



Teacher Experiences with Technical Support



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Teachers' experiences with technical support

Technical support for the eMINTS classrooms is provided through the State of Missouri Prime Vendor contract. In the first year of the eMINTS project, 1999, G.E. Capital provided technical support. In September 2000 the prime vendor contract changed and a new vendor will provide technical support in 2001. Based on their experiences in the 1999-2000 school year, eMINTS teachers report varying degrees of expertise, attitude, and responsiveness in G.E. Capital personnel serving their clusters. However, teachers' desires to understand what was being installed and technical service vendor personnel's desire to complete their work assignments often conflicted. This memo describes how the technical support impacted the teachers' work environment, and what barriers were encountered.

Context of this report

The information in this report is taken from a series of nine focus group interviews with participating eMINTS teachers conducted in the summer of 2000. One group was conducted in each cluster. eMINTS evaluation team members moderated the focus groups. The purpose of the groups was to understand teachers' impressions of program services after their first year as eMINTS teachers. Teachers were asked to discuss their experiences with eMINTS and technical service vendor technical support, their experiences with the Cluster Information Specialist (CIS), and their experiences with the eTHEMES service. This report summarizes teachers' observations about equipment installation and technical support. Separate focus group reports address other topics.

Technical support for the eMINTS classrooms is provided through the State of Missouri Prime Vendor contract. In the first year of the eMINTS project, 1999, one vendor provided technical support. In September 2000 the prime vendor contract changed and a new vendor will provide technical support in 2001. All of the comments below are about the interaction of eMINTS teachers with technicians from G.E. Capital. These comments describe a set of general concerns surrounding the interaction of the eMINTS teachers, eMINTS building administration and external technical support. While the teachers are describing their experiences with G.E. Capital, their concerns are relevant to whoever is providing technical support.

Value of the technical support for the teachers

One of the core elements of the eMINTS project is the technical infrastructure of the classroom. The installation of technology in the classroom is the first step in creating an environment that makes computer-assisted, inquiry-based instruction possible. The eMINTS teachers viewed the service received from G.E. Capital personnel very differently. On one end was this testimonial from the Central Cluster, "We had excellent service from G.E. Capital and they were very accommodating . . .they came when they needed to come and they talked to us over the phone and worked with us . . .through whatever problems we had." On the other end were comments such as this one from the East Cluster, "Everything with GE Capitol to get my equipment and get it the right way, it was just a total fight."

In some clusters teachers thought G.E. Capital technicians were knowledgeable, efficient, and "very, very helpful and very good." They were viewed in a positive light; "He wanted to know what he could do and more." Examples of being helpful were cited: giving a loaner printer while one is being repaired; spending an entire day assisting with networking; and completing work without an official work order. The most prevalent favorable comment about G.E. Capital was their prompt service. Teachers in each of the clusters commented on the fast response time.

In other clusters teachers' interactions with G.E. Capital was less positive. Teachers reported that some technicians performed a substandard installation. These technicians often left equipment and cables unconnected, interrupted class to service equipment, or limited their activities to the exact specification of their work orders.

Sources of technical support

The eMINTS project provided technical support through several vendors. Schiller's Imaging Group provided SMART Board and projector installation and support. IBM provided warranty support for the Teachers' Laptop. Missouri State Prime Vendor delivered most of the remaining classroom-level technical support. MOREnet provided network support for the T-1 lines and routers connecting the school building to the Internet.

When they were asked to describe their experiences with technical support, most teachers' comments addressed their experiences with G.E. Capital. The few times teachers mentioned the other sources of support, they were generally satisfied by the assistance they received.

Barriers to effective implementation

The quality of the technical assistance was important to the teachers, as was the process in which the technical assistance was carried out. Five major themes emerged as barriers to effective implementation:

Issues of guidance

The predominate mode of operation, according to the teachers, was "drop the equipment and run." No guidance was given on the function of the equipment. Teachers said that in most cases they were not spoken to and they had so many questions. A Southwest teacher complained that when they left, she was not told all the little tricks. One of the Northwest teachers provided the following example in her reflection: "When he installed the computers, maybe I was expecting too much, but the boxes were left in there, and some of the parts that we needed to connect were in those boxes, getting ready to be thrown away. So I don't know what his job was . . .to install everything and have it up and working, or if it was just to get it on the tables, kind of connected . . .I'm not sure." This experience was common for many classrooms. From the East, " We had a box of books and software and the wires and all sorts of stuff, and there was no explanation why it was there, it was just there." A teacher from the West expected after the G.E. Capital technician was finished with the installation they would have given her some guidelines or directions. "They walk in, set it up, walk out, and I'm going, how do I turn it on? How do I turn it off? I just had some real basic questions I would have liked someone to have walked through

with me, and that didn't happen." A North Central teacher characterizes G.E. Capital staff as "unobtrusive, but tight-lipped."

Issues of competence

Questions of the GE technicians' skill base surfaced during the discussions. "I don't think they were aware of some of the things that needed to be done or how to do them." Difficulty with equipment continued after a G.E. Capital technician made the repair call. Some stated that their technical people knew more about what to do than the G.E. Capital technician did. "Our technical people kind of helped G.E. Capital instead of the other way around."

Attention to details was lacking, things like writing the serial number down, before the CPU was installed and against the wall was disturbing to some teachers. It was also bothersome that "software was everywhere and nothing was together and it was just thrown in boxes."

In at least two cases, installation was problematic:

"I don't feel that everything was installed, they did the bare bones minimum installment on all our computers, therefore our children can't access all the programs until I have time to go down and sit down and finish installing everything. And that's true of my teacher's workstation and all my student workstations. That's frustrating."

"My room was never networked, it was never done when they initially installed it, it is still not done. I would call and they would argue with me. His supervisor called me one day and argued with me."

Issues of timing

Shared decision-making concerning the scheduling of installation and repairs would have been much preferred to the imposed schedule. Frustrating, was a word heard often when timing and schedule were mentioned. "We had to be extremely flexible because they would just be there. You just kind of have to work around them and they have to work around us." The teachers thought that it was not professional of a company to come in and uproot their whole class with a ten-minute lead-time.

The teachers felt G.E. Capital technicians did not understand the teaching environment. Examples were given of calling five times during one school day expecting that a teacher has time to check the voice mail that often. Requests that a teacher be called during a planning period were ignored. "It would be helpful if they would call when the kids aren't there. It's hard to have twenty-three students busy doing something and then you have to take a phone call. And to get technical directions and have to walk you through something."

Teachers wanted an accurate timeline. At times they were told that something would take one day and three days later, they were still out of their classroom moving from room to room; and, in some cases teaching in the hallway.

Issues of responsiveness

Every cluster had good things to say about the response time and every cluster had complaints about the response time. Stories of waiting two weeks for printer repair, three months for a scanner repair, closing a work order that wasn't finished because no one answered the phone, and never getting a response to a call were heard. After a remark was made in the Northeast cluster that a problem was attended to the next day, a fellow teacher said, "They've never come the next day for us, never."

Irritation was evident with the wait time for repair and also the lack of assistance while there. Even though a G.E. Capital technician was in the classroom and a problem was evident, aid would not be given until it was called in first. "He wouldn't even look at it or tell you what he thinks it might be." Another teacher informed the group that she had a problem that she asked a technician about "that probably would have taken him 2 seconds to fix, and he would have nothing to do with it." He only fixed the specific problem for which he had a work order.

Issues of faulty equipment

With all the technical glitches, teachers in one school felt like they lost an entire year. Equipment glitches can be expected with a project this complex; and there were glitches. Vcon problems surfaced in the Southwest and West; laptop distress in North Central; computer problems were found in the Southeast, Bootheel, and North Central. Some teachers had more than their fair share of aggravation.

"I think I was the person that got the lemons in the equipment. My scanner went bad, and I called it in and I think they were here the next day. It wasn't something they could fix here, so they sent it in and I had it back within a few days. The same thing with my printer. They couldn't get my kids to network to the printer, and so they sent it in and I had it back in a few days. My pigtail on the laptop went bad, and when I called that, and they airmailed it, I had it within 24 hours, which just amazed me. I mean, they got it here quickly. But I think everything was coming so quickly from different directions that, it was just a little frustrating."

Printer operation

Most teachers were frustrated by the performance of their printers. Many of the complaints stemmed from problems over print quality and the apparent difficulties G.E. Capital technicians had in diagnosing and solving the problems.

Interaction with district technical support

There are wide variations of district technical support for the eMINTS teachers. Among the different districts there was a wide variety of support arrangements; for example: one technical person for the entire district; a technical aide serving two schools; a teacher who doubles as a technical coordinator serving four buildings; and a technician who is only available on Thursdays and Fridays.

Regardless of the form the district technical support takes, the resounding opinion of the teachers is that there needs to be a lot more clarity about who does what and how. And, the sooner the information is disseminated, the better off everyone is. District technical staffs have complained to teachers because they thought G.E. Capital would be responsible for things, but later were told it would be more work for the district. It was clear to the teachers that there was a lack of communication when they heard comments from their district technical person like, "whose computers are these anyway?" Not knowing who is in charge of what delays the process of getting something fixed; and the teachers were interested in shortening the time of getting things back in working order.

Another area that a few clusters mentioned was a lack of compensation for the extra hours that their district tech coordinators put into supporting the eMINTS classrooms. Teachers feel their district technical staff are "totally swamped, and then he finds out at the beginning of the year, he's getting all these extra computers." "All of a sudden, we have three printers that don't match the printers of the rest of the district, and we need special ink cartridges ordered."

There were instances in which teachers told of things getting solved because of the collaboration between the two areas of technical support. A Southeast teacher was pleased that her district technical worker was told how to handle a router problem. Two phone calls and the problem was solved.

In referring to the mesh between the district technical support and G.E. Capital, the teachers' perception ranged from "rude and condescending" to "peaceful coexistence" to "really effective." The effective schools appeared to come to a mutually based agreement on the sets of roles each was to play. A Bootheel teacher explains, "I don't think that our technical people have had a problem, they kind of know where their spot is and where G.E. Capital's is and we haven't had any trouble." A Central teacher had a similar experience, stating that each knew enough about the situation to be really effective, "because our techie was there, too, they worked together."

Summary: lessons learned about technical support

At the time of the focus group sessions, Summer 2000, G.E. Capital provided technical support under the state prime vendor contract. In September 2000 the contract changed and a new vendor will provide service to the eMINTS classrooms. These summary comments are offered to assist in the provision of support during the FY01 school year.

Uneven experiences with service statewide

Teachers' perception of the quality of service they received varied greatly, but there was no discernable pattern of experiences. As many teachers had positive comments as had negative comments, and many teachers expressed both. It appeared that the quality of the service they received was randomly distributed, that the quality of the service delivered depended on the luck of the draw. This uneven nature of service delivered is a potential problem that the new vendor should address.

Some further comments about the quality of service delivered

When fixing problem with Vcon, all information on hard drive lost “. . . it seems like the gentleman that always comes to work on our stuff in Republic, I don't think he knows everything that is necessary to me. . .because it seems like he'll get in there and he'll scan the problem and then he's gone, and he's asking a question, and then, you know, either another guy will show up or . . . he loses everything that I have or he takes it with him.”

Establish clear communication lines

One of the major complaints about G.E. Capital was that they “delivered the equipment and left.” This complaint does not reflect on G.E. Capital's service delivery, as much as teachers' confusion about what the service technician was allowed to do. G.E. Capital technicians are often on a tight schedule, and visit schools to fix particular problems. Teachers, on the other hand, are more concerned with making sure they have all of the equipment they are supposed to have and learning how to use it.

Much of the conflict between teachers and technicians comes from their differing orientations. As a group, teachers were unsure what type of “service” they could expect from a service call. Many teachers were upset when the technician focused on the specifications of their work order and would not answer other questions they had.

Installation was the central concern of G.E. Capital and efficiency was the valued end. The teachers assumed that a little more attention would be focused on them, and not just the installation itself. In most cases, it seemed that the "people component" was missing and that the technical assistance was limited to wires and cables.

One solution to this problem lies in getting more information about the computer installation and service process to teachers at the beginning of the project. Presenting teachers with a detailed document describing the equipment they would have after an installation, one that provided names and pictures of cables and other key components of the teacher and student workstations is one suggested remedy to this problem. Providing teachers with a checklist delimiting a set of expectations for a service call would help them understand what to expect from a technician's visit. Finally, a document clearly describing the anticipated support roles of the teacher, the building technical staff and the prime vendor technicians would help clarify teachers' expectations for a service call.

Make it clear from the beginning what is involved and who will be a part of the project. For clearer understanding, written responsibility was suggested. "The farther it went, the more detailed it got, and they just kind of got faxes as they went along. It wasn't all up front."

Fix equipment promptly in all clusters

Although some teachers report prompt service, others report waiting over a week and some report never getting a response to a call.

Improve attitudes between G.E. Capital and school technical support staff

“ . . .they were kind of rude and condescending to him, and he’s quite. . .extremely capable, and I know he was a little frustrated with the way they acted toward him...”

Involve administration in service details

"When it comes time to go to a meeting or to get reimbursement, all those other kinds of things, and you don't think there's going to be a problem, then suddenly you realize there is a problem because you know, not everybody heard the same thing."

Provide advance notice when installers are coming

“ . . . we wouldn’t get told when people were coming or they would just show up or...they would come and we would have to move our classroom into the cafeteria or into the library or into the music room, which is fine, and we can be flexible if we have some notice...but when they show up at the door and you have to get out, that’s really difficult to work with.”

Some possible implications

Although the amount of interaction between GE Capitol personnel and the eMINTS teachers may have been adequate, it was not equal to what was expected. The most general observation one can make about the interaction of the eMINTS teachers and the G.E. Capital technicians is each had different expectations about the technician’s role. On the one hand, many teachers expected to have all of their equipment installed and accounted for. They also wanted basic information about how to operate their new equipment. On the other hand, the G.E. Technicians had very specific installation instructions and very tight schedules to complete. Given the different expectations of the teachers and the G.E. Capital technicians, it is understandable that the eMINTS teachers feel frustrated.

The most important implication is that the teachers need this supportive interaction, relative to hardware use and repair, to increase their confidence and their capacity with the technology. Another implication is that it may be necessary to give the teachers more thorough understanding of why the technicians behave the way they do; and likewise, relay to the technicians the benefits of face-to-face associations with the teachers.

Summary of technical support findings

In all cases that the administrators were involved from the beginning: the superintendent, the principal and the tech person, the project went smoothly. The teachers knew that those who needed to know what the program was about were well informed. They advised, "Make sure the channels of communication are well established." Those teachers, whose superintendents and principals went to the initial meeting, said that it made a "huge difference." They received "really good support." The administrators know "what's going on and know how exciting it is, and cutting edge."

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installation itself. In most cases, it seemed that the "people component" was missing and that the technical assistance was limited to wires and cables, and was not seen within the larger context of the eMINTS project.

Despite some rough spots, the enthusiasm for the program has not been diminished. As a Southeast teacher exclaims, "Guys, it is worth every minute. We're out of the classroom, or inconvenienced for just a day or two, or three at the most, and you know what, look at what we got for that!"