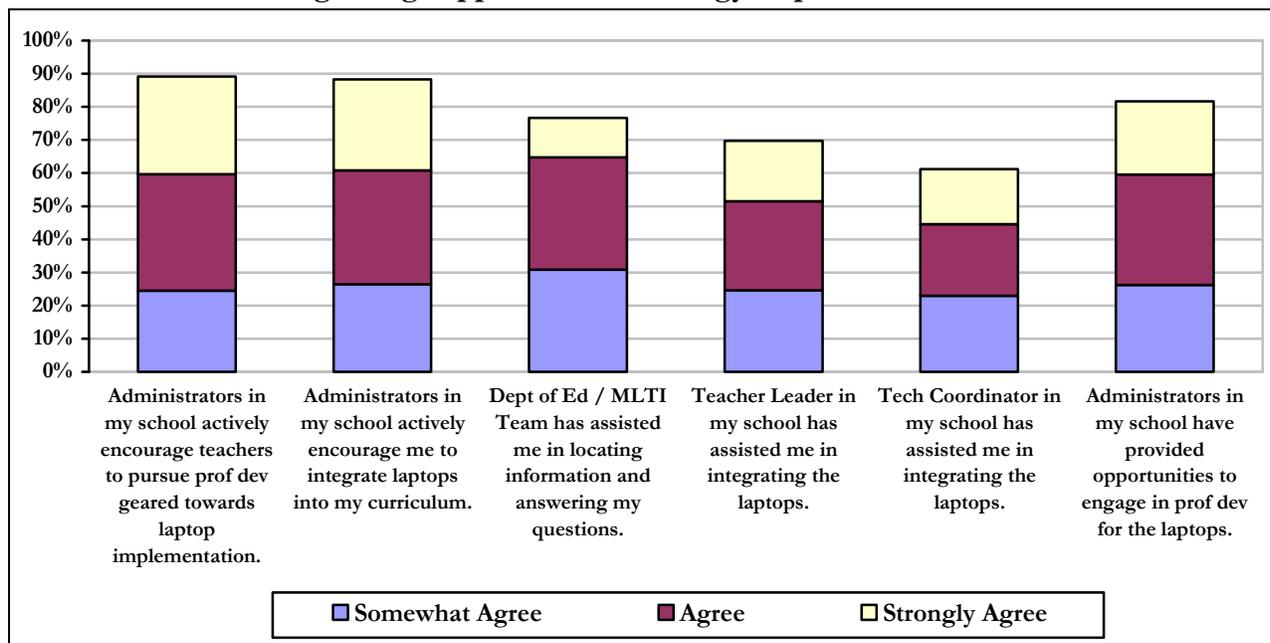
Logistics

Several of the problems encountered during this initial implementation phase are of a logistical nature, and while some schools have overcome these problems, some schools have not. One such area is technology support.

A majority of the teachers surveyed reported their school and/or district technology coordinators were helpful, but not always accessible. Almost 70% of the teachers surveyed indicated they would like more direct technical support for the laptops. One teacher voiced an opinion felt by many:

> *I feel that in our particular school, the lack of technical support on a regular basis has truly hindered the full use and potential of these computers in our school. I wish the state could mandate some guidelines for schools to have an in-house professional. We have run in to so many technical problems that it seems almost pointless to use the computers. Our building really needs someone here on a weekly basis to provide technical support.* (Teacher Survey, Fall 2003)

Other typical teacher comments include:

> *The laptops have been extremely useful when operational. Unfortunately, we continue to have difficulty keeping them on-line. Our technical support has not been sufficient to allow the program to work smoothly and consistently...our lack of on site technical support puts a damper on the "usability" of the machines.* (Principal Survey, Fall 2003)

> *The biggest challenge has been the lack of technical support when problems arise. It seems as though the state did not allocate sufficient funds for this important support aspect of what otherwise is a wonderful program.* (Teacher Survey, Fall 2003)

But two-thirds of the technology coordinators do not believe there are adequate resources allocated in their district for technology support. Two-thirds of the technology coordinators hold another position in their school or district, in addition to being the MLTI technology coordinator, one-third of these coordinators are responsible for providing services to more than one school, and only one-third of the superintendents surveyed indicated they were adding new technology personnel as a result of the 8th graders receiving laptops.

One positive note in this area is that approximately one-half of the schools report that the creation of student technology support teams has proven very beneficial. These teams, many times referred to as iTeams, are comprised of a group of students who are all interested in learning more about the laptops

and helping their classmates and teachers in using this technology. Student iTeam members are typically brought together on a regular basis to receive training in the various laptop applications, in addition to troubleshooting common technical problems. In the classroom, these students act as technology support persons, helping out in the classroom while at the same time improving their own technological and interpersonal skills.

Some schools have also encountered some usage problems because of local decisions. For example, while 70% of the teachers surveyed would prefer that their students be allowed to take their laptops home, only about 40% of the schools actually let students take them home. Consequently, some teachers and students alike, report having difficulties in assigning and completing homework when the laptops are not allowed to go home. Comments from some students include:

> *My grades have...been higher...but they've stayed higher... especially because we've been able to use the laptops for our projects and other things. The only thing that's hard is not being able to take them home yet. It's hard not being able to take them home, but have a project at school.* (Student Interview, Fall 2003)

> *Yeah, the only thing that I strongly disagree with is that we can't take them home. My parents have been asking; what do you do on your laptops, what does it look like, and what is it. I think if I could take it home, I could answer some of their questions. Plus, if I didn't have time to finish a writing assignment, I could do it at home, and when I got to school just print it off and go get it.* (Student Interview, Fall 2003)

Similarly, a majority of teachers would prefer their students have access to e-mail when using their laptop. However, only one-half of the teachers surveyed report that their students are allowed to use e-mail, which has had an impact on the level of interaction between teachers and students.

Students' care and use of their laptops has presented some schools with problems, but these have not been widespread. Approximately one-third of the teachers surveyed in Fall 2003 reported that their students were not always careful with their laptops, and some believe their students have become more careless over time. Damage rates statewide have been very low (1 to 2%) and

only about 1 in 7 students report that their laptop was taken away from them for more than a class period because of misuse. These rates are higher in some schools. However, this potentially negative impact appears to be somewhat limited because overall, misuse and breakage problems have been small. However, taking away the laptop can be disruptive to the learning process. One teacher described the impact this way:

> *I have a lot of success when students have their laptops, I get frustrated when administration takes away the laptop from a student for infractions and they do not have the tool to use in class It's like taking a pencil or a book away from a student and telling them they cannot use them.* (Teacher Survey, Fall 2003)

Expenses

Other obstacles have been of a financial nature. Figure 19 reports some of the financial impact of the MLTI on schools and districts. In Fall 2002, superintendents were asked to identify <u>anticipated</u> additional expenses from

Figure 19: Superintendents reported Moderate and Significant Impact of MLTI expenses on the following:
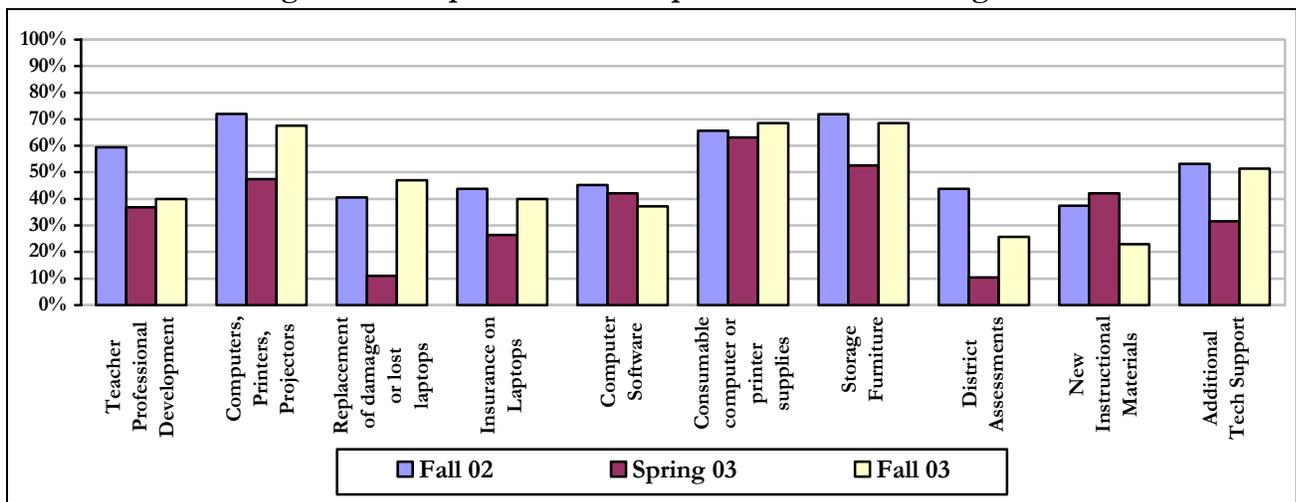
the laptop program. As may be seen in Figure 19, superintendents anticipated additional costs in several areas. But by Spring 2003, reported costs were substantially lower in several areas. And they did increase once again in Fall 2003 with the addition of laptops in 8th grade classes. In only one area did cost increase by Spring 2003 and then declined by Fall 2004 and that was costs associated with the purchase of new instructional materials.

Conclusion

How are the laptops being used, and what impacts have they had on teachers and students? Clearly, the evaluation evidence collected over the first 15 months of the program, and presented in this summary report, indicates that the laptops are being used widely by teachers and students, and their use has improved learning. Teachers report using them a great deal in developing lesson plans, and in conducting research for lesson plans and instruction. Likewise, students use them to conduct research and complete class assignments. Additionally, use levels for both teachers and students have increased over time.

As a result of the growing usage levels, there have been many positive impacts from this initial implementation of the laptop program. Teachers and students alike report improvements in the quality of students' work, the students learn more, and that students increase their understanding of what they are learning. Students of all types are more motivated to learn, and more engaged in the learning process. And interaction about learning and content between teachers and students, and students with other students has increased substantially.

Some obstacles, however, have been encountered in this initial phase of implementing the laptop program. Some teachers report technical problems, and many feel they need more technical support. Many teachers also report that the lack of sufficient professional development activities, and the lack of time to explore and learn more about the uses of the laptops, hinders them in further integrating the technology into their teaching and learning. Additionally, school districts report some increased expenses in implementing the program in their middle schools.

Thus, the evidence collected for this evaluation indicates that a large majority of Maine's middle schools have successfully implemented the laptop program, and have already witnessed improvements in student work and learning. And some schools have been more successful than others. A preliminary analysis of some of the more successful schools reveals that one

factor which contributes to their greater success is the presence of one or more key individuals in the schools who have served as champions of the laptop program and have provided strong leadership during implementation of the program. In some cases, this was the school principal, in others it was a formally designated or informally designated teacher leader, and in a few cases it was a technology coordinator. Teachers in these more successful schools have been more involved from the beginning in discussions about how, when, and how quickly to implement the program. These teachers also have been encouraged and supported in participating in professional development activities designed to help the teachers integrate the technology into their classrooms and instruction. Technology support is provided by technology coordinators, and in many cases, by student technology support teams. And finally, these more successful schools allow students to take the laptops home.

In summary, the laptop program has been very successful to date, helping schools to integrate the laptop technology into their classrooms and the learning process. And there is substantial self-reported evidence that student learning has increased and improved. In the coming years, this perceived impact on student learning needs additional attention and study. This sustained and systematic analysis will require new types of assessments, along with traditional ones, to capture the potentially new and more varied way of learning that are occurring through the implementation of Maine's innovative one-to-one laptop technology program.

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Appendix A

Sample of Surveys

MAINE LEARNING TECHNOLOGY INITIATIVE (MLTI)
TEACHER SURVEY FORM A - FALL 2003

This survey is being conducted by a research team from the Maine Education Policy Research Institute, on behalf of the Maine Department of Education. The laptop program is being studied to find out how laptops are being used in your classroom. The research team will report its findings to the Department of Education and to the state legislature.

Your participation in the survey is voluntary, and your identity and responses will be kept confidential. The survey asks you to answer some questions about your experience with the laptop program in Maine. Your views about the laptop program are important, and we hope you will take a few minutes to answer the survey questions.

Some of the questions contained in this survey are closely related to questions asked on previous surveys. Please answer all of the following questions, as we are attempting to track changes over time.

Thank you for your participation.

If you have any questions, you can e-mail the evaluation team directly at cepare@usm.maine.edu.

SCHOOL NAME: [*drop down box containing all Maine schools with 7th and 8th grades*]

1. 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	O	O	O	O	O	O
Developing instructional materials (handouts, tests, etc.)	O	O	O	O	O	O
Using presentation software for instructional purposes	O	O	O	O	O	O
Creating and/or maintaining website(s) for instructional purposes	O	O	O	O	O	O
Providing classroom instruction	O	O	O	O	O	O
Producing homework assignments	O	O	O	O	O	O
Assessing student work	O	O	O	O	O	O
Managing student information	O	O	O	O	O	O
Communicating with colleagues inside and outside the school	O	O	O	O	O	O
Communicating with parents and students	O	O	O	O	O	O
Other: _____	O	O	O	O	O	O
Other: _____	O	O	O	O	O	O

2. How often do STUDENTS in your classroom USE THEIR LAPTOPS 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
Writing first drafts of papers	O	O	O	O	O	O
Editing papers	O	O	O	O	O	O
Working with spreadsheets / databases	O	O	O	O	O	O
Taking notes on the computer	O	O	O	O	O	O
Managing / analyzing information	O	O	O	O	O	O
Researching information using the Internet or WorldBook	O	O	O	O	O	O
Taking tests / quizzes	O	O	O	O	O	O
Doing drills to increase their competency (educational drill software, online quizzes, FunBrain, etc.)	O	O	O	O	O	O
Creating culminating projects to show what they have learned (web pages, multimedia projects, videos, etc.)	O	O	O	O	O	O
Working on short-term assignments / worksheets	O	O	O	O	O	O
Sending / receiving email	O	O	O	O	O	O
Other: _____	O	O	O	O	O	O
Other: _____	O	O	O	O	O	O

3. In an average week you may utilize various instructional methods. Generally, what percentage of the time do you think you are using these various strategies in your classroom? (Total should add up to 100%)

I instruct the whole class:	_____%
Students work independently:	_____%
Students work in small groups:	_____%
Students present their work to the class:	_____%
Students work on tests / quizzes:	_____%
Other: _____:	_____%
Total:	100 %

4. Indicate how much you agree or disagree with each of the following statements about *TEACHERS AND TEACHING*.	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
I feel my teaching benefits from laptop use.	O	O	O	O	O	O
I need to learn more skills before I can more effectively use the laptop for teaching.	O	O	O	O	O	O
My concern about students accessing inappropriate materials limits our use of the Internet.	O	O	O	O	O	O
I am better able to individualize my curriculum to fit student needs as a result of having the laptops.	O	O	O	O	O	O

4. Indicate how much you agree or disagree with each of the following statements about *TEACHERS AND TEACHING*.

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
Having a laptop has helped me to access more up-to-date information for my students.	O	O	O	O	O	O
When we are using the laptops in class there is less classroom management that needs to take place.	O	O	O	O	O	O
I feel enthusiastic about the laptop program.	O	O	O	O	O	O
Using the laptops has increased my work load.	O	O	O	O	O	O
I am better able to access diverse teaching materials and resources for my students when using the laptop.	O	O	O	O	O	O
A limited number of projectors in my school makes it difficult for me to teach lessons to the entire class.	O	O	O	O	O	O
It is difficult for me to leave school to attend professional development workshops relating to the laptops.	O	O	O	O	O	O
Having laptops in the classroom has increased my expectations for students' work.	O	O	O	O	O	O
I am better able to meet my curriculum goals with students using the laptops.	O	O	O	O	O	O
The presence of the laptops in my classroom is disruptive to my teaching.	O	O	O	O	O	O
I am able to cover more material in class when we use the laptops.	O	O	O	O	O	O
I would like to have access to more direct technical support for laptops in my classroom during the day.	O	O	O	O	O	O
Use of the laptops helps me to create instructional materials which better meet the Learning Results.	O	O	O	O	O	O
Having a laptop has reduced the amount of paper based supplies that I need in my classroom (ex. newspapers, textbooks, etc.).	O	O	O	O	O	O
Given laptop problems such as freezing or an inability to access the Internet, I have to create two lesson plans for everything I do.	O	O	O	O	O	O
I am able to explore topics in greater depth with my students when we use the laptops.	O	O	O	O	O	O
I wish that I had more time during the day to explore using the laptops effectively in my classroom.	O	O	O	O	O	O
It is difficult for me to monitor appropriate Internet use in my classroom.	O	O	O	O	O	O

5. Indicate how much you agree or disagree with each of the following statements about supports in *TECHNOLOGY IMPLEMENTATION*.	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
The administrator(s) in my school actively encourages teachers to pursue professional development activities geared towards implementing laptops into the curriculum.	O	O	O	O	O	O
The administrator(s) in my school actively encourages me to integrate the laptops into my curriculum.	O	O	O	O	O	O
The Department of Education / MLTI Team has assisted me in locating information and answering my questions regarding the laptop program.	O	O	O	O	O	O
The Teacher Leader in my school has assisted me in finding ways to integrate the laptops within my curriculum.	O	O	O	O	O	O
Apple personnel have assisted me in locating information and answering my questions regarding the laptop program.	O	O	O	O	O	O
The Technology Coordinator in my school has assisted me in finding ways to integrate the laptops within my curriculum.	O	O	O	O	O	O
The administrator(s) in my school have provided opportunities for teachers to engage in professional development activities regarding the laptops.	O	O	O	O	O	O

6. Are students in your classes allowed to take their laptops home?   _____ Yes   _____ No

7. Are students in your classes allowed to use email?   _____ Yes   _____ No

8. Does your school utilize students to help troubleshoot using their laptops (e.g. Tech Team)?
    _____ Yes   _____ No

9. Did you complete a survey similar to this one distributed in:

    December 2002?   ___ Yes   ___ No

    May 2003?   ___ Yes   ___ No

10. How would you rate your overall skill level in the use of the laptop for instruction? *(Please check only one)*
    _____ 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/peripherals)

11. Are you able to connect to the Internet from home? _____ Yes   _____ No

12. Do you teach in a self-contained classroom?   _____ Yes   _____ No

13. Please list the grade levels that you teach: _____ (grades)

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

15. Concentration area in which you teach: (***Check all that apply***)

_____ Science	_____ Foreign Languages	_____ Mathematics
_____ Language Arts	_____ Social Sciences	_____ Fine Arts
_____ Technology	_____ Special Education	_____ Physical Ed./Health
_____ Gifted/Enrichment	_____ Library Services	_____ Guidance

16. How many years have you been teaching? _____ years

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

_____ Bachelor's Degree	_____ Master's Degree plus credits
_____ Bachelor's Degree plus credits	_____ Certificate of Advanced Study
_____ Master's Degree	_____ Doctorate

18. Please describe successes and/or challenges you have experienced with the MLTI.

_____

_____

_____

19. Please describe the types of professional development you would like to receive as you continue to use the laptops in your classroom.

_____

_____

_____

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

_____

_____

_____

THANK YOU FOR YOUR ASSISTANCE.

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Your participation in the survey is voluntary, and your identity and responses will be kept confidential. The survey asks you to answer some questions about your experience with the laptop program in Maine. Your views about the laptop program are important, and we hope you will take a few minutes to answer the survey questions.

Some of the questions contained in this survey are closely related to questions asked on previous surveys. Please answer all of the following questions, as we are attempting to track changes over time.

Thank you for your participation.

If you have any questions, you can e-mail the evaluation team directly at cepare@usm.maine.edu.

SCHOOL NAME: [*drop down box containing all Maine schools with 7th and 8th grades*]

1. 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	O	O	O	O	O	O
Developing instructional materials (handouts, tests, etc.)	O	O	O	O	O	O
Producing homework assignments	O	O	O	O	O	O
Assessing student work	O	O	O	O	O	O
Managing student information	O	O	O	O	O	O
Communicating with colleagues inside and outside the school	O	O	O	O	O	O
Communicating with parents and students	O	O	O	O	O	O
Using presentation software for instructional purposes	O	O	O	O	O	O
Creating and/or maintaining website(s) for instructional purposes	O	O	O	O	O	O
Providing classroom instruction	O	O	O	O	O	O
Other: _____	O	O	O	O	O	O
Other: _____	O	O	O	O	O	O

2. How often do STUDENTS in your classroom USE THEIR LAPTOPS 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
Writing first drafts of papers	O	O	O	O	O	O
Editing papers	O	O	O	O	O	O
Working with spreadsheets / databases	O	O	O	O	O	O
Taking notes on the computer	O	O	O	O	O	O
Managing / analyzing information	O	O	O	O	O	O
Researching information using the Internet or WorldBook	O	O	O	O	O	O
Taking tests / quizzes	O	O	O	O	O	O
Doing drills to increase their competency (educational drill software, online quizzes, FunBrain, etc.)	O	O	O	O	O	O
Creating culminating projects to show what they have learned (web pages, multimedia projects, videos, etc.)	O	O	O	O	O	O
Working on short-term assignments / worksheets	O	O	O	O	O	O
Sending / receiving email	O	O	O	O	O	O
Other: _____	O	O	O	O	O	O
Other: _____	O	O	O	O	O	O

3. Different teachers have different teaching philosophies. For each of the following pairs of statements, check the box that best shows how closely your beliefs are to each of the statements in a given pair. The closer your beliefs to a particular statement, the closer the box you check.

"I mainly see my role as a facilitator. I try to provide opportunities and resources for my students to discover or construct concepts for themselves."				"Students really won't learn the subject unless you go over the material in a structured way. It's my job to explain, to show the students how to do the work, and to assign specific projects."		
O	O	O	O	O	O	O
"The most important part of instruction is the content of the curriculum. That content is what children need to know and be able to do."				"The most important part of instruction is that it encourages 'sense-making' or thinking among students. Content is 'secondary'."		
O	O	O	O	O	O	O
"Students must learn basic skills before they can master complex content."				"Students can learn basic skills in the context of mastering complex content."		
O	O	O	O	O	O	O
"It is critical for students to become interested in doing academic work – interest and efforts are more important than the particular subject matter they are working on."				"While student motivation is certainly useful, it should not drive what students study. It is more important that students learn history, science, math and language skills in their textbooks."		
O	O	O	O	O	O	O

"It's more practical to give the whole class the same assignment, one that has clear directions, and one that can be done in short intervals that match student's attention spans and the daily class schedule."

"It is a good idea to have all sorts of activities going on in the classroom. Some students may produce a scene from a play they read. Others may create a version of the set. It's hard to organize, but the successes are so much more important than the failure."

| O | O | O | O | O | O | O |

4. Indicate how much you agree or disagree with each of the following statements about *STUDENTS AND LEARNING*.

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
Students in my classroom do not use their email appropriately.	O	O	O	O	O	O
Students in my classroom are more actively involved in their own learning when we use the laptops.	O	O	O	O	O	O
Use of the laptops has resulted in more open communication between students and teachers in the classroom.	O	O	O	O	O	O
Students in my classroom do more work when they are using their laptops.	O	O	O	O	O	O
My students are more apt to revise/edit their work when it is done on the laptops.	O	O	O	O	O	O
My students use the library less frequently now that they have their laptops.	O	O	O	O	O	O
The surplus of information available on the Internet makes it difficult for my students to do proper research/analyze web content.	O	O	O	O	O	O
I would prefer that my students have access to email using their laptops.	O	O	O	O	O	O
Students in my classroom are careless with their laptops.	O	O	O	O	O	O
Laptops allow my students to get their work done more quickly.	O	O	O	O	O	O
The quality of my students' work increases when we use the laptops.	O	O	O	O	O	O
My students are better able to understand when they use the laptops.	O	O	O	O	O	O
My students' inability to keyboard (type) has interfered with our use of the laptop.	O	O	O	O	O	O
My students are more organized when they use their laptops.	O	O	O	O	O	O
A lack of formal training for my students in computer use has prevented me from implementing the laptops fully.	O	O	O	O	O	O
My students are more engaged when we are	O	O	O	O	O	O

4. Indicate how much you agree or disagree with each of the following statements about *STUDENTS AND LEARNING*.

using the laptops.

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
My school has adequate numbers of printers available for student use.	O	O	O	O	O	O
I would prefer that my students be allowed to take their laptops home.	O	O	O	O	O	O
Use of the laptops has resulted in more open communication between students in the classroom.	O	O	O	O	O	O

5. Indicate the appropriate response for the different types of *PROFESSIONAL DEVELOPMENT AND/OR SUPPORT FOR LAPTOP USE* listed.

Professional Development Activity	Participation		Effectiveness			
	Not Available	Available, But Did Not Participate	Not Effective	Somewhat Effective	Effective	Very Effective
MLTI Content Area Meeting	O	O	O	O	O	O
Castine Teacher / Content Leader Retreat	O	O	O	O	O	O
Learners, Laptops, and Powerful Ideas	O	O	O	O	O	O
MLTI Regional Meeting	O	O	O	O	O	O
MLTI Teacher Training	O	O	O	O	O	O
Middle Level Institute at UM	O	O	O	O	O	O
Local workshops/seminars on how to use the laptop	O	O	O	O	O	O
Local workshops/seminars on integrating the laptop into curriculum	O	O	O	O	O	O
Help-desk technical support provided by the district, in-school specialists, or others	O	O	O	O	O	O
Informal help from colleagues	O	O	O	O	O	O
Other:_____	O	O	O	O	O	O
Other:_____						

6. Are students in your classes allowed to take their laptops home? ____ Yes   ____ No

7. Are students in your classes allowed to use email?   ____ Yes   ____ No

8. Does your school utilize students to help troubleshoot using their laptops (e.g. Tech Team)?
     ____ Yes   ____ No

9. Did you complete a survey similar to this one distributed in:

     December 2002?   ___ Yes   ___ No   May 2003?   ___ Yes   ___ No

10. How would you rate your overall skill level in the use of the laptop for instruction?
    (Please check only one)
    _____ 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/peripherals)

11. Are you able to connect to the Internet from home? _____ Yes _____ No

12. Do you teach in a self-contained classroom? _____ Yes _____ No

13. Please list the grade levels that you teach: _____ (grades)

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

15. Concentration area in which you teach: **(Check all that apply)**
    _____ Science   _____ Foreign Languages   _____ Mathematics
    _____ Language Arts   _____ Social Sciences   _____ Fine Arts
    _____ Technology   _____ Special Education   _____ Physical Ed./Health
    _____ Gifted/Enrichment _____ Library Services   _____ Guidance

16. How many years have you been teaching? _____ years

17. Highest Level of Education Completed: (*please check one*)
    _____ Bachelor's Degree   _____ Master's Degree plus credits
    _____ Bachelor's Degree plus credits _____ Certificate of Advanced Study
    _____ Master's Degree   _____ Doctorate

18. Please describe successes/challenges you have experienced with the MLTI.

19. Please describe the types of professional development you would like to receive as you continue to use the laptops in your classroom.

20. 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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Some of the questions contained in this survey are closely related to questions asked on previous surveys. Please answer all of the following questions, as we are attempting to track changes over time.

Thank you for your participation.

If you have any questions, please ask your teacher or you can e-mail the evaluation team directly at cepare@usm.maine.edu.

SCHOOL NAME: [*Drop Down Box containing all Maine schools with 7th and 8th grades*]

1. Indicate the response that describes how often YOU USE YOUR 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
Writing first drafts of papers	O	O	O	O	O	O
Editing papers	O	O	O	O	O	O
Working with spreadsheets / databases	O	O	O	O	O	O
Taking notes	O	O	O	O	O	O
Organizing information	O	O	O	O	O	O
Researching information using items such as the Internet or WorldBook	O	O	O	O	O	O
Taking quizzes / tests / assessments	O	O	O	O	O	O
Doing drills or using computer simulations to increase your skills (ex. FunBrain. Lemonade Stand, CoolMath, Sim City, etc.)	O	O	O	O	O	O
Creating presentations and other multimedia projects	O	O	O	O	O	O
Working on short-term assignments / online worksheets	O	O	O	O	O	O
Sending / receiving email	O	O	O	O	O	O
Working on assignments in small groups	O	O	O	O	O	O

2. Indicate how often *YOU USE YOUR LAPTOP IN SCHOOL* for each class listed. *Then* indicate if you *USE YOUR LAPTOP FOR HOMEWORK FOR THISCLASS.*	I do not take this class	0 hours per week	1-3 hours per week	4-6 hours Per week	7 or more hours per week	Do you use your laptop for homework for this class?	
						YES	NO
Language Arts (reading/writing)	O	O	O	O	O	O	O
Social Studies / History	O	O	O	O	O	O	O
Art / Music	O	O	O	O	O	O	O
Mathematics	O	O	O	O	O	O	O
Science	O	O	O	O	O	O	O
Technology / Computer Ed.	O	O	O	O	O	O	O
Health	O	O	O	O	O	O	O
Foreign Language	O	O	O	O	O	O	O
Home Economics	O	O	O	O	O	O	O
Physical Education	O	O	O	O	O	O	O
Other: _____	O	O	O	O	O	O	O

3. How hard is it to complete homework that must be done using a computer?
   Select the RESPONSES that fit best.

   O   I am never assigned homework that must be done using a computer.

   O   Easy, because I can take my laptop home.

   O   Easy, because I can use my home computer.

   O   Easy, because I have a computer at home.

   O   Hard, because I can't take my laptop home.

   O   Hard, because I don't have a computer at home.

   O   Hard, because I can't get on my computer at home.

4. Indicate how often you ask for help from each of the following people when you need help with your laptop *IN SCHOOL. Then* indicate if this person is *USUALLY ABLE TO HELP YOU*.	Not very often	Sometimes	This is usually the person I ask	Are they usually able to help you?	
				YES	NO
A teacher	O	O	O	O	O
A friend or another student	O	O	O	O	O
Librarian	O	O	O	O	O
Technology Specialist or Technology Aide	O	O	O	O	O
Other adults in the school	O	O	O	O	O

5. Indicate how much you agree or disagree with each of the following statements about YOUR LAPTOP USE.

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
I go to the school library to locate information less now that I have my laptop.	O	O	O	O	O	O
Having a laptop helps me to be better organized.	O	O	O	O	O	O
I am more involved in school when I use my laptop.	O	O	O	O	O	O
I would rather not use my laptop.	O	O	O	O	O	O
I am more likely to revise/edit my work when it is done on the laptop.	O	O	O	O	O	O
I would choose to take my laptop home.	O	O	O	O	O	O
All of the information available on the Internet makes it difficult for me to research/analyze the information.	O	O	O	O	O	O
Now that I have my laptop I interact with my teachers more.	O	O	O	O	O	O
I get my work done more quickly now that I have my laptop.	O	O	O	O	O	O
I do more work when I use my laptop.	O	O	O	O	O	O
I am better able to understand my schoolwork when we use the laptops.	O	O	O	O	O	O
I am more interested in school when we use the laptops.	O	O	O	O	O	O
I prefer to handwrite my assignments rather than use my laptop.	O	O	O	O	O	O
The quality of my work has improved since I received my laptop.	O	O	O	O	O	O

6. How would you rate your overall skill in using computers? *Please check only one.*

   O   Novice: I can turn the computer on, but I don't really know how to use many programs

   O   Beginner: I am able to use some basic functions such as word processing and the Internet

   O   Intermediate: I am able to use many of the programs, but I don't have a lot of experience with them

   O   Advanced: I am able to use many of the programs and have had a great deal of experience with them

   O   Expert: I am able to teach others how to use some programs and I am able to fix minor problems with my computer when they happen.

7. Have you been instructed on what will happen if you misuse your laptop?   _____ Yes   _____ No

8. Have you had your laptop taken away for *more than a class period* because you *misused* your laptop?

      _____ Yes   _____ No

      8a. If yes, why was it taken away? _____

      8b. For how long was it taken away? _____ days *(dropdown box 0 to 10, 10+)*

9. Are you able to take your laptop home?   ____ Yes   ____ No
      ____ Don't Know

   9a. If yes, when can you take your laptop home? *(Please check only one)*
         ____ Only when I have been given a laptop project to do for homework
         ____ As often as I want
         ____ Other (please describe) _____

   9b. How do you use your laptop when you take it home? *(Please check all that apply)*
         ____ Find information for assignments
         ____ Email
         ____ Organize information
         ____ Work on assignments
         ____ Do drills to increase my skills
         ____ Other: *Please explain:* _____

10. Other than your laptop, does your family have a computer at home?   ____ Yes   ____ No

   10a. If yes, do you have access to the computer at home? ____ Yes   ____ No

   10b. If yes, do you have access to the Internet at home?   ____ Yes   ____ No

11. Did you complete an online survey similar to this one in:
      December 2002?   ____ Yes   ____ No
      May 2003?   ____ Yes   ____ No

12. What grade are you in?   ____ 7th Grade ____ 8th Grade

13. Are you a: ____ Male   ____ Female

14. What grades do you normally receive in school? *Check only one response*
      ____ Mostly A's   ____ Mostly A's and B's
      ____ Mostly B's   ____ Mostly B's and C's
      ____ Mostly C's   ____ Mostly C's and D's
      ____ Mostly D's

15. What is the most exciting class assignment you have been given using your laptop? Please explain.

_____

_____

16. Please include any other comments you wish to make at this time.

_____

_____

THANK YOU FOR YOUR HELP.

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Your participation in the survey is voluntary; you do not have to take this survey if you do not wish to complete it.   Your identity and responses will be kept confidential and your personal information will be kept private and anonymous. That is why we do not ask for your name. However, due to the nature of electronic communication, complete confidentiality cannot be guaranteed.

The survey asks you to answer some questions about your experience with the laptop program in Maine. Your views about the laptop program are important, and we hope you will take a few minutes to answer the survey questions. You may answer all, some, or none of the questions on this survey.

Select School   *drop down box*

I. Technology Training

1. Is your school district planning locally (not MLTI) initiated professional development for the use of laptops for 7th grade teachers during the upcoming school year?   ☐ yes   ☐ no

2. What will be the focus of technology-related professional development for 7th grade teachers this year? _____ (fill in box)

3. Is your school district planning locally (not MLTI) initiated professional development for the use of laptops for 8th grade teachers during the upcoming school year?   ☐ yes   ☐ no

4. What will be the focus of technology-related professional development for 8th grade teachers this year? _____ (fill in box)

5. What is the total number of inservice days this year that will be devoted to technology related teacher professional development within the district? _____

6. What is the total number of voluntary (need to define voluntary) workshops that will be provided this year for teacher's technology related professional development. _____

7. With the continuation of the MLTI program, what level of support do you feel you need from each of the following to facilitate successful implementation?

RIMS	None	2	3	A Lot
Technology Coordinator	None	2	3	A Lot
Integration Specialist	None	2	3	A Lot
Teacher Leader	None	2	3	A Lot
Apple	None	2	3	A Lot
Maine Department of Education	None	2	3	A Lot
Superintendent	None	2	3	A Lot
School Board	None	2	3	A Lot

8. Has there been or do you expect any discussion between middle school and high school teachers regarding the instructional use of laptops in the following areas?

English/Language Arts	☐ yes ☐ no ☐ don't know
Mathematics	☐ yes ☐ no ☐ don't know
Science and Technology	☐ yes ☐ no ☐ don't know
Social Studies	☐ yes ☐ no ☐ don't know
Health and Physical Education	☐ yes ☐ no ☐ don't know
Modern and Classical Languages	☐ yes ☐ no ☐ don't know
Visual and Performing Arts	☐ yes ☐ no ☐ don't know
Career Preparation	☐ yes ☐ no ☐ don't know

IV. Internal Policies

9. For each of the following items, please indicate the policy status.

	Do not have policy	Last years policy is unchanged	Last years policy modified for this years use	New policy this year
Appropriate technology use by students	1	2	3	4
Students' ability to e-mail one another	1	2	3	4
Student misuse of laptops (physical)	1	2	3	4
Students' ability to e-mail one another	1	2	3	4
Students' ability to e-mail teacher and/or administrators	1	2	3	4
Students' ability to e-mail outside of the school community	1	2	3	4
Students' ability to e-mail outside of the school community	1	2	3	4
Students' e-mail being accessed by teacher and/or administrators	1	2	3	4
School district providing laptops to teacher did not receive one from MLTI	1	2	3	4

V. Assessment of Program

10. What is your overall assessment of the laptop program at this point in time?
   ☐ Not beneficial at all
   ☐ Somewhat beneficial
   ☐ Beneficial
   ☐ Very beneficial

11. At my school, laptops are being integrated into instructional activities as much as is needed:
   Strongly Disagree
   Disagree
   Neither Agree nor Disagree
   Agree
   Strongly Agree

12. Relative to all of the goals for your school, how much emphasis do you place on the integration of laptops?
   Heavy Emphasis (One of my most important agenda items for this school)
   Some Emphasis
   Little Emphasis (I have many more pressing agenda items for my school)
   No Emphasis

13. Given your vision of the laptop implementation, rate the level of success of the implementation for last year's 7th grade students.
   ☐ Not at all successful
   ☐ Somewhat successful
   ☐ Successful
   ☐ Very successful

14. Please list the two factors that contributed the most to the successful or unsuccessful implementation of the laptops.

   _____
   _____

VI. Impact of Laptops and MLTI

Rate the impact that MLTI had on the following this past school year.

	Very Negative	Negative	Slightly Negative	No Impact	Slightly Positive	Positive	Very Positive
a. Student attendance	☐	☐	☐	☐	☐	☐	☐
b. Student behavior	☐	☐	☐	☐	☐	☐	☐
c. Student motivation	☐	☐	☐	☐	☐	☐	☐
d. Student learning	☐	☐	☐	☐	☐	☐	☐
e. Teacher motivation	☐	☐	☐	☐	☐	☐	☐
f. Teachers' instructional practices	☐	☐	☐	☐	☐	☐	☐
g. Teachers' efforts to integrate content areas	☐	☐	☐	☐	☐	☐	☐
h. Criteria used to evaluate teaching performance	☐	☐	☐	☐	☐	☐	☐
k. . Other:	☐	☐	☐	☐	☐	☐	☐

	Are you able to track the following before and after the implementation of the laptop program?		If you are able to track any of the areas and have information, would you be willing to share that information with the MLTI evaluation team?	
Attendance Trends	Y	N	Y	N
Disciplinary Referrals or Detentions	Y	N	Y	N
Grades and Achievement Levels	Y	N	Y	N

VI. Demographics

15. How long have you been principal at this school? _____

16. How many 7th and 8th grade students are enrolled in this school? ____

17. What percentage of your 7th and 8th grade students receives free or reduced lunch? _____