



Individual Private/Public Computer Access

Computer Access Survey

Massachusetts School Districts

12/22/06



Introduction

The next inevitable challenge to schools, in the opinion of many educators who have been working with schools and technology for many years, is the following:

Students, with their parents' support, seeking to bring their own computing devices e.g. laptops, hand helds, to school for learning purposes.

Teachers, with their principals' support, seeking to bring their own computing devices e.g. laptops, hand helds, to school for teaching purposes; all educators seeking the same capacity!

Legislators who support funding for one to one computing in education asking why the public should duplicate instruments when many students and educators already have their own – as long as the issue of equity is addressed.

To determine how much of a challenge this kind of access is, the University of Massachusetts STEM initiative developed a survey, with the help of the UMass Donahue Institute, which was posted on MassONE and distributed through both the Department of Education and the many volunteer technology support groups in the state (ETAC, BEST , TTEC¹). Here are the results.

¹ ETAC is the Educational Technology Advisory Council to the Commissioner and the Board of Education (<http://www.doe.mass.edu/boe/sac/edtech/>)

BEST is Business and Education for Schools and Technology (<http://www.best-edtech.org/>)

TTEC is Teaching with Technology Educational Coalition, an informal group of higher education and K-12 members interested in IT licensure.

Quantitative Analysis

In this section, basic frequencies are tabulated for closed ended questions in the survey. The first four questions collected basic data on each of the respondents, including the respondent's name, title, school district and email address. Fifty-three of Massachusetts public school districts are represented in the survey. Seven respondents did not list a school district. A full list of respondents' school districts can be found in Appendix B. Respondents' positions have been categorized and frequencies tabulated in the table below. Seven of the survey respondents did not list their position. There is a list of each unique position represented in the survey in Appendix C. (While the same position is often listed by more than one respondent, in the appendix that position is only listed once).

Question #2. Respondent's Position		
Response	Frequency	Percent
Superintendent or Asst. Super.	4	7.6%
Technology Administrator	41	77.4%
Combined Teacher/Tech Admin	2	3.8%
Other Administrative	6	11.3%
Total	53	100%

Question #5. Does your district allow students to access the Internet during school hours and on school property using their own computing devices, e.g., laptops?		
Response	Frequency	Percent
Yes	15	25.9%
No	43	74.1%
Total	58	100.0%

Question #6. If you answered "No" to question #5, choose one of the following reasons:		
Response	Frequency	Percent
The district has not yet considered the issue	13	30.2%
The district is currently in the process of considering the issue	9	20.9%
The district is currently in the process of drafting a policy	0	0.0%
The district considered allowing access but then rejected it	15	34.9%
Other ²	6	14.0%
Total	43	100.0%

² Even though six people chose "other" as their response, only one person clarified the district's position.

Question #8. Does your school district allow educators to access the Internet during school hours and on school property using their own computing devices, e.g., laptops?

Response	Frequency	Percent
Yes	31	54.4%
No	26	45.6%
Total	57	100.0%

Question #9. If you answered “No” to question #8, please choose a reason from the list below.

Response	Frequency	Percent
The district has not yet considered the issue	6	22.2%
The district is currently in the process of considering the issue	4	14.8%
The district is currently in the process of drafting a policy	1	3.7%
The district considered allowing access but then rejected it	11	40.7%
Other ³	5	18.5%
Total	27	100.0%

Question #11. Does your district have/offer/participate in any one-to-one computing initiatives?

Response	Frequency	Percent
Yes	11	20.0%
No	44	80.0%
Total	55	100.0%

Question #13. Is your district interested in beginning/expanding one-to-one computing opportunities?

Response	Frequency	Percent
Yes	34	63.0%
No	20	37.0%
Total	54	100.0%

³ Even though five people chose “other” as their response, none clarified the district’s position.

Qualitative Analysis

This section provides a brief analysis of survey respondents' answers to the open-ended questions on the survey. For the complete list of all open-ended responses, see Appendix A.

Question #6: Current state of policy for student access; other category

Only one respondent responded to this question. This person said student access was "considered; (and) rejected due to low incident/moderate cost; but would be addressed if 1-to-1 happened."

Question #7: If you answered yes to question #5 (do students have access to the Internet on school grounds using their own computing device?), please briefly describe the policies that are in place to govern access.

Fifteen school districts in the survey allow students to access the Internet on school grounds with personal computing devices. The policies that allow student access at these schools focus on two aspects of Internet access: students viewing inappropriate Internet sites, and network security. Schools used several strategies to stop students from viewing inappropriate sites.

- Five schools indicated that they have an Acceptable Use Policy (AUP) that defines the appropriate use of the Internet for students.
- Two of the schools reference the Children Internet Protection Act as a part of their AUP
- Four schools also had a filter on their network to stop students accessing Internet sites that have been deemed inappropriate.
- One school said the school blocked individual sites that seemed to be inappropriate rather than using a filter.
- Two schools report that they required faculty and staff to monitor student use of the Internet. In some cases, this monitoring is done using technology such as remote desktop; in other cases, it is not clear how Internet use is monitored.

Protecting the school's network from viruses and unauthorized use is another focus of school policy. In order to protect the network, three schools reported that they required student computers to be registered with the school before students can access the Internet.

- One school allows access to students with a Novell account on the school's network.
- Two schools require students to have their computers checked by the school's technology department before they can access the school's network. The tech departments make sure that the students' computers have active virus protection programs.
- One school said it had an open network for Macs, but required that PCs be checked to make sure that the computer has active virus protection before it is allowed on the network.
- One school allows open access to the Internet, but students can only access the school's network by signing in on-line. In order to sign in to the network students need to be granted access by the district.
- One school allows student access to the Internet, but does not allow access to the district's network.
- Two districts reported that they do not have any formal policies about student access to the Internet using their own computing devices. These districts do not allow student access; however, they also do not prevent it.

Question #10: If you answered yes to question # 8 (do educators have access to the Internet on school grounds using their own computing device?), please briefly describe the policies that are in place to govern access.

School district policies regarding faculty and administrator access to the Internet on school grounds using their own computing devices are similar to the policies guiding student use. The concerns for school districts (i.e., preventing inappropriate use and ensuring adequate security) are the same for educator access as they are for student access.

- Three school districts that responded to the survey stated that policies for educators are the same as for students.
- Seven indicated that Internet access was guided by the AUP, just as several reported for student access.
- Three districts stated that faculty use must conform to the guidelines of the Children's Internet Protection Act (CIPA).

Districts also took similar steps for protecting the network against viruses as they did in the student policies. Several districts require that educators register with the district before they can use the network, or have their computer checked to make sure they have adequate virus protection (or both).

- One district ran a pilot program that allowed faculty to use their own laptops, but charged them \$12.50 to install virus protection on their computer.
- One district allows Internet access, but not access to the network.
- Five districts indicated that there was no formal policy guiding educators' access to the Internet, but it was also not prohibited.
- One of those five districts indicated that while it is possible for educators to access the Internet using their own computing devices, the district does not like them to do so.

Question #12: If you answered yes to question #11 (does your district participate in any one-to-one computing initiatives?), please briefly describe those initiatives.

Virtually all of the respondents that indicated their districts have a one-to-one computer initiative indicated that the program is limited to one school in the district, or even limited to only some classes in one school. One district reported they had an initiative requiring students to purchase the computers. That program was shut down because of equity concerns. Two districts reported being a part of a pilot project. Intel initiated one project. The other is a project called the Berkshire Wireless Learning Initiative.

Question #14: Please explain why you are or are not interested in one-to-one computing.

Districts that indicated interest in one-to-one initiatives stated that they believe there are real educational benefits to one-to-one computing programs. Several respondents stated that this kind of initiative is particularly important because developing computer skills is important for students' future in the workplace and as citizens. By far the biggest constraint on pursuing one-to-one initiatives is cost. For some districts, the cost of personnel is the problem, for others it is the cost of the computers and software, while for others it is the cost of maintenance. One district indicated that time was the biggest constraint on a one-to-one initiative in their district. Finally, some districts were not interested in one-to-one initiatives because they believe that while they do not have a one-to-one ratio for computers they do offer sufficient access to computers for both students and faculty. One respondent said that he/she was not convinced that one-to-one initiatives improved educational outcomes. One respondent indicated only limited familiarity with one-to-one computing initiatives.

Appendix A

Question #6: Current State of policy for student access; other category

- OTHER-Considered; rejected due to low incident/moderate cost; but would be addressed if 1-to-1 happened.

Question #7: If you answered yes to question #5 (do students have access to the internet on school grounds using their own computing device); please describe briefly the policies that are in place to govern access.

- A student can access the internet without "registering" his/her computer with our network. The Websense filter supervises the connection to ensure appropriate use. If a student wants to connect to our network; they need to register that computer's Mac address with us
- Access is guided by the districts' AUP that was updated in 2000 but has been in place for 10 years. Current internet filtering is at the server level using Dan's Guardian
- All student access must traverse our CIPA compliant network. Teachers monitor all student computer use including personal equipment. This was implemented in 2001 as part of the AUP
- All students sign an A District Acceptable Use Policy prior to their use of the internet and network. Any student without a signed Acceptable Use Policy is not allowed to use the network or the internet. All lines are filtered by both the ISP and locally administered firewalls that restrict content beyond the Children Internet Protection Act. Student use is monitored by teachers and network tools like remote desktop
- As of September 2005; students who wish to use their own computers to access the Internet must first have the technology department check their equipment so that adequate virus protection software is active on their computer and the name of the computer is registered with the tech office
- If a student, wants to use his or her laptop on our network it must first be brought to the Tech Office. We then add the computer to our domain and make sure they are free of any spy ware/ viruses
- If using a Mac access to our network is open. If a PC, we ask to see proof of the latest virus protection. Policy in place since 2000
- In our AUP, it states that we have the right to investigate any personal computer. Jan 2006
- NA
- No formal policy - we block the sites we do not want them on and hope we can keep up with them
- Students are allowed to access the internet only (going through our content filter) They also have fileserver access is also available to them at home
- There are no policies- just no explicit prohibitions
- These policies have been in place for approximately 4 years. All acceptable use is outlined within the policy
- They must use our Novell login process and be authenticated to our network
- Wireless access is provided in many areas within the HS and MS with limited access in the elementary schools. This has increased slowly over time (since early 2005). The access is multi-layered and filtered. A secure wireless network for school-owned and configured computers and an "open" network for all others. Students can then establish a Citrix session back into the network to access files and applications. By having this setup, we do not have to worry about the security patch level or active virus protection capabilities of non-school owned equipment (which we cannot control) and still maintain a secure network

Question #10: If you answered yes to question # 8 (do educators have access to the internet on school grounds using their own computing device); please describe briefly the policies that are in place to govern access.

- 2000 AUP
- All Teachers have read and signed the District Technology Acceptable Use Policy. Any teacher that does not sign the District Acceptable Use Policy is not granted access to the internet. Teachers that bring in

laptops have to register the Mac Address with the network Administrator. All wireless access points have an Access Control List that blocks out unwanted wireless connections

- As of September 2005, teachers may use their own computers on the school network to access their accounts as well as the Internet. They must first check with the technology office so that it is certain that proper anti-virus software is active on their machine; plus the name of the computer must be registered with the tech office for security reasons
- District AUP (Approved 2005) governing use of network resources and teacher contract regarding in general professional activity. (New contract 2006)
- Educators must agree to use the laptop the way district laptops are used; including a re-imaging of their machines to comply with virus/spam/licensing issues
- for school use only
- I am not aware of any policy
- If a faculty member wants to use his or her laptop on our network it must first be brought to the Tech Office. We then add the computer to our domain and make sure they are free of any spy ware/ viruses
- Inspection of Laptop by Technology Staff to ensure compliant anti-virus solution
- Instructors computers must be configured to log into the network the same as a school owned workstation
- Internet Access is 'allowed' but access to the actual district WAN/LAN is 'not allowed due to contamination and security concerns
- Laptops must be set up for access by the tech department. There is a limited number of employees involved; mostly administration and technology
- No policies; have not had to deal with this issue. Don't see it as a problem here
- No policy- but no prohibition
- No written policy
- Policy covers network and internet use and monitoring; filtering for CIPA; use of e-mail; access and downloading/installation of software; web page policies; policies re: posting images; content; copyright issues and accessibility
- Same as students. PC requires proof of virus protection. Policy- 1996
- Same policies as those governing students
- Same scenario as students (above)
- Teachers are subject to the AUP and are required to traverse our CIPA compliant network
- Teachers have been allowed to access the internet from school on using their own equipment since 2003
- The AUP applies to student and staff - we have the right to investigate any personal computer
- The program was handled by another tech department within BPS. Perhaps two years ago the district piloted allowing teachers to use their own laptops. Teachers were charged \$12.50 to install the anti-virus software. I am not sure how many teachers took advantage of this opportunity. This program is not advertised
- The teachers complete a form to request access to the network. In it, they agree to adhere to the AUP, allow us to check their computer to make sure that it doesn't pose a threat to security because of software that it contains and make sure that there is an active and current anti-virus application on it (which means that we can deny access if the system doesn't meet the criteria), and agree that any hardware and operating system issues that are encountered are the responsibility of the staff person, not our support staff. This was put into place in September of 2002
- There is an AUP in the teachers' policy manual that participating teachers must adhere to. MAC address must be registered to obtain an IP address. Internet filter is used while in building
- They must authenticate to our Novell network username and password
- They must comply to CIPA compliance and local virus updates
- We don't like it...but they can

Question #12: If you answered yes to question #11 (does your district participate in any one to one computing initiatives) please briefly describe those initiatives

- Andover had a 1 to 1 program where students purchase their laptops but it was shut down last year due to equity issues. The program was very successful and the student and teachers benefited tremendously
- For staff only. Currently only K-3 are not supplied with school issued laptops. We need a replacement policy in place before we can finish our goal of one to one for teachers
- one elementary classroom every student has their own laptop
- One of the elementary schools has laptops for all 5,6,7 and 8 grade students but they do not take them home
- Small computing devices; by class; not entire school
- Students' grades 5-8 receive basic computer instruction. Students k-4 receive daily computer instruction in phonics (Lexia)
- Three high school; TechBoston Academy; PATH and USA; Lila Fredrick Middle School have 1-to-1 initiatives where students are assigned a laptop to uses during school hours
- We are currently involved in an Intel pilot using UMPC (Ultra Mobile Personal Computers). We have given a device to 26 seventh grade students to be used all day and at home. Intel and Sonic Rim are conducting a study to see what the educational benefits are using UMPC devices. Our school has laptop carts that can be used in the classroom. Each school has between 26 and 52 laptops for student use. Every Middle School/High School teacher is given a laptop for professional use
- We are part of BWLI (Berkshire Wireless Learning Initiative). The official website is: <http://www.bwli.org>
- We have a student and teacher one-to-one Chemistry program at the high school level. We have a student and teacher one-to-one program at a middle school. We have a student and teacher one-to-one program at an elementary school. We also have one-to-one laptop programs for teachers; and several schools have this program

Question #14: Please explain why you are or are not interested in one to one computing.

- 1. Pioneers have shown results that are promising 2. Pilot program is good starting point for all technology projects
- A choice between computers or teachers in the classroom - we choose teachers in the classroom - no money
- At the high school level, we have strategically deployed wireless carts and computers in most departments including the library for students to have access. At the middle school there are two fixed multimedia labs and most elementary schools have a computer lab for student access. I do not see anytime soon of having the funding for the one to one computing. If all the variables were in place which includes personnel; funding; professional development and administrative backing; I would be moving it forward in the district
- Budget
- Budgetary constraints and network server size does not currently allow it
- COST- COST - COST Plus the tech support necessary to maintain the 'fleet' and the integration specialists to provide PD to teachers so that we can use this for more than browsing and writing. Our budget constraints are real; 8 staff in the ITAMS department lost their jobs last year
- Creating an environment for one to one computing would greatly aid in the communications link between teacher, student and parents. Students would have a tool at their fingertips at all times. One to One computing would engage children's' interest in learning and help prepare them for jobs of the futures
- I am hoping that the OLPC initiative does come through in Massachusetts. Although a one-to-one laptop initiative would be nice, we do not have the funds for network upgrades and support staff for such a project. The OLPC initiative will meet the needs of students and teachers much of the time; at home and at school; and we feel we can support them

- I am not aware of any initiative
- If infrastructure and security issues could be adequately addressed; I believe that 1:1 computing offers students and teachers a unique educational opportunity
- More efficient use of teacher/student time than traveling to a lab. More opportunity for extending research/learning from wide variety of sources
- No financial support
- only real change and transformation in learning will ever take place --one to one is a must
- The cost associated with initial hardware and the added cost of tech support is beyond the budget scope of our PK-6 district of 200 students
- There are many benefits to having the students access resources both internal to our network (curriculum-based software programs; etc.) and to the Internet. While these benefits have not been tracked over time, we have seen increased interest in learning when computers have been involved in the classes on an interim basis. A pilot program combined with gathering statistical data would be a starting point for us
- This is a qualified yes since I have limited familiarity with one-on-one computing
- Time
- Too expensive up-front (and long-term as far as support/maintenance is concerned). kids carry enough stuff around with them... bottom line; though- not convinced that it'd provide a real educational benefit
- Very interested in one to one computing. Boston College did a study on our program. you can view results at <http://www.aps1.net/District/Tech/Laptop/Andover1to1.pdf>
- We are a small charter school for at-risk students who share a computer lab that is meeting all students' needs
- We are cautiously interested in 1-1 computing but have concerns about network security; potential of students' inappropriate use and liability
- We are interested due to the advantages for students. We are not able to provide this initiative with our budgetary constraints
- We are very interested!
- We feel that it is important that students be able to access information, as they need it in any classroom in the building. There is so much wonderful material available on the Internet that is current and not available in print form. Also; there is are so many tools that foster collaboration among students available on the web; that we need to help our students learn a skill that is necessary for 21st success
- We find that teachers use technology much more effectively when they have a laptop that they can use any time; and that if teachers have them before the students do; the student one-to-one program is more effective. We find that students who participate in a one-to-one program are more engaged in their learning. We also believe that students must be totally comfortable and proficient in the use of technology in order to be prepared for success in higher education and future professions
- We have a good computer to student ratio and we push teacher integration - all professional staff in the District have dedicated laptops
- We have placed mobile carts in the middle school grades and would like to see this expanded. There is a movement to have all incoming 9th graders have a laptop that would help to reduce or eliminate the Digital Divide issues that are found at the high school
- We recognize the direction toward one to one computing is growing and are prepared to adopt successful models
- We think the idea is pedagogically sound; and that students need this tool to become productive citizens of our society. Computers are a tool which should be ubiquitous in student's lives
- We would be interested in one-to-one computing; but there is no way we have the funding for this at this point
- With our current ratio of 2 students to 1 computer in the high school we don't feel the need to increase the ratio to 1 to 1

Appendix B

Districts represented in survey

- Abington Public Schools
- Andover
- Belmont Public Schools
- Boston Public Schools
- Bristol County Agricultural High School
- Cambridge Public Schools
- Chelmsford Public Schools
- Cohasset Public Schools
- East Longmeadow
- Easton Public Schools
- Essex Agricultural Tech High School
- Everett Public Schools
- Gill-Montague Regional
- Hadley Public Schools
- Hingham Public Schools
- Ipswich
- King Philip
- Lawrence Development Family Charter School
- Lawrence Public Schools
- Leominster Public Schools
- Lincoln Sudbury Regional H.S.
- Lowell Middlesex Academy Charter School
- Ludlow
- Masconomet Regional School District
- Mohawk Trail Regional School District
- Montachusett Regional Vocational Technical
- Nashoba Regional School District
- Nashoba Valley Technical High School
- Nauset Public Schools
- New Salem/Wendell
- Newburyport Public Schools
- North Reading PS
- Northbridge Public Schools
- Oak Bluffs School
- Pittsfield
- Quabbin Regional
- Roxbury Prep
- Savoy
- Shrewsbury Public Schools
- Smith Leadership Academy Charter Public School
- South Hadley Public Schools
- South Shore Regional School District

- Southern Berkshire Regional
- Springfield Public Schools
- Tewksbury
- Tri-County Regional Vocational Technical
- Triton Regional
- Tri-Town School Union (Boxford; Middleton; Topsfield)
- Up-Island Regional School District
- Westfield Public Schools
- Westport Community Schools
- Williamsburg
- Winchester Public Schools

Appendix C

Educational positions represented in the survey

- Administrator for Technology
- Assistant Superintendent and IT Director
- Asst Superintendent
- Business Admin
- Chief Information Officer
- Computer Teacher/Tech Coordinator
- Computer Teacher/Technology Integrator
- Computer Technology Administrator
- Coordinator; Educational Technology
- Director Instructional Technology
- Director of Educational Technology
- Director of Grants and Technology
- Director of Instructional Technology and Media Services
- Director of Integrated Technologies
- Director of Pupil Services
- Director of Technology
- Director
- District Technology Integration Coordinator
- Education Technology Coordinator
- Educational Tech Coordinator
- Executive Director of Information and Education Technology
- Grants Consultant
- IS and Ed Tech Director
- Manager of Technology Services
- Principal
- Superintendent
- Supervisor of Instructional Technology
- Tech. Specialist
- Technologist
- Technology Chairman
- Technology Coordinator
- Technology Director
- Technology Integration Specialist
- Technology Manager
- Technology Specialist K12