

Holbrook Schools Technology Plan 2012-2016

Technology Advisory Committee:

Patricia Lally - Superintendent of Schools
Forrest Conrad - Director of Technology
Cheryl Flynn - Special Education Director
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Christine Golden – Media Specialist
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- Community Representative

Local Technology Plan

Holbrook is a K-12 school district of approximately 1,200 students distributed across a Junior/Senior High School and two elementary schools. This document describes the state of technology across the school district and offers recommendations to remediate problems.

The Holbrook Technology Plan is based on the format and guidelines provided by the Massachusetts Department of Elementary and Secondary Education (DESE) which are designed to help districts develop purposeful long-range technology plans. The guidelines represent recommended conditions for effectively integrating technology into teaching and learning.

The DESE guidelines are based on the School Technology and Readiness (STaR) Chart developed by the state's Educational Technology Advisory Council (ETAC). These guidelines are not mandated but rather recommended benchmarks for districts to meet by the end of the school year 2014- 2015. The Department will use these guidelines to gauge the progress of districts' implementation in order to approve their technology plans annually.

Benchmark 1 -Commitment to a Clear Vision and Implementation Strategies

- I. The district's technology plan contains a clearly stated and reasonable set of goals and implementation strategies that align with the district-wide school improvement plan. The district is committed to achieving its vision by the end of the school year 2015-2016.
 1. Holbrook Mission Statement:
Holbrook Schools' mission is to provide a technology rich environment designed to insure maximum learning opportunities for all students so they can be successful in college and career.
 2. Holbrook Vision Statement:
We strive to ensure that our students possess technology-based life skills that will afford them opportunities to thrive in a world where new technologies emerge on a continuous basis and where the expectation is that they can use technology to learn, problem-solve, and communicate. We strive to offer rich experiences that build comfort and proficiency with multiple technology tools; experiences that will expand students' minds and equip them to take advantage of the opportunities that are open only to those who can think intuitively, conceptualize, and apply a wide range of technology tools.
 3. A more detailed description of how Holbrook intends to meet the above objectives will be provided in the appropriate sections of this document. This Technology Plan will be submitted to the Superintendent and School

Committee for approval with the understanding that financial support will be provided to meet these goals consistent with the availability of funds and the priorities established to meet district-wide instructional goals.

- II. The district has a technology team with representatives from a variety of stakeholder groups, including school committee members, administrators, and teachers. The technology team has the full support of the school superintendent to implement the plan.

This Technology team has been established with the encouragement of the Superintendent and consists of the members identified in the cover sheet. The primary purpose of this team is to review the Technology Plan and make sure it meets all of the ongoing needs of the district.

- III. Needs Assessment - The district assesses the technology products and services that are currently in use and that will be needed to improve teaching and learning.

1. Current status of technology products and services:

A. Instructional Computers.

- Four years ago there were very few classroom computers that were new enough or powerful enough to support instruction. Currently all classrooms have an Internet connected computer and about 90% of these now meet the needs of our teachers. These gains have been possible through donations and purchases.
- All PCs are protected by Symantec anti-virus software. The virus definitions are automatically updated on a regular basis.
- Computer availability for students has improved. There are now five computer labs (three in the High School and one in each elementary school) that offer current model computers.
- There are more than (20) multi-media carts and other projection equipment in the district that offer teachers the ability to use video and audio when presenting electronic materials to their class.

B. Instructional Software.

- **Student Assessment.**
We are currently using MCAS, Star, Dibels and the DESE Data Warehouse to assess student achievement and guide instructional practice.
- **Content support.**
Teaching staff currently have the following software available to enhance and supplement instruction:
 - Inspiration and Kidspiration
 - Geometer Sketchpad

- A-Z Learning
- netTrekker
- Study Island
- RM Easiteach presentation software
- All Internet accessible software
- A variety of focused software such as music composition software and home construction software.

C. Server computers.

- All eight servers were replaced with Dell PowerEdge servers in August of 2013 in a virtualized environment. These servers should perform reliably for at least five years if power protection is in place.
- These servers are running Windows Server 2003 and 2008 R2 operating systems with a domain structure based on Active Directory.
- The maintenance contract on all servers provides four hour response time from vendor if a failure occurs. A spare server is not available to act as a replacement when a server fails.

D. Server rooms.

- In August of 2009 the Central Office was closed to reduce costs and the staff was moved to a wing of the High School. All servers and network equipment was moved to the High School server room. This server room now contains 6 of the 8 servers, the telephone system, the security system and the core district network equipment.
- Of the three areas housing servers, none are designed for electronic equipment. The server room in the High School is air conditioned but not by computer-grade equipment. The elementary school computers areas are not air conditioned. It is possible that equipment will over-heat.
- All servers are protected with battery backup units against the power failures and voltage problems common in Holbrook. Other key network equipment may not be protected.
- The High School and JFK servers are supplied power via dedicated circuits. This is critical to maintaining reliable operation of the servers. It is not known whether the server at South School is running on a dedicated circuit.
- There is little or no physical security in the server areas.

E. Network Infrastructure.

- The core network equipment in all buildings has been replaced and network operation has proved reliable.

- In August of 2010, all (3) firewalls were replaced with current more powerful Sonicwall equipment. These devices protect each building from Internet intrusion and control access to inappropriate sites.
- Holbrook installed T1 lines inter-connecting all buildings in August of 2006. These lines are slow but necessary for maintaining reliable network operation and telephone system operation.
- Internet access is provided by a Verizon FIOS and Comcast consumer-grade cable modem in each building. This equipment was not designed to guarantee reliability, responsiveness or security with Internet or inter-building traffic.
- Equipment is duplicated in each building because each building must provide its own filtering, anti-virus and firewall services.
- Firewalls, internet filtering and anti-virus protection is in place at all internet access points and on each desktop computer.
- Network distribution sub-panels are not located in secure or climate-controlled environments.

F. Power fluctuation protection.

Holbrook has frequent power problems that can damage electronic equipment and raise maintenance costs. A surge protector has been provided to protect all new classroom computers. Key equipment such as servers, network equipment and telephone equipment has been protected with battery-backup devices.

G. Telephone and voice mail.

- In August of 2009 a new Avaya IP Office telephone system was installed that provided full modern telephony services to all three school buildings including the new Central Office area. Avaya provides auto-attendant functionality, voicemail to staff (including teachers) and a more efficient use of telephone lines.
- Teachers cannot make outside telephone calls from their classroom which makes parent communication difficult. This is compounded by a lack of teacher-accessible phones in each building.

H. Web services.

- Student access to the Internet is filtered to prevent access to inappropriate sites and all Internet traffic is scanned for viruses.
- In September 2009 we moved our email, district web site and teacher web sites to eChalk. This hosted solution provides access to email and web services from any Internet connected computer in the world.

I. Printers.

Most of the oldest printers in the district have been retired and replaced with

newer donated printers. Additional task focused printers have been installed in locations where privacy is a concern. There are also two color LaserJet printers in the district.

J. Software Standardization.

All desktop computers should have a common set of software installed that is appropriate for the school and grade level as this will reduce training, enhance productivity and reduce maintenance issues. This common core of software currently includes Windows XP or Windows 7, Microsoft Office Professional, Internet Explorer, Firefox, Quicktime, Java, RealPlayer and Adobe Flash, Shockwave and Acrobat Readers.

All staff also use web-based packages such as eChalk for email and web pages, X2 for attendance/grading and eSPED for special education.

K. Presentation Equipment.

Projection equipment is critical for instruction as a tool for demonstrating computer-based activities to large groups of students and staff. Currently we have the following equipment in place:

- A. (4) ceiling mounted projectors at the High School
- B. (16) mobile multi-media carts with wireless laptops, projectors and speakers
- C. (5) classrooms have "Smartboard" functionality with (2) more on order.

L. Electronic surveys.

Surveys are an excellent instrument for obtaining feedback and guiding future initiatives. We are currently subscribed to SurveyMonkey which is a web-based, easy to use package for administering and analyzing surveys.

M. Student Data System.

In July of 2007 we moved to X2 to provide student information system services. This includes all aspects of student record keeping including attendance, discipline, scheduling, grading and transcript services. It also provides staff record keeping for attendance and scheduling as well as supporting the DESE data reporting requirements. This has proved to be a very stable and effective product.

N. Special Education.

Student Edplans and other data for SpecialEd students is tracked via a web-based package called ESPED. ESPED is a subscription service that is hosted by an Internet service provider and is a solid package from a reputable vendor.

O. Library Automation.

In January 2009, the High School library automated with the Atrium Library System. The library should be the research center of each building and should offer access to both traditional print materials as well as electronic resources (both in-house and via the internet).

P. Health Services.

In September 2009 we moved to the SNAP health and wellness package for all three schools. This package helps us track health information for students/staff such as visits, existing conditions and immunizations.

Q. Surveillance Cameras.

The surveillance cameras in the High School have been upgraded several times over the last two years. The system currently has (31) cameras distributed across two separate DVRs. The cameras have been placed both outside and inside the building and have proved an effective deterrent to inappropriate behavior.

There are no surveillance cameras in either elementary school.

R. Copiers. Copy machines are excellent high-speed printers and scanners if they are network attached. This option is most useful in offices but is generally well received by teaching staff as well. There is at least one networked copier in each Holbrook school building.

S. Building Public Address Systems. The PA systems in our buildings are original equipment and hard to maintain because the parts and expertise are hard to locate.

T. Cell Phones. Currently there are (21) cell phones issued to district staff. The leadership team, nurses and physical education staff have been issued cell phones so that emergency and day-to-day communications needs are addressed.

2. Technology products and services where improvement is needed:

A. Currently the Technology Director is the only employee tasked with maintaining the technology infra-structure. His qualifications allow him to maintain most of the equipment in the district but response time to requests for service is very long. He is directly responsible for maintaining and upgrading:

- All computers (classroom and server)
- All internal network equipment and cabling
- All data and telephone connections outside the district
- Maintaining and loading data into (18) web based applications including the student data system, ConnectEd communication system and the Star student assessment system
- The district telephone system
- The High School surveillance and security systems
- Installing and debugging all software in the district
- Complying with DESE data reporting requirements

- Insuring that all data backup routines are operational and that data security is enforced
 - Correcting technology issues of any kind and interacting with vendors to achieve resolution
 - Providing professional development to staff
- B. Although there is considerable instructional software available, there is little evidence to suggest that it is being used regularly. Funding issues, lack of professional development and staff turnover have all contributed to this situation.
- C. There is no process for selecting and acquiring instructional software. Curriculum and the curriculum committee should determine appropriate purchases after a review of instructional goals and school improvement plan objectives.
- D. Internet access speed is a bottleneck in all three buildings. Comcast provides us with 12mbs at the High School and 6mbs at each of the elementary schools. We are heavily dependent on Internet for instruction and administration.
- E. There is no process in place to regularly replace outdated electronic equipment. We are heavily dependent on donations and the current state of the economy when trying to upgrade electronic equipment.
- F. Core software (e.g. Windows, Anti-virus software, Microsoft Office) needs to be updated on most computers in the district. This is an ongoing problem because there is inadequate manpower available to perform the upgrades and stay current.
- G. Equipment and software inventories are currently maintained in spreadsheets. An automated inventory package would provide accurate numbers and reduce the burden of maintaining this information.
- H. There is no package in place to automate software updates on PCs. This makes the PCs more susceptible to intruders and may result in reduced functionality.
- I. Key components of the network infra-structure have been updated but many network devices are old and cannot support gigabit network speeds. The network cabling in all buildings was installed by volunteers at least 6 years ago and cannot support gigabit network speeds.
- J. While teachers have been assigned voicemail to facilitate communication with parents, policies have not been put in place to insure that teachers check for messages on a regular basis.

- K. “Smartboard” functionality has been well received at South School as it engages the students and provides the ability to display electronic information in a group environment. We currently have about (20) “Smartboards” in the district and plan to introduce more as funding becomes available.
- L. Community access television. While Holbrook does have a cable TV studio, we do not currently offer any student classes that utilize this facility. We do however provide community programming on a regular basis.
- M. Building Access Control. All buildings depend on key access or keypads to control access into the building. There is no way to identify who has a key or the keypad code as these may have changed hands many times. Neither is a record kept of who enters a building other than through the main entrance. An electronic proximity card system would electronically verify who has entered the building and will timestamp the event as well as identify the entrance door used. If a card is lost or misplaced it can be disabled

IV. Budget

1. The district recognizes that technology plays a critical role in achieving its goals. The district has a budget that will ensure the implementation of its long-range technology plan.

- A. Minimum budget (see Appendix A for details)

This budget will cover the necessary hardware and software expenses to keep the existing environment operational (assuming no major hardware failures):

- \$ 7,500 ... personnel/stipends (excluding Tech Director)
- \$55,000 ... maintenance on existing software
- \$ 8,500 ... maintenance on existing hardware
- \$11,000 ... contracted support services
- \$ 6,000 ... consumables and equipment repair
- \$14,000 ... telephone and communications costs
- Total ... \$102,000

- B. Budget needed for growth (see Appendix A for details)

- \$102,000 ... minimum budget from above
- \$ 45,000 ... technician
- \$ 29,000 ... software additional purchases
- \$122,000 ... hardware replacement/additions
- \$ 15,000 ... professional development
- \$ 5,000 ... Increase Internet access speeds
- Total ... \$318,000

- C. The Technology budget has been funded at the minimum level for the last (6) years. Growth has been possible through the use of donations, grants and capital improvement funds only.

2. The budget includes staffing, infrastructure, hardware, software applications, professional development, support, and contracted services.

The budget presented above includes these items but does not include the Technology Director or the Data Management Specialist salaries.

3. The district seeks funding for technology programs from federal, state, and private resources, as well as from academic departments that are supported by technology. The district explores ways that technology can reduce costs and create efficiencies in other areas of the district budget.

- State technology grants have essentially disappeared. Holbrook is not eligible for the funds that are available because it is not identified as a “high need” district.

- We have been able to secure the donation of approximately (150) computers over the last three years but these computers are already 3 to 5 years old and do not come with software.
 - We are using Ncomputing technology which uses one physical computer to support four workstations. This decreases costs by about 50% if the environment meets the criteria.
 - We are examining the use of Internet resources to replace the traditional textbook. This could potentially provide large savings.
4. For districts that plan to apply for E-rate reimbursement, the technology plan specifies how the district will pay for the non-discounted portion of their costs for the services procured through E-rate.

Holbrook uses Erate funds to subsidize telecommunications costs and email/web page services. This provides a savings to the district of about \$20,000 annually. The balance of these expenses (about \$45,000) comes from the general operating budget and the technology budget.

V. Evaluation

1. The district routinely consults with technology staff before purchasing technologies items, to ensure that the items are appropriate, cost-effective, and sustainable.

The Technology Director is a member of the Leadership Team and attends all leadership meetings. These meetings determine district priorities including purchases. The Technology Director also provides consultation services to the Leadership Team when exploring new initiatives that involve technology.

2. The district's technology plan includes an evaluation process that enables it to monitor its progress in achieving its goals and to make mid-course corrections in response to new developments and opportunities as they arise.

The Technology Director meets regularly with the Superintendent and the Leadership Team to determine district priorities. If adjustments are required to meet an unanticipated need, these meetings determine which items stay on the list and which are denigrated. The Technology Director also prepares the technology budget annually and seeks input from the Leadership Team. The Technology Advisory Committee may also be asked to convene to review the current situation and take corrective action.

Benchmark 2 - Technology Integration and Literacy

A. Technology Integration¹

1. Outside Teaching Time - At least 90% of teachers use technology every day, including some of the following areas: research, lesson planning, organization, administrative tasks, communications, and collaboration. Teachers explore evolving technologies and share information about technology uses with their colleagues.

All teaching staff in Holbrook are expected to use the X2 Student Data System to enter daily attendance, lunch counts and grade information. In addition the primary means of communication between staff and the Leadership Team is via email.

2. For Teaching and Learning - At least 90% of teachers use technology appropriately with students every day to improve student learning of the curriculum. Activities include some of the following: research, multimedia, simulations, data analysis, communications, and collaboration. Teachers integrate evolving technologies that enhance student interest, inquiry, analysis, collaboration, and creativity.

The High School has the largest percentage of teaching staff that use technology (primarily the Internet) to supplement course content. For example, one of our science teachers uses on-line lectures from MIT and one of our math instructors uses a house construction program to reinforce learning objectives.

The elementary teachers use a hosted package called Study Island that reinforces content skills and MCAS appropriate material in the computer lab. One of our science teachers at South School uses a multi-media package called Science Court to present and assess specific science lessons. Many elementary teachers use a package called A-Z Learning to prepare worksheets that are relevant to the lesson plan.

B. Technology Literacy

1. At least 90% of eighth grade students show proficiency in all the *Massachusetts Technology Literacy Standards and Expectations* for grade eight².

¹ The Massachusetts Department of Elementary and Secondary Education defines technology integration as the daily use of technology in classrooms, libraries, and labs to improve student learning.

² The *Massachusetts Technology Literacy Standards and Expectations* are available on the Department's website (<http://www.doe.mass.edu/edtech/standards.html>).

We do not currently test eighth graders to determine proficiency in Technology Literacy. We believe that a large percentage would achieve acceptable levels because they have been introduced to and instructed in computer skills since the third grade.

2. 100% of teachers are working to meet the proficiency level in technology, and by the school year 2014-2015, 90% of teachers will have mastered 90% of the skills in the Massachusetts Technology Self-Assessment Tool (TSAT).³

All teachers are aware of the technology proficiency requirement and understand that they must meet this goal. We do not require that teaching staff use the TSAT to gauge their proficiency level but we use surveys and direct observation to ascertain their skill levels.

C. Staffing

1. The district has a district-level technology director/coordinator.

Holbrook has a full time Technology Director.

2. The district provides one FTE instructional technology specialist per 60-120 instructional staff to coach and model.

Holbrook does NOT have any dedicated technology support staff other than the Technology Director. We do stipend a teacher in each building to provide basic support services to other staff but the expectation is that these staff will remedy simple problems and report anything beyond their abilities to the Technology Director.

3. The district has staff specifically dedicated to data management and assessment.

Holbrook has a full time Data Accountability and Analysis Specialist. This person is tasked with tracking student performance and identifying areas where instruction is not effective K-12. They are also responsible for uploading SIMS/EPIMS/SCS data to DESE.

Benchmark 3 - Technology Professional Development

- A. At the end of five years, at least 90% of district staff will have participated in high-quality, ongoing professional development that includes emerging technology issues, technology skills, universal design, and research-based models

³ The *Technology Self-Assessment Tool* is available on the Department's website (http://www.doe.mass.edu/edtech/standards/sa_tool.html).

of technology integration.

Holbrook does not currently have sufficient funding or staff resources to provide professional development at this level. Professional development is provided on an as-needed basis several times a year to appropriate staff but the training is typically done by in-house staff. When new products are introduced, we include as many staff as possible in the vendor training. We also have a mentoring program to introduce and support new staff in the existing systems. Each building has a teacher receiving a stipend to support other teachers but this must be done outside of normal instruction time. The Tech Director occasionally provides workshops to groups on specific topics such as the creation of web pages or the use of Internet resources such as netTrekker.

- B. Technology professional development is sustained and ongoing and includes coaching, modeling best practices, district-based mentoring, study groups, and online professional development.

See “A” above.

- C. Professional development planning includes an assessment of district and teachers' needs. The assessment is based on the competencies listed in the Massachusetts Technology Self-Assessment Tool.⁴

Assessment of teacher needs is based on the results of local surveys that poll the teaching staff to identify instructional needs and on informal observations. Typically a teacher or group of teachers will request training on a specific software package or topic and we will deliver that training to the best of our ability. This is an effective form of instruction because the teachers receive training when it is most relevant and it will be used almost immediately to reinforce that new skill.

- D. Administrators and teachers consider their own needs for technology professional development.⁵

Administrators participate in relevant professional development offered to teaching staff. The Superintendent encourages attendance at conferences and symposiums to develop technology skills and become aware of emerging

⁴ The *Technology Self-Assessment Tool* is available on the Department's website (http://www.doe.mass.edu/edtech/standards/sa_tool.html).

⁵ A sample administrator technology self assessment tool is available on the Department's web site (http://www.doe.mass.edu/edtech/standards/tsat_sampadmin.html). Administrators may also want to refer to the *National Educational Technology Standards (NETS•A) and Performance Indicators for Administrators* published by the International Society for Technology in Education (http://www.iste.org/Content/NavigationMenu/NETS/ForAdministrators/2009Standards/NETS-A_2009.pdf).

technologies. Course reimbursement funds are available to subsidize attendance.

Benchmark 4 - Accessibility of Technology

A. Hardware Access

1. By 2014-2015, the district has an average ratio of one high-capacity, Internet-connected computer for each student. (The Department will work with stakeholders on a regular basis to review and define high-capacity computers.)

Funding and staffing limitations make this a difficult goal to achieve and it is not clear that reaching this goal will actually improve student achievement. The newest building in the district is over 40 years old and none of the buildings can meet the electrical, infra-structure or space requirements to support this number of computers without extremely expensive remodeling. All existing computers are Internet connected.

2. The district provides students with emerging technologies appropriate to their grade level.

Students in all schools have access to computer labs and the single computer currently included in each classroom. These labs are used to access web based packages to increase student achievement such as Study Island. We currently have about (20) smartboards in the district and are actively pursuing funds and opportunities to increase this number.

3. The district maximizes access to the general education curriculum for all students, including students with disabilities, using universal design principles and assistive technology devices.

Holbrook provides special needs students with Alpha Smarts or laptops as appropriate. We have special audio equipment for hearing impaired children and have text-to-speech and speech-to-text software for students where this is appropriate.

4. The district has procurement policies for information and instructional technologies that ensure usability, equivalent access, interoperability and SIF compliance⁶.

The X2 Student Data System is not currently SIF compliant but is working to meet the standards set by the DESE in this area. Other systems are not

⁶ For more information, see the website for the SIF Association (<http://www.sifinfo.org/us/index.asp>).

currently SIF compliant.

5. The district provides technology-rich classrooms, with access to devices such as digital projectors, electronic whiteboards, and student response systems.

As stated previously in this document, we have an initiative to increase the number of electronic whiteboards beyond the five currently installed “smartboards”. More than (20) multi-media carts (including projectors) are available and there are (4) ceiling mounted projectors.

6. The district has established a computer replacement cycle of five years or less.

The district has NOT endorsed a computer replacement policy.

B. Internet Access

1. The district provides connectivity to the Internet for all computers in all classrooms in all schools, including wireless connectivity.

All classroom computers in the district are connected to the Internet because most administrative systems are web based. All buildings provide wireless access although wired access is preferred for reasons of security, reliability and speed.

2. The district provides an external Internet connection to the Internet Service Provider (ISP) of 100 Mbps per 1,000 students/staff.⁷

Funding limitations and vendor limitations preclude Holbrook from meeting this goal.

3. The district provides bandwidth of at least 10/100/1 Gb to each classroom. At peak, the bandwidth at each computer is at least 100 kbps. The network card for each computer is at least 10/100/1 Gb.
 - Data cables in all three buildings were pulled by volunteers at least 10 years ago. They were not professionally terminated or tested and the cable used is not rated for 1 gbs operation. Funding limitations preclude the complete replacement of our network cable infra-structure to meet this goal. The maximum speed available in classrooms is 100 mbs.

⁷ For more information, see the 2008 report *High-Speed Broadband Access for All Kids: Breaking through the Barriers* published by the State Educational Technology Directors Association (SETDA), available on SETDA’s website (<http://www.setda.org/web/guest/2020/broadband>).

- All computers in the district can connect to the network at 100mbs.
About 60% of the computers can connect at 1 gbs

C. Networking (LAN/WAN)

1. The district provides internal wide area network (WAN) connections from the district to each school between schools of at least 1 Gbps per 1,000 students/staff.

Most network backbone connections within each school are running at 1gbs because the cable was upgraded with a CAT6 or fiber cable. Internet connections to each school are running at 50 mbs or less. Inter-building connections are T1 lines (1.44 mbs). Funding limitations and vendor limitations preclude Holbrook from upgrading their inter-building connections to 1 gbs.

2. The district provides access to servers for secure file sharing, backups, scheduling, email, and web publishing, either internally or through contracted services.

Holbrook maintains (8) Dell servers for file sharing, print sharing and minor software distribution. All significant applications are web based and hosted by a third party that is responsible for backups, security email etc. Staff and student data resides on the servers where it is backed-up regularly.

D. Access to the Internet Outside the School Day

1. The district provides access to its computer labs before and after school to ensure that students and staff have adequate access to the Internet outside of the school day.

The High School library computers are available for a limited time outside of the normal school day.

2. The district disseminates a list of up-to-date list of places where students and staff can access the Internet after school hours.

Most of our staff and students have Internet access at home. Students are encouraged to use the Town Library computers after normal school hours.

E. Staffing

1. The district provides staff or contracted services to ensure that its network is functioning at all times.

The Technology Director provides primary support for net infra-structure in all buildings. A third party provides support in emergency situations and when network upgrades are required.

2. The district provides resolves technical problems within 24 hours, so that they do not cause major disruptions to curriculum delivery. The district provides clear information about how to access technical support, which can be provided in person or remotely.

Funding and staffing limitations preclude Holbrook from achieving this goal. The Technology Director provides sole support for resolving all technical problems that have been reported by the Tech Liaisons or the staff. Major outages and problems that have a large impact on instruction are dealt with on a priority basis and frequently are resolved in less than 24 hours. Other problems are resolved on a best effort basis.

Problems are reported via email or cell phone to the Technology Director by the leadership team, tech liaisons or by the staff directly.

3. The district provides at least one FTE person to support 400 computers. Technical support can be provided by dedicated staff or contracted services.

Funding limitations preclude Holbrook from achieving this goal. The Technology Director is solely responsible for maintaining all computers, servers, network infra-structure, software, security systems and telephone systems in the district.

Benchmark 5 - Virtual Learning and Communications

- A. The district encourages the development and use of innovative strategies for delivering high-quality courses through the use of technology.

Holbrook provides access to remote courses for two different purposes. The Virtual High School (VHS) program provides on-line courses that are not available in Holbrook to students that wish to expand the depth of their education.

We also offer course recovery through Novanet. This program is designed to help students fulfill graduation requirements by enrolling in a web based course similar to a course offered in Holbrook. This option provides an alternative to students that cannot take the course locally because of time or other constraints.

- B. The district deploys IP-based connections for access to web-based and/or interactive video learning on the local, state, regional, national, and

international level.

Holbrook supports streaming video Internet connections. For example, one of our science teachers uses lectures taped at MIT to supplement their course material.

- C. Classroom applications of virtual learning include courses, collaborative projects, field trips, and discussions.
Holbrook supports streaming video Internet connections. For example, one of our science teacher uses lectures taped at MIT to supplement their course material.
- D. The district maintains an up-to-date website that includes information for parents and community members.

The Holbrook web site, www.holbrook.k12.ma.us is modified daily with announcements, documents and home assignments. The district calendar, lunch menus and the staff email are all integrated into the web site.

Benchmark 6

Safety, Security, and Data Retention

- A. The district has a CIPA-compliant Acceptable Use Policy (AUP) regarding Internet and network use. The policy is updated as needed to help ensure safe and ethical use of resources by teachers and students.

The Holbrook AUP is posted on our web site and all staff members must agree to abide by its terms before they are allowed to access email or build web pages. The AUP is also included in the student handbook for each school and the students are expected to abide by its terms or lose their Internet privileges.

- B. The district educates teachers and students about appropriate online behavior. Topics include cyberbullying, potential risks related to social networking sites and chat rooms, and strategies for dealing with these issues.⁸

Holbrook has just completed a formal anti-bullying policy based on the DESE guidelines and has submitted this policy to the state. This policy has also been posted on our web site.

⁸ To learn more about teaching students about safety and the Internet, see Net Cetera: Chatting with Kids About Being Online, a free guidebook produced through a partnership of federal agencies and the technology industry (<http://www.edgovblogs.org/duncan/2009/12/online-safety-guidebook-for-parents/>).

- C. The district has a plan to protect the security and confidentiality of personal information of its students and staff.⁹

All confidential information is protected by controlling access to that information on a need-to-know basis. Internal access to the information is controlled by assigning permissions to a user account on a system-by-system basis or field-by-field basis. External access to Holbrook systems is blocked by at least one firewall. Only the personnel/payroll system records Social Security numbers and other confidential information. Most systems record only the minimum information needed for data processing.

- D. The district complies with federal and state law¹⁰, and local policies for archiving electronic communications produced by its staff and students. The district informs staff and students that any information distributed over the district or school network may be a public record.

Holbrook contracts with eChalk for email services and eChalk is tasked with archiving electronic communications produced by its staff. We do not supply email accounts to students. Staff are informed each year that information distributed over the network is public domain and that no guarantee of privacy is implied or granted.

⁹ To find out how state agencies in the Executive Branch must protect personal information, as well as to find training tools related to this effort, see the Commonwealth's website (<http://www.mass.gov/?pageID=afsubtopic&L=6&L0=Home&L1=Research+%26+Technology&L2=IT+Policies%2c+Standards+%26+Guidance&L3=Legal+Guidance&L4=Privacy+%26+Security&L5=Executive+Order+504&sid=Eoaf>).

¹⁰ Information about state regulations is available from the state's Record Management Unit (<http://www.sec.state.ma.us/arc/arcrmu/rmuidx.htm>).