Technology Procedures, Planning, & Budgeting

GOAL: To learn more about how your school plans and budgets for technology. How is technology used and maintained in your building?

TASK: Interview a school technology facilitator or any person within your building that can provide you with the answers you require.

# Requirements:

1. You can video or audio record your interview. If you choose this method, please identify the parties you are interviewing at the start of the recording.
2. You may instead choose to type out the responses of your interviewee. If you choose this method, be sure to obtain a picture of your interviewee along with the information in the table below.
3. If the interviewee gives a vague response, ask additional questions to prompt them to elaborate on the topic. If they are lacking knowledge on certain questions, find a 2nd interviewee that can provide an adequate answer.

# INTERVIEWEES – Identify the parties that have been interviewed

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| NAME: Rob Hough | JOB TITLE: Technology Director |
|  | 7 years in current position, 6 years of teaching experience, 6 years of corporate/military IT experience |
| I have seen technology work well when teachers are given adequate training and support, as well time to plan for change. I have seen the opposite when teachers are not given enough lead time to implement change. I have also seen failure when infrastructure does not meet demand, as in the case of wireless issues, bandwidth shortages, etc. For example, this school year we took a number of steps to ensure that our wireless network and Internet capacity were up to the challenge. Then, the number of wireless devices connected to our school network jumped from 1200 – 1700 over a five-day period, largely because of the number of guest users. While we adjusted to meet demand within a couple of weeks, many teachers and students experienced frustration over several school days. These days, it does not take much for users to lose confidence in technology when things to don’t work exactly right. Expectations are higher than ever before. | |

# Questions to ask:

1. Explain your procedures for technology inventory maintenance. (How do you take inventory? When and how often do you take inventory? With whom do you share the data? How is the data used for future technology decisions?)
   1. We take inventory annually but maintain it electronically throughout the year. We have management servers that maintain inventory in real time. We can run reports to share this information, as one example, with our CFO for audit purposes. We use this data to inform decisions such as the number of devices available to students, etc.
2. Explain the procedures and guidelines that are used in planning and purchasing technology resources for the school.
   1. We generally bid anything over $1,000, within reason. For large capital purchases, we request proposal from a minimum of three vendors. This is a process I started when taking over the tech director position.
3. What techniques are used to maintain your current technology? (How often do you update software? What techniques are used to keep older computers running properly? )
   1. We have moved many software services to cloud solutions to avoid software lifecycle replacement costs. Two years ago, we migrated to Office 365 for email, contacts, and calendar. Recently, we also made available Google Apps to our middle school teachers and students, with plans to expand to other schools in the coming months. On the hardware side, we vacuum the dust out of every computer every summer and by doing so have extended the life of computers by up to two years. Recently, we also upgraded RAM in every computer across the school system and upgraded from Windows XP to Windows 7.
4. How do you manage software installation for all of the computers in the building? (Do you manually install software on each machine? Do you have individual staff members install software? Is software installed remotely?)
   1. For small installations, we manually deploy software. For anything more than a handful of installations, we deploy packages using remote deployment tools (push installations). These installations are completely transparent to the end user. A recent example is AirServer, which was pushed to all teacher computers with a customized configuration.
5. Describe some of your troubleshooting techniques when working with the technology issues in the building? (Do you use technology forums? Do you reinstall software or reimage the computers? Do you obtain advise from colleagues?)
   1. We will reimage computers as needed to solve major problems. Now that most data is not stored on the actual computer, it gives us increased flexibility to do this.
6. Describe your school’s network? (How does it operate?)
   1. We have four campus locations with internet deliver to English Station and Indiana. Rock Creek and Southwest get internet through English Station.

We have 2800 K-12 students, roughly distributed as follows:

ES: 60%, IN: 24%, RC: 8%, SW: 8%.

Recently, we doubled internet bandwidth to each campus as follows:

ES: 250Mbps, IN: 100Mbps, RC: 20Mbps, SW: 20 Mbps

We monitor bandwidth in real time, using SolarWinds, and can tell that utilization averages 20% - 50% at each location throughout the school day, so we are correctly provisioned and positioned for growth.

On the LAN side, our campuses use enterprise-class Cisco switching in Kentucky and HP switching in Indiana. It has made business sense to continue to build on this foundation. Each campus uses high-speed fiber-optic, fiber channel, or etch channel connections for transport to various schools. A somewhat complex VLAN configuration segments, prioritizes, and filters traffic based on end user, device type, and so on. Two Fortinet firewalls and web filters protect the Kentucky and Indiana edge, and a variety of technologies, including Sophos antivirus, protect the interior LAN.

1. What strategies are employed to maximize the use of technology by the teachers? (Do you offer PD? Has the admin set technology goals for the staff? Do the teacher have access to the latest in technology?)
   1. This is an area that has essentially split-off from IT this past year. Our curriculum department now employs a technology integrator who takes point on most PD for teachers. There is a strong plan in place to provide PD and work towards various goals, but I would say that the plan is in very early stages. A second technology integrator position remains unfilled and, once filled, will accelerate the plan. In terms of having the latest technology, I would argue that teachers have late-generation technology, but perhaps not the VERY latest. For example, every teacher has both a desktop PC and iPad2. Nearly all have digital projectors and 86 have SMART Boards. Deployment of technologies within a school is always a balance between needs and wants based on available resources. This is an ongoing battle, and one of my biggest challenges right now centers on sustaining the large numbers of technologies already deployed.