



Using Students as Campus Technical Support

Doug Prouty
Contra Costa County
Office of Education
77 Santa Barbara Rd.
Pleasant Hill, CA 94523

Using Students as Campus Technical Support

It is well documented that, compared with a similar sized corporation, a school district Information Technology department is grossly under staffed and under funded. A recent national survey shows that school districts average about one technician for every 400 computers, compared to one technician for every 100 computers in the corporate environment. Because of this and a lack of funding in other areas, there are very few school districts that are able to effectively provide adequate technical support to administrators, teachers and the computers in the classroom.

With the economy in trouble, states and therefore school districts have been forced to reduce budgets. One IT director of a district that seemed to have a handle on technical support recently mentioned, that his district would have to cut out several support positions. It may be quite a few years before an increase in funds start to flow again. Not only does the decrease in district budgets jeopardize the little support they provided to the classroom, it also means that teachers and students will have to make do longer with aging technology.

One possible untapped resource within the school is the students themselves.

Programs like E-Rate and the Digital California Project, plus an increased importance in student data systems has caused school and district networks to become more sophisticated. This result is an increase in the number of servers, firewalls and other network technologies, and thus an increase in points of failure. Over the last ten years, the greatest need has shifted from the support of computer workstations to the support of network systems. Thus, we have greatly increased our need for personnel such as network system engineers, network managers and programmers. District IT people and hired consultants will have to focus on network responsibilities while basic classroom tech support will go unaddressed.

Add these obstacles up and it becomes obvious that a school will need to tap into all other tech support resources it can find. One possible untapped resource within the school is the students themselves. "What schools have for the first time in history is an area where the average kid knows more than the average teacher, when it comes to technology." (Harper – 2000) Why not organize the students for this task?

Formally organized and well run, student technical support programs become a wonderful service learning opportunity.

Students have traditionally assisted with projects around campus such as landscaping, painting and office support. Teacher Assistant or TA is a regular class in most high schools. Elementary schools have always had students willing to help out. I remember being responsible for the technology in my 4th grade classroom. Of course, that meant I threaded the 8mm projector, repaired broken film and ran the filmstrip machine. A lack of technical aptitude didn't stop the teacher from utilizing these tools in her classroom.

According to research from the Cisco Academy, Cisco Systems' program to mobilize students as technology support is a great help to many schools - <http://cisco.netacad.net>. The students spend two years in the program and work hands-on understanding computers and networks. Their new skills give them a chance to give back to the school community and this contribution of support makes a student feel valuable and is highly prized by the technology users. Formally organized and well run, student technical support programs become a wonderful service learning opportunity. Research (Kinsley & McPherson, 1995) points out that service learning shows many benefits for students including:

- Personal growth such as: self-esteem, acceptance of new challenges, reinforced values, and accepting consequences for own actions
- Intellectual development and academic learning such as: basic academic skills, high-level thinking skills, self-motivation, judgment, and understanding
- Social growth such as: social responsibility, civic participation, exploration of service-related careers, and an understanding, appreciation of, and ability to relate to people.

If nobody is dedicated or available to support the computer systems, and there are long delays in repair, teachers and students will just stop using them.

If nobody is dedicated or available to support the computer systems, and there are long delays in repair, teachers and students will just stop using them. Considering a district's substantial monetary investment in the technology and the proven benefit computers brings to learning, this is an option we should try to avoid. "If teachers are going to embrace computers, then the barrier to timely technical support must be eliminated"- (McKenzie, 2000). Unfortunately, when technical support is lacking on campus, a few teachers give their extra time to help out. It is not uncommon for a "techie"

With an organized program in place, the answer to the tech support problem is sitting in the desks.

teacher to leave their students and classroom to have it covered by another teacher or vice principal, so that they can provide tech support for a colleague or the system in the office. Taking a teacher away from the job of educating so they can provide tech support is harmful to student learning and an ineffective use of their time.

Students have proven capable of supporting the technology in our schools. With an organized program in place, the answer to the tech support problem is sitting in the desks. Northgate High School, in Walnut Creek, CA, was one of the first to develop and pass a school board approved technology support class. Students are organized into teams that support various academic departments. They must organize their assignment as a small business, thus adding business to their valuable skill base.

There are examples of successful student tech support programs throughout elementary, middle and high schools everywhere. Some are “home-grown” and depend heavily on the teacher that started them. Others come from designed programs with strong time-tested curriculum such as: GenY SWAT (Students Working to Advance Technology), and SupportNet.

Gary Hensley, a student tech club teacher at Black Diamond Middle School, in Antioch, CA, comments that his school would be in trouble without the student’s help. “I used to spend tons of extra hours at school. Now my students handle most of it. I still have to make sure that the teachers are comfortable and the students are capable, but this program is a big success.”

What is it that the students are able to do for their schools? They can be the first line of defense on any campus providing technical support for software and hardware. They can provide basic preventative maintenance, run operating system maintenance and clean hardware. They can inventory and set up equipment for teachers, and help other students with their technology use. Students can even provide instructional support thus assisting teachers with technology integration. This can include: searching the Internet for instructional resources, and helping to create classroom materials such as PowerPoint presentations.

SupportNet Online

<http://supportnet.merit.edu/>
SupportNet Online offers an array of resources specifically geared to help teachers and technical support personnel in Michigan schools and libraries.

SWAT Web (Students Working to Advance Technology)

<http://www.swatweb.net>
A structured environment for students to develop digital literacy skills.

Generation Yes

<http://www.genyes.org>
Supporting K-12 students as change agents infusing technology to improve learning.

CREATE – for Mississippi Challenging Regional Educators to Advance Technology in Education

<http://www.create4ms.org>
Designed to better prepare students and teachers for life in the 21st century through seamless integration of technology into instruction.

If you don't already have a program in place, here are some ideas and resources for getting started. Student tech programs can either be a full-blown academic course, a before and/or after school program, or an activity period/study hall opportunity. The more formalized and official it becomes, the more the students and staff will value the program. However it is run, the focus should be on the students. Make them feel valued with praise, laminated badges and T-shirts.

There are several organizations that are dedicated to mobilizing students in support of technology. Many of them have curriculum and "canned" programs that are being utilized throughout the country (see the box to the left). There are also many individual teachers who have worked to develop their own programs. Try some web searching to find various writings, presentations, and programs dedicated to the subject. Then exchange emails with these folks to see how they are making it work.

District IT departments will have a legitimate concern about giving students too much access to the network. A disgruntled student or one showing off with passwords can do some real damage. It is important to instill ethics and responsibility and to not allow students to support critical administrative systems. There is plenty of work for them at the desktop and peripheral level. Start a dialogue and work with your district technology departments so it becomes a partnership and a win-win for all involved.

There are a great number of benefits to getting students involved with technology on your campus. Their ability to provide tech support will show dividends in your teacher use and satisfaction. It will also benefit those currently trying to provide tech support, hopefully relieving that teacher who expends so many extra hours. It is a shame not to get the full use of your school's technology investment.

Best of all, a student tech support program provides great benefits to the students. Not only have these programs been shown to help attendance, self worth, and self-esteem, it gives them a direction and a highly marketable skill.