

Harvard Public Schools

Technology Plan

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I. OVERVIEW

A. **Mission Statement**

The mission of the Harvard Public Schools is to integrate state-of-the-art technology into all academic levels in such a way as to significantly enhance learning and productivity of all members of the educational community. As well, the mission is to prepare students, teachers, staff and citizens for the increasing technological demands in the workplace and society.

B. **Vision Statement**

Every student in the Harvard Public Schools will be adequately prepared to utilize technology as a tool appropriate to his or her development. Students in the Harvard Public Schools will be ready to become active participants in our rapidly changing society. This vision will be realized by:

- Cherishing creative, futuristic thinking about educational technology as an essential skill for students, staff and community.
- Having every teacher adequately prepared to utilize multimedia technology and integrate it into his or her own curricula.
- Ascertaining that every classroom has access to the resources necessary to deliver an information-rich telecommunications technology environment that will allow for future growth and change.

Further, the integration of learning technologies into the schools will be driven by the Harvard Education Plan, the Massachusetts Common Core of Learning and the Curriculum Frameworks. A comprehensive, system-wide plan will be developed to inform technology decision making and to assure equity of access to technology for all students.

The Harvard Schools Technology Plan consolidates information about present and future education technology needs and recommends ways to meet those needs. Areas addressed include:

- Selection and upgrading of hardware and software to improve teaching, learning and administrative effectiveness.
- Networking to link schools, the community and the world.
- Provision for adequate staffing.
- Professional development for teachers and administrators.
- Implementation and funding recommendations.
- Technology integration within all areas of curricula.
- Data driven decision making supported by information gained through technology.

In summation, educational technology has significant potential for improving student learning, to promote significant school restructuring, and expanding the time and motivation for student learning. Research has shown that growth in use of technology by schools is strong. Schools are adding equipment and developing connections to the national information infrastructure at a high rate. Some schools and school districts have moved rapidly to a ubiquitous use of technology. Our Technology Plan will enable all students, teachers and staff to be capable of effectively using the most up-to-date tools of technology within the coming three years. The expectation is that everyone will have the opportunity to benefit from a technology-rich atmosphere and ultimately become a productive, well-informed, successful citizen of the future.

C. Harvard Education Plan

- Master information management skills, including the use of computers. Technology will be used to categorize and incorporate information effectively.

(Accomplished by networking throughout the schools; internet access to all students; minimum of one computer in each room; network link to the public library; distance learning access for every classroom; research projects to require computer search and multi-media application, integrated subject based on computer assisted instruction, multi-media application, IEPs written to include heavy use of computers and the internet to aid learning.)

- Demonstrate knowledge in literacy and numeracy, scientific methods, world languages and fine arts.

(Accomplished by heavy reliance upon software used in class-sited computers for teacher and student learning; use of the internet for teachers to find resources; self-directed learning for students; offering courses for credit through distance learning; sharing student projects through the internet; curriculum planning using resources found on the internet; computers for testing; enhancing subject integration through software applications and internet access; computer-assisted, interactive language courses.)

- Use of critical thinking to define and solve problems and to formulate projects to conduct research.

(Accomplished by introducing sophisticated software programs such as systems analysis throughout the school system; capitalizing on the computer's characteristics to help students collect and analyze data; use students to assist with staff development, networking management

and computer repair; utilize Survey Monkey and MassOne to conduct staff, student and community surveys to gather accurate, useful feedback and data.)

- Be socially responsible by demonstrating self-respect and tolerance for others; appreciate cultural differences.

(Accomplished by learning responsible use of the computer; experiencing the need to share technology resources and time; using experiences gained on the internet to gain a worldwide perspective; gaining an appreciation for how the computer affects world citizenship; obtaining information about other cultures; communicating directly with students and people throughout the world.)

- Acquire interpersonal skills needed to be a productive part of a team effort.

(Accomplished by learning how to share computers and technology within computer labs and in the classrooms; learning to be a good internet citizen; participating in collaborative learning enhanced by technological resources; gaining an appreciation for the integrated nature of technology, especially the dependence on team input.)

- Demonstrate good character.

(Accomplished by learning to treat other technology users with respect; accepting responsibility for own behavior on the computer and as an internet user; learning patience and self-reliance; gaining self-respect by mastery of certain technologies.)

- Communicate clearly.

(Accomplished by using word processing and multimedia capabilities provided through technology; having access to an endless variety of written texts; being able to access libraries and art galleries throughout the world; having vast opportunities to write and communicate on the internet; using multimedia as a medium for communications.)

D. Goals

Three-Year Technology Plan Technology Goals 2006-2009

When creating the goals for Harvard Public Schools' three-year Technology Plan, there was universal acceptance of the United States

Department of Education’s four national goals. The Massachusetts Department of Education Benchmark Standards are also based on the United States Department of Education’s four national goals.

- Goal #1 All teachers in Harvard will have the training and support they need to help students learn using computers and the information superhighway.
- Goal #2 All students, teachers and administrators will have access to modern multimedia computers in each classroom, lab, library and administrative office.
- Goal #3 Every classroom, lab, library and administrative office will be connected to the internet.
- Goal #4 Effective software and on-line learning resources will be made available for integration of technology to enhance and address the state frameworks and standards.
- Goal #5 The Harvard Public School System will expand the lines of communication and provide all community members access to up-to-date technology.

II. INFORMATION TECHNOLOGY ASSESSMENT

A. INVENTORY OF EQUIPMENT AND SERVICES

1. Computers

TYPES	A	B	C
Superintendent’ Office	5	0	0
The Bromfield School	166	29	33
Harvard Elementary	85	40	3
TOTALS BY TYPE	256	69	36

- **Telecommunications**

All telephone classrooms have the capability to receive and sent outside calls. The Bromfield School has the capability to receive voice mail.

- **Internet access and services**

All classrooms are connected to the internet. Service for the T-1 line is currently provided by Charter Communications and the internet provider is Integrity.

Connect-Ed is a communication tool that is used by the Harvard School administrators to send messages to staff, students and parents in a single telephone call.

B. CURRENT PROGRAM STATUS

1. Curriculum Integration

Our focus on curriculum integration is done through the leadership of our media staff, department, curriculum and team leaders, all of whom facilitate the most current use of technology and integrate it into the curriculum when and where appropriate.

2. Staffing and Training

All teachers and administrators were provided with email accounts accessible from any internet based computer. Email has been identified as the communication means of choice between administration and staff and frequently used for communication with parents and students. Our network, procedures and school websites have been upgraded.

3. Course Offerings

Flash Animation/Web Design	(Grades 9-12)
CADD (Computer Aided Drafting and Design)	(Grades 9-12)
Interior Design	(Grades 9-12)
Computer Technology	(Grades 6-8)
Computer Graphics	(Grades 9-12)

4. Computer Network Acceptable Use Policy

Network

1. The purpose of the Harvard Public Schools' Network is to promote the exchange of information and research consistent with the mission of the school system. The use of other organizations' network or computing resources must comply with the rules appropriate for this network. Transmission of any material in violation of any US or state regulation is prohibited. This includes, but is not limited to: copyrighted material, threatening or obscene material, and/or material protected by trade secret.

2. Harvard Public Schools' Network is not for private or commercial business use, political or religious purposes.

3. Any use of the Harvard Public Schools' Network for illegal activity is prohibited. All communications and information accessible via the network should be assumed to be the private property of the source.

4. Use of the Harvard Public Schools' Network to access obscene or pornographic material, or chat groups is prohibited.

5. As a network user, you are expected to abide by the generally accepted rules of network etiquette. These include, but are not limited to, being polite (so do not get abusive in your messages to others), use appropriate language (do not swear, use vulgarities or any other inappropriate language).

6. Do not reveal your personal address or phone numbers to students or colleagues.

7. Do not use the network in such a way that you would disrupt the use of the network by other users.

8. Use of programs that harass the Harvard Public Schools' Network users or infiltrate the computing system and/or damage the software components is prohibited.

9. Subscriptions to Listservs, bulletin boards and on-line services must be preapproved by the Network Administrator.

10. Absolutely NO computer system settings are to be copied or altered in any way, without the prior approval of the Network Administrator.

11. Network traffic going in and out of the Harvard Public School computer network could potentially be monitored and recorded.

12. Net Sending is a violation of the Acceptable Use Policy and is a function reserved for administrative purposes only.

Security

13. You will respect the rights and property of others and will not improperly access, misappropriate or misuse the files, data or information of others.

14. You will not share your account with anyone or leave the account open or unattended.

15. You will keep all accounts and passwords confidential and not accessible to others.

16. You are responsible for making backup copies of the documents critical to you.

17. Any user identified as a security risk or having a history of problems with other computer systems may be denied access to the Harvard Public School's Network.

Software

18. You are responsible to take precautions to prevent viruses on your own equipment and the equipment of the Harvard Public School.

19. The illegal installation of copyrighted software or files for use on school computers is prohibited.

20. Please see the System Manager to install any software on The Bromfield School's computers.

Printing

21. Excessive printing without permission of a teacher or staff member is a violation of this policy.

22. Permission by teacher is required for use of color printer.

23. All printing will be monitored for paper consumption and is approved on the discretion of the school administration.

E-Mail

24. E-Mail is provided for the exchange of information consistent with the mission of the school system.

25. E-Mail cannot be used for private or commercial offering of products or services for sale or to solicit products or services.

26. E-Mail cannot be used for political or religious purposes

27. E-Mail messages are subject to review by the Harvard Public School administration review at any time.

28. All violations of the Acceptable Use policy will be reviewed by the Network Staff for the determination of the degree of seriousness then presented to the Principal, Assistant or Associate Principal for appropriate disciplinary action.

Interpretation, application, and modification of any Acceptable Use Policy is within the sole discretion of the Harvard Public School Department. Any question of issues regarding this policy should be directed to the building principal.

THE USE OF THE HARVARD PUBLIC SCHOOLS' NETWORK IS A PRIVILEGE, NOT A RIGHT, AND INAPPROPRIATE USE WILL RESULT IN A CANCELLATION OF THIS PRIVILEGE. IN ADDITION, VIOLATION OF ANY

CONDITIONS OF USE DESCRIBED HERE MAY BE CAUSE FOR DISCIPLINARY ACTION. THE PRINCIPAL WILL DEEM WHAT IS INAPPROPRIATE USE AND THAT DECISION IS FINAL. ALSO, THE SYSTEM MANAGER MAY CLOSE AN ACCOUNT AT ANY TIME AS REQUIRED. THE ADMINISTRATION, FACULTY, AND STAFF OF THE HARVARD PUBLIC SCHOOL DEPARTMENT MAY REQUEST THE SYSTEM MANAGER TO DENY, REVOKE, OR SUSPEND SPECIFIC USER ACCOUNTS.

C. Current Budget

Line Item	Total Budget 07-08	Funding Source	
		Omnibus	Erate
Network Support Salary	\$ 102,672	\$ 102,672	
Hardware	\$ 24,700	\$ 24,700	
Professional Dev. Expense	\$ 0	\$ 0	
Telephone – T1 Line	\$ 8,000	\$ 8,000	Applied
Maintenance	\$ 3,000	\$ 3,000	
Software	\$ 20,150	\$ 20,150	
Supplies	\$ 7,000	\$ 7,000	
TOTAL	\$165,522	165,522	

D. Needs Assessment

1. Current Status

The district collects data from the TSAT survey and then discusses the results at administrative meetings and the annual goal setting summit. The implementation of integrated technology is part of our annual teacher evaluation form. The plan is reviewed and updated annually.

The district has a student technology assessment in place as well as a survey of students about their technology proficiency.

III. TECHNOLOGY OBJECTIVES AND PLANS

A. Overview

The superintendent, business manager, administrative council and school committee continue to fine tune technology expenditures in response to a very tight financial budget. Balancing student technology needs against fewer budget dollars continues to challenge district leadership.

1. Upgrade classroom computers at all schools. Foster web based communication with parents and students. Continue to encourage lesson

plans based upon state standards. Continue to develop electronic communication skill within the district. Provide training to teachers so that students will benefit from increased literacy and math skills and thus experience improved MCAS performances.

2. Continue to incorporate and assess grade appropriate technology curriculum skills.
3. Continue to make improvements to the district web page. High school students will be offered Virtual High School to their online classroom course offerings pending budget approval.

B. Equipment and service components

The majority of our purchases for technology are funded by parent and community fundraising groups. With our own budget, the following items have been purchased during this current school year:

Four Type A Computers
10 at HES donated by Community Education
Laptop cart, printer, WAP AND 7 laptops donated by parents

C. Telecommunications

<u>Vendor</u>	<u>Amount</u>
Verizon Wireless	\$ 3,000
Verizon	\$19,000
Internet: Integrity	\$ 8,000
Connect-Ed	\$ 4,000

D. Grants (e.g., distance learning)

The Harvard Public Schools are in negotiations with Virtual High School regarding distance learning for The Bromfield School. If accepted, funding will be provided through a local grant. Other online resources are through MassOne and ASCD.

E. Deployment Schedule

Annually, the technology plan has provided an acquisition and replacement schedule to gradually improve the pupil/computer ratio toward a state target of 5:1 type A computers. Funding has not been available to fully implement such a replacement plan. The Bromfield School building project completed in 2003 allowed a significant influx of new hardware and software.

F. Staffing and Training

1. Technology coordination – district initiatives are focused upon improved student learning. State frameworks provide the guidelines and direction for classroom instruction. Technology spending supports district initiatives.
2. Support and maintenance – one technology assistant provides software and hardware assistance to the district’s schools. One network manager oversees the school and town-wide network.
3. Curriculum and planning – the two principals meet regularly with the superintendent, department and curriculum leaders as well as technology teachers to assess current programs and to acquire technology in support of instructional goals.
4. Staff training – new teachers work with experienced mentor teachers for their first two years in the district. Grade level teachers and curriculum instructional leaders provide additional guidance to teachers. Professional development activities incorporate technology into the curriculum planning and are a part of our teachers’ assessment process. Training for all teachers and administrators will be provided to correspond with the implementation of Test Wiz to analyze MCAS data. The expanded and improved MassOne site is also a valuable resource. Teachers are encouraged to take high quality on-line courses through ASCD and local colleges and universities.

IV. PLAN ADMINISTRATION AND BUDGETING

The Massachusetts State Department of Education has approved the current technology plan for the Harvard Public Schools. Dollar amounts sufficient to grow the plan continue to be a challenge. Town meeting members have rejected increases in school spending for technology.

A. Budget Projections (08-09)

TECHNOLOGY - 30006			OMNIBUS	OMNIBUS
			FY08	FY09
110	-51021	Network Support Sal	103,171	106,800
		SALARY	103,171	106,800
111	-52050	Hardware - Systemwide	6,700	9,000
112	-52051	Hardware - HES	8,000	28,500
113	-52052	Hardware - Bromfield	10,000	33,000
114	-52374	Professional Devel. Exp.	0	0
115	-52380	Telephone - T1 Line	8,000	8,000
116	-52875	Maintenance	3,000	3,000
117	-55100	Software - Systemwide	7,500	17,500
118	-55200	Software - HES	10,075	12,000
119	-55340	Software - Bromfield	2,575	12,500
120	-55400	Supplies	7,000	7,000
		EXPENSE	62,850	130,500
		COST CENTER TOTAL	\$ 166,021	\$ 237,300

B. Ongoing Planning and Review

1. Student performance is monitored closely in Massachusetts' schools via the MCAS standardized test which is given annually. Published results keep the public informed as to the progress the local school district is making.
2. Principals take seriously their roles as primary leaders is in seeing that children benefit from quality instruction. As leaders, they assign individuals and teams with the day-to-day supervision and monitoring of student progress. MCAS data is reviewed through DOE information and Test Wiz.
3. Our technology plan is an ever-evolving document. Its objectives are directly tied to Massachusetts Curriculum Frameworks. At a minimum, an annual review takes place to determine the strengths and weaknesses of the plan. Attention is

always directed to reviewing associated technology standards as part of the annual curriculum review process.

4. Staff and student technological proficiency is measured through informal observations and formal (written) assessment tools.
5. Students and faculty are expected to demonstrate technology skills. Students are assigned and graded according to technology rubrics in the subject areas. Teachers are expected to use electronic resources in lesson planning and presentation. Electronic grade books are one means of using technology. The district uses software programs to evaluate student performance and map future courses of action.
6. Equitable distribution of technology follows the proportion of total student population each school comprises. Equipment may be clustered within a particular building to enhance learning experiences. Principals monitor equipment use within their buildings and are proficient at maximizing return on investment. When budget dollars are insufficient to fully equip a particular school, specific learning objectives and groups of students are targeted for priority distribution.
7. The district technology team, which includes representation from a cross section of diverse stakeholders, continues to provide the leadership and direction in maintenance of a current and viable plan.