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September 4, 2001

## **Focus Group Report Series – Report 5**

### **Parent Perceptions of the eMINTS Program and Its Effect on Their Children**

**Results from focus groups with parents of eMINTS students reflected very positive attitudes about the program. Most parents saw improvements in their child's reading, writing, and research skills. Parents were impressed with the teamwork and cooperation developed by students sharing computers. Parents saw their children gain self-confidence and become more motivated. Parents were impressed with the skill of the teachers and with the training and support the program provided them. Parents reported their children increased home computer use in academic areas. Parents regretted that more students were not able to participate in the program and were concerned that the program did not continue into the child's next grade. Many parents felt their children would retain the skills and learning strategies they developed in the eMINTS classroom.**

#### **Background**

As part of the eMINTS evaluation process, parents were asked their perceptions of the eMINTS program and its effect on their children. Four eMINTS schools were selected to have parent focus groups in April 2001. Letters of invitation were given to all 173 students in eight FY00 classrooms in these schools.

A total of thirty-nine parents attended the focus groups. Some parents had children in the program for two different years. Some parents had a child who had been in the program two years, "looping" with the same teacher and classmates. Most parents who attended the focus groups had a child in the program only during the current school year.

The four schools represented were all in the same cluster. The schools are representative of all schools in the eMINTS program across the state. The degree to which each school and teacher implemented the eMINTS program is highly variable and representative of the various degrees of implementation observed across the state. In some cases, the teachers were confident in

This report is one product of the eMINTS evaluation project. Other reports and their overall evaluation plan are available at <http://emints.more.net/evaluation>.

The eMINTS Evaluation focuses on student impacts, teacher impacts, changes in learning environments and outcomes of project services.

their abilities to create a collaborative learning environment with effective use of the technologies provided by the program. In others, the teachers were more limited in the degrees of collaborative learning observed in their classrooms with erratic or less frequent use of the technologies. Levels of support for the eMINTS program also varied by school and district. Throughout the report, if the difference in schools was a significant factor in parents' comments, then this was noted.

## **Introduction**

The focus group began by asking parents what their initial reactions were when they heard their child would be in an eMINTS classroom. After some discussion, parents were next asked what areas of the eMINTS program pleased them or made them unhappy. Parents shared anecdotes addressing a variety of academic, technological, social, and physical topics.

After discussing parents' initial reactions, this report will look at the ways parents described the academic impacts of the eMINTS program.. Besides improving reading, writing, and mathematics, parents saw new technical skills develop using the computer and the Internet for research and presentations. Next we will look at how students improved their social skills by cooperating and working as a team. Parents also discussed the role of the teacher in the classroom and in the eMINTS program. The classroom was physically changed and parents discussed this impact on their children. The eMINTS program also had an effect on the home life of students and their families. The last sections of this report address the overall experiences students had in the program and the parents' opinions of the future of their students and of the program. This discussion concludes with the parents' ideas about the program's strengths and weaknesses.

## **Initial Parent Reactions**

The focus groups began by asking parents what their initial reactions were when they heard their child would be in an eMINTS classroom. Most parents were excited about the opportunities their child would have with daily access to computers and the Internet. Some parents were apprehensive that in high technology classrooms, teachers would lose sight of basic education. Some parents felt they had not received adequate information about the program at the beginning of the school year. "I really have totally been lost all year [about] what they are even doing. I think we should have had an introductory class." Although most parents had gone to a meeting at their school, some parents were still unclear about the program and thought it was a remedial program. "[The meeting] almost gave me a negative [opinion]...It sounded like it was focused on just helping the ones that

couldn't keep up..." Most parents hoped that the computer would be a tool used in the classroom and not the focus of the classroom.

### **Impacts on Learning**

Parents saw effects of the eMINTS program on what their children were learning. Many parents saw improvement in their child's reading, writing, and mathematics skills. Parents were impressed with the computer skills learned by their child including the use of the Internet and the related research and presentation skills. As parents noticed their children becoming more independent learners, they also became aware of life skills their children were learning such as teamwork, cooperation, and problem-solving skills.

### **Reading**

Many parents stated that their child's reading skills had improved. One parent said that her child was reading more and "at a higher level too, I think, because everything they do has got reading involved with it." Another parent stated that her son "has always made good grades but I have seen some great improvements [in reading]." Another parent stated that he had seen many improvements "especially reading. I've seen reading just take off and go." One parent was pleased with her son's improved vocabulary. "[My son's] vocabulary is unbelievable. Granted he was a good reader and writer but he is getting this from somewhere...I think that probably the computer...it's just the environment...That's got to be a big part of it."

Not every parent had seen improvement. One parent noticed a negative change at home. "My daughter used to read more in the evenings and now she goes down and plays on the computer more. I really think her reading's gone down some." Although a few parents reported concerns that with an increase in computer use their child was reading less, most parents noticed an increase in reading skills. One student had been in a special reading class last year. Her mother reported a great improvement this year.

...[My daughter] was in a special class to get going on her reading because she just wasn't doing it. And this year...all she wants to do is read...I don't know if it's this program or if it's just her getting a little bit older but I think it has been because she's been so excited about learning.

### **Writing**

Most parents saw an improvement in their child's writing skills. "...When he does a report on something, I think it's more organized. I think it's longer. I think it has better information in it and it's more complex." Another parent is pleased with the whole process of writing in his child's classroom.

I think the ability to look at [multiple] resources and pull from lots of different articles and books and websites and being able to synthesize that and organize that into one piece...[the computer] has really helped in that area.

Parents remarked that writing and editing were easier on the computer and this encouraged their children to write more. "If it's fun, they want to do it...Typing is faster than writing and deleting is faster than erasing, so...they have more time and perfection is more attainable..."

Several parents were concerned that handwriting skills would diminish due to computer usage. Conversely, one father reported that his handicapped child had difficulty writing by hand and had found the computer extremely helpful. "Writing by hand is slow for her, but her keyboarding is good enough now where she can just write out of her head." One parent had hoped for improvement in his daughter's reading and writing skills, but was disappointed.

I think my daughter probably is at risk about the same as last year. We're hoping for improvement in reading and writing...She's not progressing as fast as we'd hoped. We'd hoped the increased interest in the computer would encourage her...

## **Mathematics**

Parents from three schools noticed the use of the computers in math class. "It's a wonderful program. I'm seeing that they are doing more math." A few parents noticed their child had increased the amount of time spent practicing arithmetic problems. "Things like math were just in worksheets. It's maybe harder to get motivated to do that...[The computer] allows them more opportunity for practice..." Some teachers maintained websites with links to math games. Parents were pleased with this because their children played math games both at school and at home. One parent was disappointed that his daughter's class did not use the computers more for mathematics.

I know how easy that is [Math Blaster] to set up on a computer because we had those programs when the kids were younger...I just didn't see that stretch that I thought was potentially there.

One father thought the eMINTS style of math instruction had helped his son.

My son went into third grade. He was kind of struggling a little bit in math and eMINTS...they make it a little more fun, a little more interactive. And my son has greatly excelled in math due to that because it's something that's interesting and it's

something that he can kind of run with rather than getting bogged down just by a bunch of numbers on a piece of paper...

At one school, parents noticed that their teachers did not integrate mathematics with computer usage. "I didn't see them do as much math stuff. It's much more literary type of stuff. The math and maybe the science are areas they could improve on."

...The math maybe wasn't as exciting for them some how...I don't remember him ever coming home and saying, 'Oh, we did this in math on the computer.'

### **Computer Skills**

Parents were unanimously impressed with the confidence and skill their children demonstrated with computers. "They are not scared of the computers. They go in and play and see what this feature does..." Parents were impressed with the technological knowledge their children demonstrated. "[My son] is wonderful at the HyperStudio and does PowerPoint presentations like it's nothing..." Most parents claimed that their child knew more about computers than they did.

I think it's just the deep down knowledge of the technology that they are getting...They're getting knowledge that I know people who have to take Intro to Computers as a college course and they are just freaking out and these kids are getting this in third grade.

A few parents wondered if the students were learning any word processing programs. "They're coming home and...they come up and do a PowerPoint and they go to get on the word processor [and] they haven't got a clue..." Some parents realized that their children are learning more than just computer skills.

Dual learning. Obviously, if you are going to learn something you learn the computers at the same time. With the same effort you would put into just learning the one subject, you learn two things in one shot. That's an obvious advantage.

Parents were pleased that their children were getting this exposure while young and hoped it would continue. "This is the perfect time for them to be learning computers because their minds are so open..." Several parents also mentioned that with age-appropriate software the computers could be used at an even younger age.

## **Presentation Skills**

All parents were impressed with the projects the students presented using PowerPoint. "I see pride in those presentations that they do." Parents enjoyed seeing the classroom presentations and appreciated the chance to compare their child with the rest of the class. Some parents started the school year with mixed feelings about the use of PowerPoint in the classroom but later realized "the visual aspect reinforces organization. When they just write papers they never see that."

I was real surprised when I saw PowerPoint. PowerPoint? What are they teaching PowerPoint for? And I was wrong. PowerPoint has been a great tool for them.

Over the course of the year, parents noticed that their children were better able to organize information, to design creative presentations, to confidently present information, and to remember the information.

[A positive thing I have seen is the] ability to do research; find sites on the Internet. I think he talks more about what goes on at school. He usually starts out about, 'Today we did PowerPoint.' But then it usually comes around to really the information that he gained...

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...So many kids...they write the paper, period. The PowerPoint forces them to [go] point by point by point. That is an outline type set up they are learning whether they know it or not...

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Presentations...gives them good speaking skills, self esteem, trying to organize their thoughts and tell them to another group. I think those are good skills.

## **Research Skills**

Most parents were enthusiastic about their children using the Internet and were impressed with their ability to use it as a resource. Parents were pleased that by using the Internet the classroom's resources could be expanded beyond what might be in the school library. One parent mentioned that the Internet's flashy style was very appealing to this age group.

Several parents shared anecdotes of their child's excitement over research. Many students finished their work and enthusiastically started extra projects.

"I think it pushed her to do her other work so that so could have some more time and go back and do [the extra research]..."

I think my son is getting more information...They were following the Iditarod dog races in Alaska...If he finishes, he can link on over and go to a web page about the care and feeding of sled dogs or how do you build a dog sled or why the heck is it so cold in Alaska. There is somewhere to go. There is a progression. So he is getting a lot more out of each subject.

A few parents differed in their opinions regarding the use of hardbound resources versus use of the Internet. Some felt the Internet had all the current information and that everything at libraries was out-of-date and other parents thought that nothing could replace reading something "tangible."

...I think they find out a lot more and it makes it a lot more fun for them to research it [on the Internet] versus picking up a book and looking through pages. They like the computer better.

### ***Evaluating Internet Sites***

A few parents had concerns about the possibility of students finding inappropriate sites or being unable to assess the validity of sites. Three parents from different schools gave differing opinions. Regarding inappropriate sites, one parent related what she had noticed.

I was concerned when they first started really surfing the web. How are we going to make sure that these kids are not getting into the wrong places? But, I've been real pleased...and actually I think the kids themselves have learned a responsibility as far as where you go...They are all in this classroom and everybody is kind of watching each other.

Two fathers differed in their opinions on student assessments of Internet sites.

...We talk about quick access to information. At the same time, I don't know if fourth graders can discern what's good information and what's bad...There is a lot of bogus information on the Internet and they can't differentiate what's right and what's wrong.

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...I don't know if she really understands it or not, but she can look at a valid information site versus some frivolous site and know that this is true research and this is somebody's made up

story. And so she can discern between good information and fiction. That, to me, is neat to see...

## **Independence**

Parents reported that their child was gaining independence as a learner as the teacher became more of a facilitator. "They can work through that rather than have the teacher guide them every step of the way." One parent was pleased that the eMINTS program was "giving the class to the students." Another parent stated, "I think they are more willing to take risks..." A few parents noticed changes in their children and were not sure whether this could be attributed to eMINTS or to their becoming more mature.

I guess the idea that they can go as far as they want and it's an individual kind of thing. They can feel challenged by the computer but they are working at their own speed. They don't feel pressured...

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It's one of those win-win situations. It doesn't matter what your level is. You're going to be successful working on your project just like all the other kids in the class. You're not left behind. It's going to be okay.

## **Authentic Learning**

Parents commented on areas of growth they had witnessed in their eMINTS students that they hoped would carry over into life outside of the classroom. Authentic learning areas noted as important by parents included teamwork, cooperation, problem-solving, and computer skills.

They are also learning to work in a...real work environment type of setting...[where a co-worker] comes to you for help. That's the way the real world [is]. It's not somebody setting up here dispensing knowledge...

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Teamwork. They have to work together and learn better together. If somebody has more knowledge, then that's the person that can help you learn something. And somebody else over there may know something else to help you.

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Somebody is going to have one part to do. They're going to have another part to do and it's going to add to the common

[good]. In this case, it's a homework project or some kind of an assignment or presentation. Somewhere down the road, it's going to be a budget proposal or it's going to be getting the forms held together while somebody else gets the concrete truck backed up in the right place or whatever the talent is. It's working with people.

### **Classroom as a Learning Community**

Parents noticed changes in the classroom environment. By sharing computers, their students were working closely with other students, learning to cooperate and work as a team. Sharing resources and ideas developed more tolerance and respect for classmates and more friendships developed. Parents thought that keeping students together and with the same teacher for a second year was not the ideal situation. In eMINTS classrooms discipline problems decreased because students were not getting bored and acting out. Students developed more self-confidence, especially in presentation skills. The students had a new enthusiasm for school. Overall, parents noticed that the classroom fostered an attitude of helpfulness and sharing between its members and set up a positive learning community.

### **Cooperation**

All classrooms were set up to have one computer for every two students in order to foster teamwork. A few parents thought this ratio was due to financial considerations and were at first unhappy about this arrangement. Several parents would have been happier with one computer per student. Other parents were concerned that students would be mesmerized by their computer and become isolated from the rest of the class. Most of the parents came to realize, as the school year progressed, that there were benefits to sharing computers and working together.

I imagined kids just sitting in front of a computer doing this with no interaction...[But] they do have to share and take turns and cooperate with [using] the one computer and so I think it's been more of a plus than I thought it would be.

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I think it actually helps that there aren't enough computers to go around. The assignments become cooperative by nature. Everybody has to team up to do things...and the kids work together, I think, a lot better than other kids their age who are in a more traditional classroom...

Most parents found that their child enjoyed working together with classmates on projects. Parents noticed that sharing resources and ideas led

to cooperation and collegiality between classmates. One parent announced that for eMINTS “the teamwork aspect, yes, that is part of it. That’s the overall part of it.”

Sharing the computers...I think that’s a real good way of cooperating and learning teamwork because they have partners and they rotate their partners throughout the year...I know [my daughter] really bonds with whoever she is with at the time and learns to work with them.

Several parents found that over the course of the school year, this arrangement was beneficial for the individual students as well as for the entire classroom. “I think it’s been great for teaching and learning from each other...It’s a lot of sharing of the knowledge and skills.” Another parent told participants about her son.

I think the sharing [is important]. He’s totally happy all by himself...It’s been good for him to have to make adjustments to people who are faster or slower or different. He may not have been happy with it, but it’s been a good experience. It brings him out of that little tunnel vision.

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I like that fact that there were two to a computer and that they really had to learn how to work together...It’s almost like being in an office setting where you have somebody there you had to learn to work with and [to] help each other.

### ***Difficulties of Working Together***

Inherent with all team projects is the concern that each teammate contribute to the work needed to complete the project. One father stated that his daughter “said that, depending on who she is working with, some students just rely on her to do most of the work and she gets a little frustrated with that.” Parents noticed that sometimes the students worked on a project together and at other times they had separate work and needed to share time on the computer. Although most parents were pleased that their children shared the computer with a partner, two parents were concerned about this. Those parents feared there would not be enough time for each student to finish their work and it would be impossible for some students to take computer work home. Two other parents thought that students could sometimes be adversely affected by the speed at which their partner worked.

Several parents noticed that in the classroom, there was the temptation to visit with your partner and not work. “It also teaches them time

management because when they are with someone that they are social with they still have to get to the task.”

A few parents reported their child had occasional difficulty adapting to such close work with other students. One parent noticed her child was becoming more reclusive and wondered about the cause.

...With [my daughter], she’s becoming more reclusive in a way and less social...I don’t know if that’s just a function of who she is and the age she is or a function of having to work on the computer and not really interacting with a larger group.

### ***Students Helping Others***

Parents remarked that the eMINTS classroom environment fostered helpfulness and permitted students to not only work together but to help each other. One mother said, “I’ve noticed in previous classes [my son] wasn’t allowed to help...I think that this program gives kids the flexibility to be helpful.”

I’ve noticed too, they help each other and [have] cooperation amongst themselves...It doesn’t bother them to help somebody else. If they get stuck with something, they’ll come over and say, ‘Try this’ or ‘What about this?’

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I think it sometimes places them in a teaching role. I know the child that my daughter was first paired up with was a child who had special needs. And she would come home talking about, ‘Well I had to do this for him and I had to do that and he couldn’t do this so I had to do and I had to show him and I had to show him again.’ So I guess you could say, in a way, it detracted from what she was having to do but yet it was good because she had to put forth the extra effort to actually help someone else...She was capable of doing it too and I’m sure that the teacher keeps that in mind probably when she pairs the students up.

In many classrooms, teachers allowed students to help with computer problems. One parent remarked, “I think it’s a real confidence builder for the kids when she says, ‘Go get so and so. He knows how to do that.’” One parent stated that the teacher, “She calls on the kids for help. The kids love that.” Parents noticed that some students knew more about computers than some teachers. “They kind of teach her and she teaches them and they kind of help each other.”

## **Teamwork Develops Mutual Respect**

By working closely together in teams, students developed mutual respect for their classmates. Parents reported that their children often talked about their computer partners and came to know them well. Anecdotes told by parents presented a picture of the classroom as a learning community. Some parents found their children were better able to relate with classmates than in prior years. Only one parent said she had not noticed connection between eMINTS and social skills. All other parents had noticed a connection. between teamwork, respect, and friendship.

...As they work with two kids on a computer [my daughter] is always coming home and talking about who her partner is this time and what they worked on together and ends up making friends with that person as well as working with them. And so, I think the environment has it set up as working real well on that.

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I don't know if [my daughter] has learned to work with her computer buddy any better but I hear about them a lot more...It seems like most of the time she's teamed up with a boy and the boy always gets it first and he's so slow. But she knows everything about him socially as compared to the other kids...

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...You've got your cliques in every class...I just don't get so much feedback from my kids [both who had been in eMINTS] about who did what and nitpicky kind of...regular kid stuff. I just don't hear so much of that gossipy [stuff] this year...

One father shared a story about his son who previously had difficulty making friends. He believes the eMINTS classroom has been a wonderful environment for him.

My son is very smart and he's a little bit weird. And in a traditional classroom the kids don't interact much about their work...and so somebody who is really smart and whose brain works a little differently than everybody else's [and] who only interacts with the other kids socially out at recess, where he also happens to be really clumsy, is really out of place. But because he's in this eMINTS classroom where he is working together with everyone, he's interacting. The other kids, I think, maybe appreciate the fact that his brain works a little bit differently and that he sees things that other people miss. And they are interacting in different ways than kids would in regular

classrooms. It's not just, 'We play on the playground and if you're no fun there, then you're just a jerk or a nerd;' [instead] it's, 'We're working together here and then we're going out there doing something else. We're coming back in together.' And they are all interacting in so many different ways that I think they all just get along better. They know each other a lot better than kids who are working in a traditional, quiet, you-work-on-your-thing classroom and then going outside and playing dodge ball.

### **Impact of Looping**

At one school, the third grade eMINTS teacher and her students moved together to the eMINTS fourth grade thus spending two successive years together. Parents had some comments to make about those "looping" students. Overall, they thought it was not a good idea. When discussing moving out of two years in eMINTS to a traditional classroom for the last year in the elementary building, one parent stated, "I can see where two years would be worst than one."

...This group of kids stayed together for the most part for two years...I think it's got some pluses but it's got some negatives...They've done [PowerPoint] programs and they are very helpful...So they really seem like a tight-knit group...They know each other. They know what buttons to push when they want to. So it's not always such a good thing. You can know somebody too well when you know what you can say to set them off...

### **Classroom Behavior**

Parents thought that classroom behavior was better in an eMINTS classroom. Several parents noticed that children who were once bored and acted out were now doing extra classroom work on the Internet instead. "I knew it would keep him engaged and active and out of trouble. I just thought it was great."

...When a kid sets down with a piece of paper in a classroom and...they finish it because they are smarter or they know what they are doing...and then what are they supposed to do? With the computer, they can go on and make another link to that web page. That's where a lot of the behavior [problem] is being taken care of because they are not tied to this one piece of paper waiting for something else to come...

One parent shared that her child was always losing recess last year due to behavior problems. "I hadn't attributed it to this class either, but my son

probably missed 75% of recess last year. I'm not kidding it was on the ridiculous side." This year he hasn't missed any.

A parent who also works in the school office noticed that the children in the eMINTS classrooms had fewer discipline problems. "...[For eMINTS] all of our social and discipline problems result in the lunch room and on the playground; never in the classrooms..."

Parents noticed that during this school year there was a sharp decrease in negative comments about classmates including complaints about class discipline problems.

...I can remember [my daughter] saying last year, every day, 'So-and-so got in trouble. So-and-so wouldn't sit down...' She really doesn't say that this year... Maybe this is because they have more hands-on that maybe they are not acting up as much...

### **Self-Confidence**

Parents noticed their children's self-confidence increase this year. Students often made PowerPoint presentations to the class. Parents believed this action contributed to their child's new confidence in being able to talk in front of a group. "...When they do the PowerPoint presentations, I have seen a gain in confidence in their ability to do that over the year..." As students became more confident in using the computers, finding information, working with others, and sharing what they'd learned, their self-esteem improved.

It's helped a lot. It's brought his self-esteem up. Because he'd say, 'I'm dumb. I can't do this.' That's what it was last year. Now he works his way through it and figures things out...I've seen a great improvement in that.

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What a great feeling of accomplishment at that age. 'I did this. I made it all the way through and I did it by myself.'...I definitely think my daughter feels much more confident.

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My daughter...two years ago...she went to a different school and she wouldn't talk or anything. And now...she's just like a total different person. She probably is like the loud mouth of the class now. So it's built her confidence. And with the teacher, she doesn't have any problem getting up and asking her now, 'Is this right?' or whatever. And she never would do that before, so I think it's really boosted her in being able to talk to anybody.

## Motivation

The students had a new enthusiasm for school. "They have fun learning now and that's terrific." Parents saw a difference between the current year and prior school years. "I think they've had more fun in school this year." Parents said that their eMINTS students wanted to be in school. "Never once did he say he didn't want to go to school. I mean, not once." One parent reported that her son was upset if she scheduled medical appointments during schools hours. "Now he is to the point, if I have to pull him out [of school] early, he gets mad at me. He doesn't want to go, especially if it's his computer day." Another father said that his son often stayed after school to continue using the computers.

I think with the computers they enjoy learning so much more. They get more excited about doing the work. Before, if they had to pull out a book, they weren't as excited...

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...And when you do come to the classroom, it's like, 'Look at this. Look at that.' They are just so excited about their work. And you're not going to see that with just the book and papers. It's the computer. Yes, it's a whole other ballgame for them.

Parents commented their children were so excited about their school projects that once home they would more readily discuss school activities with their parents. "The kids want to bring it home...'Mom, get on the computer and [let me] show you what I did today.' They initiate the presenting it to the parents..." Parents were pleased that their children were excited about school and wanted to share this with them and were grateful for the opportunities for discussion and sharing that this brought up at home.

The excitement that my daughter has toward learning with the whole program, it's just made me so happy to see that. Because, if you get a kid that just goes to school and just gets through the day and you ask them how their day was, 'Same old, same old, boring, boring.' She never ever says that. She is always excited to talk about it and tell me what they have done.

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...She is so excited to tell me what they've worked on, what they have done, and the research that they can do on their own. We came from a Catholic school a couple of years ago and she just seems so much more excited about learning now. She just tells

me everyday that she is so glad that she is somewhere where they do have this program...So I think it's great.

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I think sometimes it opens up avenues for us to talk. 'Oh Mom, I want to show you this.' We went into the website that they're doing for [the school]...It just gives you another thing to talk about [with your child]...

### **eMINTS Teachers**

Parents noticed the enthusiasm the eMINTS teachers had for the program and were impressed with their hard work and skill. Often eMINTS provided renewed enthusiasm for teachers who had been in the field a long time. Parents saw the relationship between teacher and student change to a more cooperative and less hierarchical relationship. The equipment in the classroom put new demands on the teachers including coping with equipment malfunctions, monitoring more active learners, and finding competent substitutes. Parents noticed that some teachers had poor technical skills and that this posed a problem for them and their classroom. Parents were impressed with the training and support provided by the eMINTS program and believed these were key to the success of the program.

### **Teacher Enthusiasm**

Parents found that most teachers were enthusiastic about the program. "I think...the students and the teachers just share not only an interest but almost a passion for it [eMINTS]." Many parents noticed that it renewed teaching enthusiasm for some teachers who had been in the classroom for many years. "And they said they [have] just been teaching so long, they're getting burnt out...The computers was really a breath of fresh air for them."

Parents were impressed with how hard the teachers worked to implement this program in the classroom. "...The teachers have made it just real accessible and real useable and real non-scary." Parents declared that the program was not as important to the classroom as was the teacher and that a good teacher would make a program work well. "I think no matter what environment you're in, your teacher definitely makes a big difference." One parent commented on the teamwork he saw develop between eMINTS teachers. Several parents hoped teachers were being rewarded for their hard work.

The teaching style is important. The teachers that do the eMINTS are passionate about it. They have put more time and energy into it than any of us will ever know...Are we rewarding

these teachers? I don't know...I've just overheard teachers and they are very excited about it...They do a lot of preparation in order to be able to present this stuff to our kids and they are working so hard...They just continue to chug away at a really fast pace with it...

### **Teacher-Student Relationships**

Parents noticed that the eMINTS program changed the classroom environment. "It gives them a lot more one-on-one." Another parent stated, "We've been pleased with [his teacher] and I think he is too. He seems to have a lot of interaction with her." Parents saw a change in the relationship between teacher and student. "They [the students] seem to have more respect for them [the teacher]."

I see her moving around the classroom more. [When my older] daughter had her, before the computers, it was more she was at the desk and she had them come to her to ask for help. There was a central location the kids could come to. Now they are everywhere...You have to go to [the student's] computer and see what's up, what they're doing there.

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I think that's part of the student/teacher interaction that's so good because the teacher is learning too and it's not just standing up in front of the room and dispensing the knowledge to the kids. It's kind of a cooperative sort of thing.

### **Classroom Difficulties**

The equipment in the classroom put new demands on the teachers including coping with equipment malfunctions, monitoring more active learners, and finding competent substitutes. "It looks to be more challenging to teach." Some parents were concerned that state testing still stressed teachers. "I really see the teachers feeling pressured to teach what's going to be on the MAP test." Parents were aware of the changes that both the teachers and students made to adapt to this new classroom environment.

There's a higher level of independent activity going on which makes it more difficult for the teacher. I think more kids are doing more different things and you're having to try to keep all of them together...

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The kids share the desk so there's desk day and there's computer day. And I think from a teacher's standpoint it kind of adds a little kink into the classroom having half the kids working

on computer and half the kids not. But that's the way it is and it can't be any other way and they seem to be working around it. But I guess that's the one negative thing I see.

Another parent commented on the equipment challenges faced by the teachers. Teachers plan their lessons around using the equipment and when it malfunctions, this causes problems. "It's obviously harder on the teacher. I think I've seen that, especially when the technology isn't working correctly."

I've seen a learning curve [with the teachers]...for things in technology. When it breaks down, the problems...And once you get used to that, she learned to work around it. This technology breaks down. That is just a fact of life...

### ***Substitute Teachers and Aides***

Parents were unhappy about the problems this special classroom caused when a substitute teacher was needed. "...Substitutes don't work well with this program...It's almost like you need specialized substitutes in the eMINTS program." Another parent asked, "Now can you imagine subbing in that room? They know nothing so the day is sometimes wasted not knowing what they are able to do."

I heard that they did PowerPoint presentations [for a substitute] and he was just negative. Every time the kids did their PowerPoint presentations, he said some real negative things to the kids about everything they did.

Some parents recommended schools provide trained aides for the eMINTS teachers, aides "that really learned this program and to go to the schools and really help the teachers." One parent suggested they could "share [the aide] between the two classrooms." Several parents thought this would help with the substitute teacher problem. "That's why you need a teacher's aide so that way they could take over the day that the teacher was out..."

### **Technical Skills**

Parents noticed that a teacher's willingness to learn about technology affected her success with the program. Parents were impressed with the determination and growth they saw in most teachers. Parents saw that some teachers were not technically inclined and believed this presented a problem to becoming a fully functioning eMINTS teacher. "This program is only as good as the teacher is and some people are just more apt to be technologically inclined than others. I think it's really a burden on somebody that is naturally not." Parents noticed hesitancy on the part of some

teachers due to their inexperience with technology while others jumped right in.

[One teacher] is doing the web pages with the students and I don't think that's happening in our [child's classroom]. [Our teacher] has a web page but I think for her it's more of a struggle. She's not comfortable with the web pages yet, so I guess additional teacher training wouldn't be a bad thing.

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...There are teachers who are less technically inclined or more technically [inclined]...I've been real pleased with [my child's teacher] because she's jumping into it and she's enthusiastic about it and good at it. But she is learning too, and she's very humble about that and says, 'Well, I don't know that yet.'

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When I see [my child's teacher] it looks like she is more interested...[The other teacher] I think has gone the other way. It's more stressful for her because she is not comfortable with the technology. I think both the teachers are enthusiastic it's just more of a challenge for [one].

Parents were grateful that teachers kept the classroom focus on learning and not on equipment.

I really did worry about this becoming fun computer time. And I think that [the teacher] has done an awesome job about keeping it as a tool and a means to communicate and organize their information. It hasn't become the focus in the room. Their learning is still the most important thing.

### **Program Support**

Parents were impressed with the amount of training and support the teachers received. "She seems to be very comfortable with the computers and enjoys it. But, I know she's talked about all the hours of training. I know it's got to be quite a commitment..." Another parent thought that the teachers "train for 100 hours or something like that." Parents hoped the program would continue helping teachers by making "sure that they continue to be updated on any new things with the computers and technology." Regarding eMINTS program support, another parent stated, "I don't think you could do it successfully without that support."

For instance, at work we've switched to a new computer program. It's just been all of a sudden...and nobody knows what

they are doing...[However, eMINTS] was phased in and done right because the teachers had the training ahead of time...so it was well thought out.

Parents believed training and support were both key to the program. "I think more than this equipment though, that the support that eMINTS provided was critical to the teacher being successful." Several parents felt that in order for the program to be truly successful, the teacher must desire to be in the program, be technically inclined, and agree to all of the training. "They want to [train]...and that's what it takes."

I've watched [my child's teacher] teach...She's very thorough and is very knowledgeable of the software and the hardware and I think that's part of that 100 hours [of training], learning both of those.

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I thought [the teacher] was wonderful this year and that could be the training; the different way she's been taught to handle the classroom now because of the eMINTS. But she just seems to work so well with the kids.

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It's not exactly just the computers but just the whole way the eMINTS program is set up to support the teachers and help to integrate all of the information and the best programs for the kids. I've been real impressed with the overall [program].

A few parents suggested that current teachers could mentor future teachers. "...The teachers now are being trained to such a point that they could be mentors for other classrooms...I don't know if that's the goal of some of the teacher training or not."

### **Cost of eMINTS**

Most parents felt the high costs of the eMINTS program were worth the benefits. Parents were aware that the cost of eMINTS was high and they were concerned about future funding and maintenance of the current system. Other parents envisioned eMINTS in all elementary classrooms but considered the cost prohibitive.

You have to go for what you think is absolutely reasonable. You would like to see two or three [classrooms] with the exact same set-up as that [eMINTS] classroom. These kids would be able to

move around and everybody would be able to get a chance. But I can't see that. That just seems so outrageously expensive...

Several parents thought that when all aspects were taken into consideration, current costs of traditional education were comparable to the costs of eMINTS. "You think about a hardback book that costs \$20 or...the consumable workbook is \$15 and it's gone at the end of the year." Another parent countered, "You think textbooks go out of date fast. Computers go out of date over night." A different parent commented:

Well, what [price] are we looking at? I don't know. What is the price of education? How does it compare to updating text? I know it's still more expensive, but once you have the basic things in there...How [expensive] is it to keep it up-to-date?

A few parents mentioned that they should be vocal about the program's benefits in order to help school boards make future decisions about the program.

We know that this is a tremendous amount of money so it's not a simple application...and so in a time of limited funds they, [the school board], have to focus on what they want to do but they need to hear from the parents who think this has had a positive effect on their youngsters to know that they believe that it is important to continue to try to do this kind of a program in the other classes.

### **Physical Environment of the Classroom**

Parents expressed their opinions regarding the room arrangement, computers, SmartBoard, and desks. Parents noted that the classrooms were now more crowded and were limited to "non-messy" activities but declared the benefits outweighed the sacrifices. Parents were aware that eye contact between teacher and student was now limited due to the large monitors and that workspace was also limited. Several parents were concerned about health issues connected to sitting at a computer for long periods of time.

### **Room Arrangement**

The parents noticed changes in the child's classroom environment compared to previous years. Several parents thought the classroom was quieter with less distracting movement.

And in a way it was less disruptive...[In the eMINTS class] there just wasn't that commotion and so it made it a more positive learning environment...They weren't bothering the other kids that were still working. They could do what they needed to do right at their chair...

eMINTS required that schools provide air conditioning in the eMINTS classrooms. Parents said their children enjoyed the air conditioning. However, in one school, the district would not put in window units due to security concerns. Students in these classrooms complained to their parents about the heat.

### ***Space Limitations***

Parents observed how crowded the classroom was in order to accommodate the equipment. Several parents mourned the loss of the flexibility within the room. Desks could no longer be moved to accommodate different activities. Messy activities in science and art were no longer feasible and classroom parties had to be relocated. Parents also wondered how crowded classrooms could ever accommodate more students and computers.

It's a little crowded. Even [my son's] teacher has mentioned it's just a little crowded and some students can't be that close to each other. So it's not easy. That's the trade off.

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I know my son has mentioned...not enough hands on time with things...[like] the messier science projects...He wouldn't give up computers [for it though]. He enjoys that.

### **Equipment**

It was clear that some parents were very familiar with computers and others had limited knowledge. Parents with little computer experience were concerned about the physical impacts of using a computer. More experienced parents were concerned about software use and computer maintenance and upgrades.

There seems to be some redundancy in software between PowerPoint and HyperStudio. I think they could maybe work on some other software; diversify the software a little bit...From what I saw of HyperStudio, it seemed to do pretty much the same thing that PowerPoint did.

### ***Monitors***

Parents voiced a few concerns about the monitors. They felt the size of the monitors inhibited sightlines in the classroom making it difficult not only for teachers to observe students but also for students to see the SmartBoard. Parents thought class time could be lost because of this. One parent said, "[The monitor], it gives them something to hide behind sometimes."

The thing I've seen as a disruption is being able to see the blackboard or whatever depending on where you are and looking

around the monitors or even seeing children in class discipline on the other side of the room. Ideally, it would be wonderful if they had those desks where the monitors are up underneath with the glass and they were down under and they could still have their full view of the classroom.

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When I've asked my son...he did mention that when the teacher is talking, it's not really computer time. It's very tempting. People will sit there and try to [use the computer]...someone stays hid behind the computer...to sneak a few strikes at the keys.

Two parents were concerned about emissions from the monitor and wondered if their children were being exposed to any negative physical effects from sitting in front of a monitor all day, every day.

### ***SmartBoard***

Not all of the parents had been in the classroom and seen the teachers and students use the SmartBoard. The parents who had seen the SmartBoard in use were very impressed with it and made positive comments about its benefit to the classroom. Parents who had seen their child make a PowerPoint presentation using the SmartBoard were as excited as their child. "I think having the Smart Board, it gives them...some pride [in their projects.]"

Most parents had only seen the SmartBoard in use for student PowerPoint presentations and were therefore unaware of its many other uses. One parent who had seen the teacher use the SmartBoard to demonstrate the use of Word to her class said, "I'm just thinking how much easier it is for her to teach with the SmartBoard."

Another parent was not convinced it was worth its cost. "I don't know if they really need that SmartBoard. That's so much money..."

Another parent was aware of the problems associated with equipment malfunction. He mentioned the disruption he'd seen in the classroom when the SmartBoard malfunctioned. "So today she was using an overhead and she was miserable."

### **Desks and Workspace**

Parents discussed the desks in their child's classroom. Each school represented had a different type of desk and desk arrangement so that the

student's workspace varied greatly among different schools. At one school a parent stated, "They don't have a lot of desktop surface to work on...May be that's part of the handwriting issue is this very small area to work with." Another said, "I think in some ways they will be glad to have their own desks back [next year]."

Without traditional desks, the storage of student supplies became a new problem. Each school developed their own solutions to this issue. One parent commented on the classroom's non-traditional storage of supplies.

It's kind of awkward for them to get accustomed to having their desk materials in their tub or their crates but once they got accustomed to digging through their crates for whatever they need, I think they manage pretty well.

Several parents wondered if the desks were comfortable for their children to work at daily. Parents were concerned about poor posture, poor placement of the monitor, and inadequate chair size in relationship to the desk. One parent hoped that the children were being surveyed about this. "Does anybody get feedback formally or informally from the students? Whether they are comfortable?" A few parents were concerned about the health of their child after sitting at a computer for long periods of time although most parents did not mention these concerns when probed.

One school in this group had ergonomic desks. The monitors were recessed and when the keyboard tray pulled out, a portion of the desktop rose and the monitor could be seen. Several parents at this school had comments about the desks.

At first when they got the eMINTS program and they weren't going to be able to afford the desks, I didn't want my child in the class because I think it would be really distracting to have that big computer setting on a desk. And then where do the kids work? It just doesn't sound like that was going to work at all. But they did get the desks and I think it was a necessity.

### **eMINTS Students at Home**

The families who had computers in their homes noticed an increased usage by their eMINTS students. Parents were pleased to find that their children were using the home computers for more academic uses rather than for just games. eMINTS students searched the Internet for both personal and school-related areas of interest. Students regularly accessed class websites for school related activities. Students often helped their parents with computer skills and also shared their knowledge with siblings. Many parents were concerned that they saw less schoolwork come home leading to a

feeling of being out-of-touch with what was happening in the classroom and that newsletters did not take the place of actual schoolwork.

### **Academic Usage**

Parents with home computers were pleased that their children were using the home computer. Many parents reported that their eMINTS children were playing fewer non-academic games than were their non-eMINTS children.

...I'll say, 'Go get your flash cards and work on your multiplication tables.' 'Can't I go do one of the math programs and do the multiplication with that? I would rather do this than do the flash cards.'

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I know my two daughters who have been exposed to eMINTS, if they turn on the computer they start doing something academic based or they come back to the school website or they're going to look for something. My son, who was not exposed to eMINTS, I mean, it's useless. He wants to play a game...But the girls...use it in a wider, more productive range.

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[My daughter], she loves to do the story writing thing with, like American Girl is the one that comes to mind. She uses that all the time and she is creating her own story line, animating the character. And then you have to go watch it.

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### ***Class Websites***

Most teachers maintain a class website. Parents stated that on many of these sites students are able to access homework assignments, spelling lists, and math games. "...Because of the web links...she'll go back to the web page because she did a math program at school today. It was so cool. She had to go back and do some more..." Another parent said his daughter would "come home and look on the Internet for the spelling games and the stuff that [her teacher] had on there."

We lost her spelling words yesterday...She could get on [the class web page] and print out the spelling words...And if she was sick or missed any homework then she could get on-line and see what she needs to do. And I love that. If she's absent, you can just get on there and click and say that she is not going to be there and not even have to make a phone call...[The teacher], she sets up games each week for the spelling words that they are doing...After school...if she wants to play games she has to play the games that the teacher put on there...I really like the

fact that [the teacher], she puts a lot into it and puts a lot of information on there.

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...She had to get on there and she had to take a test on there and then it was sent back to school...That was kind of neat because you could sit there with the child and see what they had learned and learn right along with them if you chose to, and yet the teacher is seeing what the end result is.

### **Involvement with Family Members**

Parents were thrilled with the knowledge their children displayed. "I'm not computer literate at all. When they come in and do this and show me I say, 'It's nice. I'm glad you can do it because I can't.'" Parents reported that their children had helped them out with computer problems at home. A parent said, "He's trying to teach me how to use our scanner. I have not a clue." One parent described his son. "He's a resource for me. If I don't know how to do something, I can go ask him." And another parent recounted, "I'll have to ask my daughter, 'What am I doing wrong?' And she'll come over and she'll help me figure out what I'm doing wrong."

Parents with home computers were pleased to see their eMINTS student share information with their siblings. "...Whatever she was learning she would come home and show him [her brother] and so he just kind of kept up with her." A couple of parents bemoaned the fact that they must share the computer. "She's been on there all night. It's my turn." One parent described an interaction between her two children.

My son, who didn't have eMINTS, had to do a newspaper based on Harry Potter in fifth grade in language. He really has great ideas but he doesn't know how to do it and he thinks in 3-D...Well, [his sister] comes in, sits down, [and] starts showing him how to download pictures from the Internet onto his newspaper. [She] showed him how to put in text boxes, showed him how to change his fonts...showed him how to look up different things rather than just all that he knew about it from reading the books. They went to Harry Potter website pages...Typically I would have said his newspaper would have been a page long...and [the stories] would all have been three to four sentences long...It ended up, he made it into a scroll at least from here to the end of that table...He put so much into it. But his sister was sitting right beside him. That never happens. They are a year apart. They don't help each other do anything...He was there for probably five or six hours, which is

unbelievable...That's quite a lot of hours for him to even sit still and be at a computer and then for her to be helping him....That was wonderful to see those two cooperate.

### **Other Effects of eMINTS at Home**

Parents shared a variety of anecdotes about eMINTS and its effects at home. Most parents complained that they did not see enough student work come home. Parents felt out-of-touch with the classroom and with what their child was learning because of this.

You go to the backpack and there's nothing there. It's like, 'What have you done all day? There's not any papers.' And that took a while to get used to; to realize that they are doing something. It just doesn't come home in paper form.

Some teachers sent home newsletters to inform parents about classroom activities.

I don't think you get out of a newsletter the kinds of information that I would get from just looking at that math homework and see the kinds of things that they are doing and how they are doing it.

Many students are making fewer trips to the library because they are spending a lot of time at home searching the Internet. Students are sharing resources with their classmates, finding information in the evening and sharing it at school the following day. Several parents were pleased that their child had learned typing skills by practicing EZ Type on the home computer. A few parents were concerned about the amount of time their child spent at home using e-mail and wished they would use the computer in more academic ways instead.

Parents talked about projects their child was now tackling at home because of what they had learned in the eMINTS classroom. "[My daughter] came home and did the family tree; different pictures for every one of us." Another parent said, "My daughter is going to design a web page of us this summer so we can send pictures to my family since none of them live here..."

### **Student Access to eMINTS**

The eMINTS program is largely in third and fourth grade classrooms and also in a few fifth grade classrooms. Each school has a different process for deciding what students participate in the eMINTS program. eMINTS parents were pleased that their children were able to be in the program and conversely disappointed that other students were not able to participate.

Parents saw benefits when teachers shared their eMINTS classroom with other classes so that more students had experience with eMINTS. Several parents thought departmentalization would make eMINTS classrooms available to more students. Several parents saw the benefit of eMINTS for special needs children. A few parents felt that the computers should be used by some student every hour of the school day and should never be idle.

### **School-wide Access**

Parents were proud to have eMINTS in their school. "The fact that a school this size could offer something like eMINTS, I think is amazing..." Most parents expressed satisfaction at having their child in an eMINTS classroom and confessed that, "I would have been really upset if my kid was in the other class."

...[My daughter] found it very rewarding. She's learned a lot. She's taught me a lot. It's been a real expansion. I, too, wish that all the fourth graders could have that experience. It's been great.

Parents thought this would be a great program for all elementary students. "I think that it is just a wonderful program...I wish every school could get it and I wish we could get one for every class." Parents regretted that more students in their school were not able to experience eMINTS. "When I found out that not all the fourth graders had them I was a little bit disappointed because it immediately [was] structuring a hierarchy..." Parents strongly wished that it could be in all classrooms in any one grade and expanded to all the higher elementary grades also.

Some eMINTS teachers shared their classrooms with other classes and others did not. "The other third grade classes have been complaining because they haven't [been able to be in the eMINTS classroom] and they were told that they would get to come through." This sharing of eMINTS varied by teacher and not by school. One parent noticed that her non-eMINTS daughter benefited from the program even though she was exposed to it for a short amount of time. "I have another daughter in fourth grade...She was in one of the classes that went to visit the established eMINTS. I think she picked up a lot on that." At another school, a parent noticed more school-wide access to eMINTS. "I see how the other classes share the technology. You might not be in the class, but you still are exposed to it..."

### ***Suggestions for Increased Availability***

Parents made suggestions for ways to include more children in the program. These suggestions included departmentalizing so that students were in the

eMINTS classroom part of every day for a specific subject. Other suggestions included having students in the eMINTS classroom for a week and then out for a week, or changing teachers and rooms in the middle of the year. Parents felt that it was unfair not to share eMINTS and that any participation in the program, no matter how minimal, was better than none.

### **Special Needs Children**

Parents indicated that eMINTS could benefit special needs children but they did not elaborate. One parent mentioned that the equipment and Internet connection would be highly beneficial to children who must be schooled at home for periods of time.

Related to who was chosen to be in the eMINTS classroom, a parent stated that schools should put children who could most benefit from eMINTS into that classroom rather than randomly placing students in eMINTS. "Does that really prioritize on how you are using your technology and your supportive interventions for the kids or are there some kids that slip through the cracks...?"

One father was concerned that the computers assigned to special needs students who were pulled out of the classroom for part of the day were being under utilized.

My qualm is that a child that goes in here that is [at] a lower level; that is not in that classroom [for the full day], that is pulled out because they have a reading problem...They are not on that computer. He's stealing from a child that could be on there and it's not fair...to some other child in another classroom that they don't get the opportunity...If that child is going to improve, he ought to be in there to get the benefit..

### **Limited Access in Some Schools**

In one school, the teachers were not implementing eMINTS as fully as their peers and these parents were not seeing the benefits of the program as rapidly as parents in the other schools. These parents viewed the eMINTS program as mainly a technology program whereas parents in the other schools had discovered that the most important part of the program was the classroom transition into an active, cooperative learning community.

"...I would have to claim I don't really know enough about the program itself to know what the students and teacher and the whole educational system is suppose to derive from it...I just maybe don't get."

The project evaluators had earlier noted during their site visits that the eMINTS program had been implemented to a lesser degree in this same school. Before discussing the comments of the parents in this school, it must be noted that these four schools represent all eMINTS schools in the state and that this one school also represents other schools that were slow to implement the eMINTS program.

From classroom observations, researchers were aware that teachers in this elementary school used their eMINTS computers less often than teachers in the other three schools. In this school, the Internet was used less often for school projects and the projects were less involved. There was also less teamwork and less student independence. From the parent focus groups, this was independently verified by the parent comments in this school compared to the other three schools.

I don't know what percentage they are on the computers...I just can't pry anything out of [my son] but when I ask, 'What did you do on the computers today?' 'Oh, we didn't use them today.' So I don't know how much they are actually on them.

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I know right now [my child's] class is writing a paper...They are doing research. Today they were probably on a total of an hour...[Later,] when they took a break from regular instruction...traditional [instruction]...then they could zip back over to their computer and keep accessing information to complete...their reports...

Earlier in the year, the evaluators had categorized the lessons taught in these classrooms as "teacher-centered." Observers noted that these teachers were adapting the eMINTS inquiry-based teaching style to their classrooms at a slower pace than teachers at the other schools represented. This was verified when a parent recounted, "But it didn't seem like they had told me they were changing their teaching style or anything like that. I talked to them about that specifically."

Parents in this school also suggested using the computer lab next year as a replacement for eMINTS, claiming that regularly scheduled times in computer labs would be able to continue what eMINTS had started. Two parents suggested that the eMINTS computers could be used as a lab to provide more access for more students. "...Instead of having it in...two classrooms just have it as a specials [class]...like once a week, go to computer class and then for your 45 minutes you could get access." Several parents in this group were not aware that their children had been

participating in computer labs for several years already. Parents in the other three schools were strongly against computer labs.

With twenty more minutes or whatever, if he runs back in here to the computer lab, it is not enough to do anything...because sometimes it takes twenty minutes to get in [to the Internet] to find what you want.

This school also lacked a room air conditioning system required by the eMINTS program. "I think they use [the computers] quite a bit except when it got really hot. I remember that was an issue because then they couldn't [use the computers] when it was really hot."

### **Students After eMINTS**

Parents were very pleased with what their students learned while in the eMINTS program. Parents saw a new learning environment resulting in students being successful at their own level. Parents believed the student's research and computer skills gave them an advantage over other students. Some parents thought these skills would be retained over their child's school career and beyond while other parents feared they would be lost without reinforcement in subsequent years. Many parents were concerned about their children's transition from eMINTS back to a traditional classroom.

### **What Students Learned**

During their time in an eMINTS classroom, students learned many new skills. Parents believed the most long-lasting skills would be in using computers and the Internet and knowing how to do research and present the results. "Hopefully our kids will become more global and know that they can pull from lots of resources and [know] where to go to find that information..."

It's going to be harder [next year], but with all the knowledge that they've learned this year...they are going to know how to do more of the research on their own...[They] have the computer skills that they need to maybe help them excel in their future learning.

Regarding research, many parents felt that their child's knowledge of the Internet gave them an advantage over other students and would continue to do so. Several parents mentioned that this benefit would continue through high school and beyond. Many parents were impressed with the quality and quantity of information their child found and synthesized.

When they do bring home [work], you see the research that they've done is pretty neat to know. To me, it's a lot more knowledge than your average fourth grader would have without

the access to the computer. I think they've researched a little deeper. It's so easy. I do think they learn more...

### **How Students Learned**

Parents saw that their children had developed a new style of learning during their time in an eMINTS classroom. Learners were more active, were more motivated, and retained more. One parent described it as a "free flow educational experience going on where everybody is working a little bit at their own pace and they're exploring different avenues about the core subject that they are learning." Another parent is pleased with the effects eMINTS is having on her son.

[Our son] comes home and talks about [what he has studied at school]...He can go into great detail about different things. And you can really tell that he is grasping it and understanding it. It's not just a fact that he's memorized. And he seems really excited about it too...I feel like he's really learned it...

Parents were also pleased that the computer was not the focus of the classroom.

To me...one of the very important parts of the whole project is the integration of the computer into the learning process. It is a tool but it's not *the* tool. It's part of the way they learn...

Several parents noticed that this new style of learning reached children who had not previously felt ownership in a learning community and that the inquiry-based classroom encouraged all children. A parent explained, "[eMINTS is a] program that meets the needs of all levels of children as opposed to just the mainstream." Another parents related how accessible the program was for all learners.

[eMINTS provides] equal access for all the kids because I think kids learn [in] different ways. And I think [the computer], it is very intriguing and it keeps the kids interest...and somewhere in there you're going to hit that kid's learning style because not all kids learn by traditional methods.

Parents felt that eMINTS gave the students more opportunities to be successful learners. "If you have a child that is more advanced and you have one that is not, I think they can work at their own pace and their own level." One parent observed, "When you do walk down the hall, you do see reports that have gone in lots of different ways and are at lots of different levels of sophistication..." Another parent commented, "It's advanced the kids a lot...They work together...I think it's helping the students to learn."

One parent expressed his opinions on the goals of the eMINTS program.

...It's important to note that the eMINTS program is not, has never been intended to be about the technology. The eMINTS program was about changing the way children learn so [it] happens that the methodology chosen for this particular project and in this particular research endeavor was through a technology focus. But key to the whole success has been getting the teacher a different mindset about how education is presented. There's no longer what they call the "sage on a stage." You typically had the teacher in the front of the room writing on the board and that's how we learned. That's not how they are learning now. They're learning because the teacher goes around and helps them problem solve.

One parent was concerned that the open classroom environment might be letting some students avoid their least favorite academic areas.

...He loves school, which is really great...But I'm a little concerned that maybe with the freeform kind of an environment that is developing with the eMINTS classroom that some of the children might find it a little easier to avoid the subjects that they don't like...

Many of the classroom projects and Web Quests were not solely focused on social studies or mathematics, but combined many subject areas. Several parents talked about the integration of subjects and how it kept their children interested in areas they had formerly shunned.

...I think with some of these eMINTS-type assignments, [other subjects] they are so filtered in and hidden in and incorporated into these projects that you forget that you really don't like math because you got kind of this group goal and you've got other kids helping you and you don't have one teacher breathing down your back...I think the advantage that eMINTS has is that common interest background just draws it together where in the past, things might be stumbling blocks...

### **Possible Problems**

Parents were pleased that their children were able to experience the eMINTS classroom but were concerned that this new, exciting experience was for only one or two years and then the student would return to a traditional classroom. Parents were concerned about this transition.

### ***Transition to Traditional Classrooms***

Most parents were concerned about their child leaving the eMINTS classroom and confronting a change in the next classroom environment. Many parents were afraid the adjustment would be difficult for their children.

...I'm just more concerned about the transition...the shock of having to go back to the 'Here's your paper. This is what you do. And behave.' Going out of this class is going to be a huge let down...

Parents were concerned that their child's teacher and classmates the year after eMINTS would not be understanding of this different eMINTS learner. "...And are they going to work with that? These students learn differently than the traditional students and we're going to put them all together again..."

Parents shared stories about how disappointed and sad their children were about leaving the eMINTS program and their fears for next year.

He's already talked about it and he's bummed, he realizes his year is over and he is going to be going back to [a regular classroom]...He's not as excited about going into fourth grade...He really loved this year. It was exciting for him and he is kind of let down.

A few parents were not concerned about this transition to a non-eMINTS classroom. One parent reminded the others that each school year requires adjustments.

I'm not anticipating a lot of problems. I know it will be an adjustment but I'm still very thankful that he was in it this year. I wouldn't have taken this year away from him in anticipation that there'll be a problem next year. It's always an adjustment with each new school year. From fourth grade to fifth is usually quite an adjustment anyway.

### ***eMINTSness in Future Grades***

Parents were very pleased with the program but were concerned that it was only available to their child for one or two years. They offered suggestions for the next year. "It would be nice if they could have six computers in every classroom that was hooked up to the web so those kids would have that opportunity...That way those children will stay up-to-date with it." Several parents hoped that, at a minimum, there would be a SmartBoard in their child's classroom next year.

Most parents were concerned that their children would lose the skills they had developed in the eMINTS classroom.

“...If they go two years with no access like this, it’s going to be like starting over again because it’s going to change that much. If you’re not constantly at it, it’s going to change.”

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...These kids have learned all this...and some of them may not have computers at home. If they go for years and they’re never able to use what they’ve learned and build on it, then I worry about the boredom.

Many parents hoped a curriculum was developed to include eMINTS skills in their child’s future grades. One parent reasoned, “They’re evolving, instead of going back and forth.”

...Technology just moves every six months...so even if these kids are turning out websites and presentations and all that in third and fourth grade, when they get to sixth and seventh, what then? Are we building that into the curriculum so that we are able to grow with those kids as technology...grows or did they just learn all this cool stuff in third and fourth grade and there you go?

One parent suggested, “[Next year] I think they will be using the computers more at home because they don’t have access to it at school.”

### **What Will Students Retain**

Although parents were excited about what their children had experienced in eMINTS, they were divided in their opinions about their learner’s retention of skills without reinforcement in subsequent years.

...I think it is a great program. The only other thing would be, can we get it into fifth grade?...I think a two year program like this would be much more advantageous than a one year program. If you have half as much [in fifth grade] and half as much here [in fourth], you could carry it on...The habits you’ve learned, the things that you know...do you carry that on when you lay off it a year and three months?

Although parents were unhappy that their learners would not continue in an eMINTS environment, many parents felt that their children would retain the learning skills they had implemented during their time in the program. “I think they will always be more interested in finding out more. I really think

it's had long-term benefits." One parent was confident that the students would be able to transfer what they had learned to future endeavors.

...It's going to be easier for them to take all that; like researching things and pulling information and organizing it, and now go back to paper [rather than computers]...Going and getting the information was probably the hardest part. Now they know how to do it and how to put it together.

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Kids are real resilient and I think they retain a lot. If they got to sixth or seventh grade and now they have an assignment, they could mess around and pull all those skills back up again.

One parent noted that the eMINTS style of learning could continue even without the computers.

You can continue that hands-on learning focus and change the way your mental process is working in the way the classroom is presented...[even] without the constant infusion of technology in the classroom...

### **Overall eMINTS Program**

Overall, parents were quite pleased with the eMINTS program. A few suggestions offered by parents were to increase the challenges for the advanced learner, to place the eMINTS classroom in the highest grade in the elementary building, to maximize the use of the eMINTS computers throughout the school day, and to help students with after school computer availability.

When asked about the strengths of eMINTS, parents reported that the overall concept of the program and the implementation were quite impressive. Parents also considered the teacher training thorough and properly implemented.

### **Areas for Improvement**

Overall, parents were quite pleased with the eMINTS program. There were several areas where they suggested improvements. A few parents wished the program provided more challenges for gifted students. A few parents wished the program could be phased in over two years. Many parents wished it could be placed in the highest grade in the elementary building to lessen the shock of leaving this special learning environment. Parents hoped to maximize the use of the eMINTS classroom by having it scheduled for use by students every hour of the school day. Some parents suggested that an eMINTS classroom or computer lab be available after school for those

without home computers and that a software subsidy be given for those with home computers.

### ***Challenge All Students***

Some parents first considered eMINTS more as a remedial program while other parents had expectations that the program would challenge the more advanced students. Most parents were delighted to see the effects the program had on students, yet a few parents were disappointed that the program fell short of their expectations.

I'm very impressed with the program. Probably the only one shortcoming I see with it, is that it has not been used to challenge some of the kids as much as it could be...

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They made it sound like this is for the disadvantaged kids that need a little help...That's a valid use of it, but I wanted a wider band because I want it to challenge all levels, which is one of the things I feel the computers can give the classroom. I didn't feel like it was focused on that and honestly, through the year, I still have that feeling that probably...it's not being used to the extent it could be to challenge the ones that are capable.

### ***Grade Level for Program***

Although parents were pleased with their child's experience in the eMINTS program, they were concerned that it would not continue for the remainder of their child's elementary experience. Many parents suggested the program would be better suited for the highest grade in the elementary building so that the transition for the students would be to middle school rather than back to a traditional elementary classroom.

...Fifth grade is the last year in elementary schools and then they go to the middle school, which is a completely new environment...They're going to be in eMINTS in the fourth grade and then they are going to get back to the traditional elementary school classroom in fifth, just for one year and then they are going to make another change into the middle school...It would be nice to see some introductory eMINTS type of thing in the fourth grade but then if they did the whole thing in fifth grade, they're changing into something new anyway.

A few parents suggested phasing the eMINTS program in over two years with the first year being more of an introductory year.

...It should be more an intro in fourth and more like what they are doing in the fourth in fifth grade. [That] would make me

more comfortable instead of slamming it in fourth...I almost feel like a gradual go into what they are in would be better...I think there's a lot more potential there...stretching it out to another year and not emphasizing as much the first year...

### ***Maximum Use of Technology***

Although parents were very pleased with the eMINTS program and were pleased that their child was a participant, they regretted that it was not available to more students. Some parents looked for ways to insure that the computers were always in use. One parent was disturbed that computers were possible left unused when special needs students left the classroom. Another parent commented that the program should be "making sure that we're maximizing how we use that technology, not just for *which* student population but also *are* we using it. It's not just setting around idle."

Another parent suggested that other classes could use the eMINTS classroom when the eMINTS students were out of the room.

Those kids have to [go to] gym. Those kids have to go to music and that classroom is setting there empty...I think spreading it out to more students and maybe doing away with some of the sophistication [would make the program better].

### ***Availability of Computers After School***

Many parents were looking into the future of eMINTS and the difficulties that would be encountered by the eMINTS student regarding homework. Those with computers at home would have a distinct advantage. Many parents thought that it would be helpful for their children to have a computer available after the school day. "I know we have a disparity between those who have computers at home and those who don't...I really see an advantage of being able to carry the work from the school and then for her to continue it on at home."

At one school, parents suggested having an evening computer lab as a way to help provide evening computer and Internet access for all students.

[There are] families that have a difficult time providing on-line and stuff like that...If you go to the library and try to get on at the library, you wait in line...So maybe [it would be good] to have an eMINTS center where it's located close enough for families to take their kids there if they need some more time on the computer. [It] might be the resource center or have a room in one of the elementary buildings that is dedicated [evenings] throughout the week...

Several parents wished that eMINTS could help them acquire computer software at a discount especially so that students could have the same programs on their home computer as on their school computer.

## **Strengths**

Parents were asked to suggest areas in which eMINTS could receive an award. This question elicited this response from one parent. "...The whole concept of it [eMINTS] is enormous. That someone came up with it and implemented it and it's been so successful...When I think of eMINTS, the whole concept of it, it's just pretty outstanding." One parent thought eMINTS could be rewarded for "taking two years and training teachers. Actually, sending them for training, kind of phasing it in slowly and the next year doing more with it by taking the time and [doing the] training..." Another parent commented.

I'd say [eMINTS could win an award for] doing something fairly revolutionary and pulling it off. I don't think that a school, especially in our district, could get together the funding for that many computers and that much technology in a class plus get the teacher properly trained to make good use of it. I think that's just a really big task to be able to do that and pull it off so that it works as well as it has.

Other areas parents suggested for awards:

- academic innovation
- pioneers for future education
- willingness to think outside the box
- the introduction of technology
- helping the students to learn
- helping "kids" be on the cutting edge
- the teacher's support that they provided this year
- implementation award

## **Conclusions**

Overall, parents were impressed with the eMINTS program and were pleased that their child had been able to participate. Many parents saw improvement in their child's reading, writing, and mathematics skills. Parents were impressed with the computer skills learned by their child including the use of the Internet and the related research and presentation skills. As parents noticed their children becoming more independent learners, they also became aware of life skills their children were learning such as teamwork, cooperation, and problem-solving skills.

Parents noticed changes in the classroom environment. By sharing computers, their students were working closely with other students, learning

to cooperate and work as a team. Sharing resources and ideas developed more tolerance and respect for classmates and more friendships developed. In eMINTS classrooms discipline problems decreased because students were not getting bored and acting out. Students developed more self-confidence, especially in presentation skills. The students had a new enthusiasm for school. Parents thought that keeping students together and with the same teacher for a second year was not the ideal situation. Overall, parents noticed that the classroom fostered an attitude of helpfulness and sharing between its members and set up a positive learning community.

Parents noticed the enthusiasm the eMINTS teachers had for the program and were impressed with their hard work and skill. Often eMINTS provided renewed enthusiasm for teachers who had been in the field a long time. Parents saw the relationship between teacher and student change to a more cooperative and less hierarchical relationship. The equipment in the classroom put new demands on the teachers. Parents noticed that some teachers had poor technical skills and that this posed a problem for them and their classroom. Parents were impressed with the training and support provided by the eMINTS program and believed these were key to the success of the program.

Most parents felt the high costs of the eMINTS program were worth the benefits. Parents were concerned about future funding and maintenance of the current system. Several parents thought current costs of traditional education were comparable to the costs of eMINTS.

Parents noted that the classrooms were now more crowded and were limited to non-messy activities but declared the benefits outweighed the sacrifices. Parents were aware that eye contact between teacher and student was now limited due to the large monitors and that workspace was also limited.

Parents noticed an increased usage of home computers and were pleased to find that this was usually in academic areas. Students regularly accessed class websites for schoolwork and games. Students often helped their parents with computer skills and also shared their knowledge with siblings. Many parents were concerned that they saw less schoolwork come home leading to a feeling of being out-of-touch with what was happening in the classroom and that newsletters did not take the place of actual schoolwork.

Parents were pleased that their children were in the eMINTS program yet were disappointed that eMINTS was not available to more students. Parents saw benefits when teachers shared their eMINTS classroom with other classes so that more students had experience with eMINTS. Parents suggested that classes be departmentalized so more students could

participate. Several parents saw the benefit of eMINTS for special needs children. A few parents felt that the computers should be used by a student every hour of the school day and should never be idle.

Parents were very pleased with what their students learned while in the eMINTS program. Parents saw their students learn in an open, cooperative environment where students were encouraged and were successful at their own level. Parents believed the student's research and computer skills gave them an advantage over other students. Some parents thought these skills would be retained over their child's school career while other parents feared they would be lost without reinforcement in subsequent years. Many parents were concerned about their children's transition from eMINTS back to a traditional classroom.

Overall, parents were quite pleased with the eMINTS program. A few suggestions offered by parents were to increase the challenges for the advanced learner, to place the eMINTS classroom in the highest grade in the elementary building, to maximize the use of the eMINTS computers throughout the school day, and to help students with after school computer availability.

When asked about the strengths of eMINTS, parents reported that the overall concept and implementation of the program was quite impressive.

In conclusion, parents were impressed with the eMINTS program, noting their child's improvement in academic, technical, and social areas. Students not only developed new skills, but also a new enthusiasm for learning which parents anticipated would carry over long into the future.