

What can we do about School Tech Support?

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A listserv for technology coordinators recently had a discussion titled "Barriers to Best Practices." This discourse was started by David Warlick and stems from his book, *Raw Materials for the Mind* - <http://www.landmark-project.com/rmfm/toc.html>.

David mentions two barriers, and the possibility of a third. The lack of teacher preparation time and the sheer momentum of our industrial-age style education system that renders it nearly impossible to turn, are number one and two. He offers the third, as the policies and restrictions employed by the district and site technology staff. This naturally sparked a healthy debate. How do we effectively provide technology support to our schools considering a lack of funding and personnel?

Technical Staff:

Private industry usually employs one technician for every 50 to 100 machines. This healthy ratio does not even include their network management personnel. School districts average around 250 machines to 1 technician if they are lucky. And this person is often a teacher. The restrictions and policies enforced by our technical staffs often seem to be the fiendish plot of a propeller-headed young man bent on keeping the teachers from effectively using technology. And yes, many of the measures put in place to limit support requests can restrict the end-user. One of the biggest struggles seems to be a district's Internet filtering system. Most allow for the access of a restricted site only if a teacher makes a request to free it up. Yet many districts do not have the resources or know-how to handle and act on those requests. Congress required the filtering of school Internet access for those receiving federal discounts on networking services and products. The frustration this has brought on requires an article to itself. We will focus here on what can be done to solve other support issues.

California's Digital High School grant and other funds from the state have provided large numbers of computers for the classroom but little money has been dedicated to ongoing technical support. With the economic dip what little money was available is now drying up. Our districts are looking at budget deficits. Since hiring more technical support is not an option, what can be done to lighten the load?

I have been both a classroom teacher and a technician. In schools there is usually a class-system (pun intended) where the certificated personnel wield power over the classified staff. Whenever I work with, or present to educators, I always point out that I was a classroom teacher for 10 years and then I am accepted as a fellow educator. A site or district level technician

usually does not have this card to play, and though not outwardly demeaned by teachers, the relationship is usually strained. It is generally agreed by psychologists that the money does not motivate the robber or thief as much as the high they get from exercising the power over their victim. Not to equate our technicians with thieves but I have to admit there is a power play that can be, and sometimes is, exercised. Tim Landeck, the technology coordinator for the Alisal school district near Monterey, California suggests that we treat our technicians like gold. Include them in the decision-making processes, pay for the training they need, and work to build a positive relationship between them and your teachers. If they feel empowered and more like a partner, there will be less distrust from both sides.

Workstation Obsolescence:

The support costs for a computer kept past its life cycle (5 years) increase exponentially. In the world of the classroom, we use computers until they die. I just helped a "poorer" school establish a computer lab from the hand-me-downs from other districts. It is wonderful yet sad to see machines that were headed to the recycler now being used by kids that wouldn't have them otherwise. The average RAM in that lab is 8MB. If you get the opportunity to outfit a new computer lab, consider a package that puts the equipment on a 3-year lease. This makes the original purchase about 1/3 of what it would be. If the district or site can commit to that amount yearly, the lease will allow a 3-year refresh cycle for that equipment. At the end of three years you can usually buy the computers for \$1 each and resell or redistribute them on campus. Most major vendors like Dell, Compaq and Apple have lease programs. The Tucson Unified School District www.tusd.k12.az.us leases their Compaq computers through Eduflex.

(www.compaq.com/education/k12/success/tucsonunified.html)

Workstation Software:

A single school district may have hundreds of software titles installed. This makes it difficult to inventory and it makes it impossible to support. It is best if a technology department can provide a matrix listing all titles allowed with guidelines for the level of support each will receive. Applications on the list are hopefully tested and any known issues should be included in the matrix. This will help teachers and sites with the purchasing and standardization of software if they know that little support is available for one vs. another product. For computers directly supported by you, try to implement a common hardware image. A failed drive can be easily diagnosed or re-imaged and sent back online.

Standards/Purchasing:

To make the software image successful, there needs to be a standard hardware platform down to the vendor. This is difficult given the practices of schools. Still, when you do have the ability to make buying decisions, consider buying from the major computer makers such as Dell, Compaq, HP, Gateway and Apple and insist on a three-year support contract with each machine. Standardizing on Tier 1 vendors guarantees that you will get

standardization within the box, not requiring you to have different drivers for mixed hardware. It is also important to keep all printers to a standard for general maintenance, ink cartridges, laser cartridges, etc. Standardizing and using higher end vendors cost more up front will save you more in support thus requiring less technician time.

Support Procedures:

Each site must have access to an efficient help desk tool. The more efficient this process is, the better use of everybody's time. Use a computer-based tool for help desk calls with a database back end. This will provide a system for record keeping of support needs, a knowledge base of solutions, email communications for status and an escalation procedure. You can get a shareware product developed by Mac Carey from our office at www.cccoe.net/hd. In regular emails to staff or on the web page where the Help Desk site is located, consider providing an FAQ or "Top 10" most common problems and their solutions. This gives folks a chance to check these items first before alerting a technician. Its always embarrassing when the reason it didn't work was because it was unplugged. Another good resource along these lines is a troubleshooting handbook or laminated card that is placed next to each machine. Computer Strategies developed a Macintosh booklet that can be purchased at http://www.compstrategies.com/resources/first_aid_kit.html.

Training:

Since we are encouraging all users to check the FAQ and/or troubleshooting guide and be the "first line of defense", we should also provide an incentive based professional development program on basic tech troubleshooting. Perhaps network access or the email account is not activated until the course has been completed. Districts could even develop a self-paced, online-accessible training. This too will decrease the number of low-level technical support calls.

Servers:

Huge time consuming tasks are server configuration, installation, support and maintenance. If you have a rock-solid network, consider using server farms or outsourcing some of your servers to Application Service Providers (ASP). Student Information System vendors are beginning to host your data and application on their server. The program is then accessed through a web browser. The provider will handle upgrades, maintenance, backups, etc. NCS Pearson who has SASIxp provides schoolCONNECTxp at <http://k12.ncs.com/k12/district/schoolconnect.htm>. Also consider server software that can provide "support down the wire". Products like PC Anywhere or Timbuktu allow you to take remote control of workstations throughout the network and over the Internet. Products like Novell ManageWise or SMS are helpful for pushing out new software and upgrades. They also allow for asset management, copyright compliance, and detection of rogue software.