

# **BANGOR SCHOOL DEPARTMENT**

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## **Technology Plan 2009-2012**

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## 1. Introduction

The Bangor School Department has provided for broad community involvement in the technology planning process through the use of various mediums – from our school department web site and system newspaper (*The Communiqué*), to school-based newsletters, faculty survey, meetings of relevant faculty and public demonstrations of student technology use.

Important to our ongoing planning process is the inclusion of media specialists throughout the system. Bangor believes that the successful integration of technology rests, in large part, upon our ability to help both teachers and students use it as a tool in the retrieval, analysis and evaluation of information. Technology tools can uniquely support differentiated instruction, critical thinking experiences, real-world engagement, organization, media management, enhanced communication and collaborative experiences as well as alternative forms of representation and expression/performance. In this regard, the use of technology represents a set of many skills that is vital to the success of all children. The Bangor School Department's technology plan works to support our mission of high academic achievement for all students.

## 2. Vision

*Our vision is to improve student academic achievement by making information technology an integral part of the teaching and learning process.*

The Bangor School Department views technology as a set of tools that bring new capabilities to the learning environment. We believe when technology is properly employed it enhances teaching and enriches learning experiences for students. Technology, appropriately integrated with content pedagogy and knowledge, engages students in a multi-sensory learning environment often resulting in deeper concept development.



### **3. GOALS**

#### **A. Fully implement the K-12 information literacy curriculum that follows the basic information literacy standards:**

- A.1. Information Literacy
  - A.1.1. Student accesses information efficiently
  - A.1.2. Student evaluates information critically
  - A.1.3. Student uses information accurately and creatively
  
- A.2. Independent Learning
  - A.2.1. Student independently pursues quality information
  - A.2.2. Student understands and evaluates creative expression of literature
  - A.2.3. Student evaluates information and generates knowledge
  
- A.3. Social Responsibility
  - A.3.1. Student recognizes the importance of information to a democratic society
  - A.3.2. Student practices ethical behavior in regard to information technology
  - A.3.3. Student works effectively with others in the pursuit and generation of knowledge

#### **B. Distribute and support information technology appropriately throughout the learner's experience in all Bangor schools:**

- B.1. Access
  - B.1.1. Continue to strategically deploy the information technologies needed for teaching and learning – including the systematic review and acquisition of hardware
  - B.1.2. Utilize thin client devices to provide access in locations not requiring desktop PCs
  - B.1.3. Continue to enhance network security
  - B.1.4. Hire one additional full-time computer support technician
  
- B.2. Learning



- B.2.1. Implement the Integrated Approach to Technology Skills Development
- B.2.2. Explore student learning software to be delivered via Citrix server vs desktop PCs – Looking first to quality web-based, open ended option/enhancements
- B.2.3. Expand support for the integration of information and other technologies into learning activities that engage learners in more authentic, creative and critical tasks

**C. Use technological tools to support teaching:**

- C.1. Provide teachers with appropriate access to standardized information technology environments for teaching
- C.2. Provide teachers and administrators with access to student information systems that enhance their instructional practice, including the capacity to analyze student achievement data
- C.3. Continue to strategically deploy the information technologies needed for teaching and learning – including the systematic review and acquisition of hardware and curriculum specific resources
- C.4. Continue our installation of a system-wide standard suite of grade-level appropriate software tools for word processing, presentation and multimedia project development, data manipulation, graphics, communications and information access – primarily through our WAN and Citrix server system

**D. Employ information technology to improve the assessment of student progress and the management of information in the Bangor Schools:**

- D.1. Expand the capacity to store, retrieve, manipulate and analyze student achievement and progress data generated in assessment activities conducted by the Bangor School Department as part of our local assessment system
  - D.1.1. Continue to expand teacher access to information management tools from the workplace and from home using a thin-client computer platform



- D.1.2. Continue the implementation of our thin-client delivered, “home-grown” Elementary Student Database (OnTrack) used by teachers in grades K-3 into our 4-5 schools
  - D.1.3. Continue to implement our thin-client delivered, “home-grown” Maine Learning Results student achievement tracking software (OnTrack) at Bangor High School
  - D.1.4. Research and select a student achievement database that expands upon our MLR tracking software to include the ability to track student achievement in other assessments and measures for students K-12. This database would include the capacity to cross-reference assessments within content areas by curriculum standards.
  - D.1.5. Continue to develop a computer-based system for developing and managing individual educational plans (IEPs, 504s, etc. . .) that interacts with our SIS
  - D.1.6. Develop a database that will track and organize our Comprehensive Education Plan and strategic planning efforts at both the system and building levels
- D.2. Expand the use of our FirstClass communication software, the IRIS alert system, and our school department website with teachers and staff, students and parents K-12, and our greater community

**E. Cultivate a technology-literate faculty and staff capable of integrating technology into educational settings in ways that are appropriate to individual learner needs:**

- E.1. Expand staff development offerings related to the integration of information technology into teaching, learning, assessing progress, and management
  - E.1.1. Conduct periodic needs assessment surveys to determine staff development needs among teachers, administrators, and staff
  - E.1.2. Use a variety of program formats, such as courses, workshops, seminars and mentoring, to provide instruction in technology skills and integration strategies



- E.2. Encourage personal growth in the use of information technology among teachers, administrators, and staff
  - E.2.1. Continue the payroll deduction, personal computer purchase program
  - E.2.2. Continue appropriate system-wide strategies to encourage the sharing of best practices in teaching, learning, assessing and managing
  - E.2.3. Personal growth goals should reference and relate to new initiatives

#### **4. Identify Necessary Technology**

Currently, the Bangor School Department has a fully integrated data network connecting the schools and the central office with wired network outlets to all classrooms, offices and teacher workrooms. All schools also have wireless network service. Office staff has access to productivity tools, accounting and personnel applications, PowerSchool and the Internet. Faculty and support staff have access to our server-based computing environment both from school and from home. On this thin client platform, built on Citrix Metaframe and Windows XP Server, faculty have access to general productivity and presentation tools, our FirstClass communication platform, PowerGrade for grade entry in grades 6-12, our locally developed Elementary Student Information System (OnTrack) for grades K-5, our locally developed Maine Learning Results Management System (OnTrack) for grades 9-12, Special Education Management software, personal data storage, local educational applications and the Internet.

##### Grades K-3

There are computers in each library and all classrooms have a computer. There are also computers in teacher workrooms and SRI laptops and older MLTI1 laptops on mobile carts. To improve access, more (or replacement) computers or thin client devices are needed to meet the goals of providing technological tools to support learning and to use information technology to improve the assessment of student progress.

##### Grades 4-5

There are computers in each library and all classrooms have a computer. There are computers in teacher workrooms and each school also has SRI laptops and older MLTI1 laptops on mobile carts. To improve access, more laptop computers or thin client devices are needed to meet the goals of providing technological tools to support learning and to use information technology to improve the assessment of student progress. To meet the goal of distributing information technology appropriately throughout the learner's experience, students need more access to technology resources.



## Grade 6

Students and teachers have access to one computer lab in each building. This lab is for general production, presentation work and the Internet. Grade 6 also has the older MLTI1 laptops for a one to one ratio. Due to the age of these laptops, replacement purchases must be planned.

## Grades 7-8

All students and teachers have one-to-one computer access through the MLTI laptop program. The network at this level is robust, as it is at all levels. Charging stations and laptop storage facilities are fully functional and adequate. Students and teacher have access to a wide variety of production software and information resources, including the Internet.

The large number of computers at this level creates a need for daily technical support that should be handled by a technician not a teaching professional. An additional, full time computer support person would be helpful to meet this goal.

## Grades 9-12

A number of computer labs (as shown in the table on page 8), teacher workrooms and classroom workstations provide students and teachers with access to centralize, personal data storage, productivity, curriculum related applications and the Internet. Teachers have also been provided with MLTI2 laptops and teachers and students have access to Citrix at school and at home which provides them with a common suite of applications. In addition, this system also allows both students and teachers access to library resources, both catalog and databases. And, a NoteShare server provides options for both teacher collaborative efforts and the sharing of teacher developed classroom resources with students 24/7 independent of platform.



**Bangor School Department Student:Computer Ratios and Teacher:Computer Ratios**

**June 2008**

Building	Grades	Student	Teacher	Both	Staff	Total	01-Apr-08	Classroom	Student:	Teacher:
		Computers	Computers	St. & Te.	Only	Computers	Student Enrollment	Teacher Count	Computer	Computer
Downeast School	0 - 3	40	12	24	4	80	283	30	4.4	0.8
14th Street School	0 - 3	19	3	16	4	42	148	10	4.2	0.5
Abe Lincoln School	0 - 3	27	9	29	6	71	224	18	4.0	0.5
Fruit Street School	0 - 3	38	10	28	5	81	316	23	4.8	0.6
Vine Street School	0 - 3	29	4	28	3	64	270	24	4.7	0.8
Fairmount School	4 - 5	59	5	68	5	137	270	22	2.1	0.3
Mary Snow School	4 - 5	51	5	52	3	111	246	19	2.4	0.3
Cohen School	6 - 8	489	36	7	13	545	415	31	0.8	0.7
Doughty School	6 - 8	426	37	6	9	478	380	32	0.9	0.7
Bangor High School	9 - 12	326	163	138	45	672	1335	110	2.9	0.4
Acadia Ed. Program		0	0	0	2	2				
The Learning Center Alternative Ed.Program		0	0	16	4	20				
	TOTAL	1504	284	417	104	2309	3907	325	2.0	0.5

Student:Computer ratios calculated using "Student" and "Both" computers.  
 Teacher:Computer ratios calculated using "Teacher" and "Both" computers.



***Table of computer labs in Bangor High School***

<b><u>Lab Purpose</u></b>	<b><u># workstations</u></b>	<b><u>Room</u></b>	<b><u>Department</u></b>
Computer Science, Graphics	24	A114	Math
Comp. Aided Drafting	20	D11	Technology
Student Prod., Science Apps	5	B23	Science
Student Prod., Science Apps	5	B107	Science
Student Prod., Science Apps	18	B30	Science
Geography Mini Lab1	8	A101	History
Geography Mini Lab2	8	A106	History
English Writing Lab	24	A8	English
Foreign Language Lab	22	A20	Foreign Language
Accelerated Reading Lab	4	B106	Reading
Word Processing Lab	24	B104	Business
Business Applications	21	B101	Business
Photo/graphics Lab	10	D15	Graphic Arts
Open Use, Student Product. Lab	24	A21	N/A
Math Lab	15	A111	Math
Library Research	30	Lib.	Library

At the 9-12 level, the goal to distribute and support information technology appropriately requires a computer-rich environment, which we will continue to define and expand. If students are to become more active learners and demonstrate their learning as creators of high quality digital media content, more access to technology tools is needed at this level.

Our experience with thin client server-based computing has shown that in some areas this platform can provide all the tools students and teachers need. Other production areas may require the capabilities of full desktop PCs. Determinations are currently being made based on targeted use (pilots) and production goals, as to the use of thin client devices versus desktops in different areas and specific labs. Where full desktop PCs are needed, they will need to be kept up-to-date. Where a thin client environment is appropriate the number and availability of thin client devices should be increased.

### **5. Collaboration with Adult Literacy Service Providers**

*Describe how the program will be developed, where applicable, in collaboration with adult literacy service providers.*



The Bangor School Department has a comprehensive Adult Education Program, including adult literacy, which is part of a larger collaborative with several area school departments. Technology use in our Adult Education Program includes:

- The Bangor High School computer labs are used by Adult Education Classes
- Collaboration in the use of the Distance Learning Classroom (ATM)
- Ongoing technical support from Bangor School Department
- MSLN Access for Adult Educational Classes

We also provide access to our Citrix system by Adult Education participants, allowing them to utilize the suite of applications that are currently available to K-12 teachers and limited numbers of students. This allows for home access to those students who are connected to the Internet.

## **6. Strategies for improving Academic Achievement and Teacher Effectiveness**

*Describe how funds, specifically Ed Tech funds wherein applicable, will be used to improve academic achievement, including the technology literacy of all students attending schools served by the SAU/LEA; and describe how funds expended will improve the capacity of all teachers in schools served by the SAU/LEA to integrate technology effectively into curriculum and instruction.*

Ed Tech funds will be used by the Bangor School Department to continue its effort in developing student achievement databases designed to track student performance against the MLR. Our focus, due in part to the legislated mandate regarding graduate certification of the Maine Learning Results (MLR), has been in grades 9-12 and we have fully implemented at this level in the five legislated content areas. We are in the process of researching at the K-8 level and are looking to expand the capacity of the system to include the creation of individual student profiles K-12 that will track multiple assessment data points. This effort will include the ability to cross reference assessment data by curriculum and performance standard(s). Paralleling our database implementation is our ongoing professional development (PD) in the administrative and teacher use of student achievement data for improved student performance.

A three-level PD plan is in place, which is embodied in our *BSD Core Competency* planning process. Goals set at the system-level are supported by building-based goal setting/planning as well as individual teacher goal setting. All goals and plans tie back into our overarching strategic plan and system Comprehensive Education Plan as required by Chapter 125 of Maine law. Ed Tech funds will also be used, as articulated in this plan, to create a database that will track our strategic planning progress. It should also be noted that significant local resources have been expended in both time and dollars for these projects as well as Ed Tech funds.



Our goal is to provide teachers and administrators with powerful tools that will allow them to analyze student achievement data so that they can ultimately improve their instruction and, consequently, student learning.

## **7. Integration of Technology with Curricula, Instruction, and Assessment**

*Describe how technology (including software and electronically delivered learning materials) will be integrated into curricula, instruction, and assessment and include a timeline for this integration.*

With the successful completion of our WAN and our installation of Citrix, the Bangor School Department has taken a significant step in the implementation of technology at all levels. As we move forward, we will be looking to leverage these systems to the fullest extent possible with the goal of significantly reducing the number of traditional stand-alone desktop machines. This fundamental shift in how we look to provide teachers and students with basic, but necessary technology will allow us to be more efficient in deployment and service and will help us standardize both hardware and software. Additionally, it will allow us to provide the most up-to-date versions of core software, which for us is Microsoft Office.

As technology becomes a required tool for all educators in Bangor due to our MLR and student achievement software, we look to continue our strong historical efforts in providing teachers with timely and appropriate professional development. In this regard, there are two goals: (1) to help teachers utilize student information management systems in a way that improves their instructional delivery to individual students, and (2) to provide research-based proprietary software when it supports our instructional purposes. This technology plan articulates these goals.

## **8. Technology Type and Costs, and Coordination with Funding Resources**

Equipment and software purchases in the Bangor School Department will come mainly from our local budget, supported at various levels by both federal and state dollars. It is anticipated that federal funds will be used primarily for database development and special projects that have unique technology needs, as mentioned elsewhere in this plan.

As described in other places within this plan, the majority of our future hardware purchases will be thin-client devices that will be supported by our Citrix system. Desktop and/or laptop equipment will be acquired when it is necessitated by program requirements (i.e., heavy use of graphics) – the next page outlines the goals of our plan along with implementation timelines and anticipated funding sources.



**Bangor School Department: 2009-2012 Technology Plan\***

<b>GOAL(S)</b> <i>(see pages 3-6)</i>	<b>ACTIVITIES</b>	<b>TIMELINE</b>	<b>RESOURCES &amp; RESPONSIBILITY</b>	<b>COSTS &amp; FUNDING SOURCE(S)</b>																								
A. Informational Literacy	A.1-A.3 Full Implementation of the BSD K-12 informational literacy curriculum	A.1-A.3 2008-09: 9-12 2009-10: 4-8 2010-11: K-3	A.1-A.3 Asst Supt Media-Library Specialists Building Principals Teacher representation	<table border="1"> <thead> <tr> <th>Source</th> <th>2008-09</th> <th>2009-10</th> <th>2010-11</th> <th>2011-12</th> </tr> </thead> <tbody> <tr> <td>Federal</td> <td>\$2,000</td> <td>\$2,000</td> <td>\$2,000</td> <td>\$1,000</td> </tr> <tr> <td>State</td> <td>\$1,000</td> <td>\$1,000</td> <td>\$1,000</td> <td>\$1,000</td> </tr> <tr> <td>Local</td> <td>\$2,000</td> <td>\$2,000</td> <td>\$3,000</td> <td>\$3,000</td> </tr> </tbody> </table>					Source	2008-09	2009-10	2010-11	2011-12	Federal	\$2,000	\$2,000	\$2,000	\$1,000	State	\$1,000	\$1,000	\$1,000	\$1,000	Local	\$2,000	\$2,000	\$3,000	\$3,000
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Local	\$2,000	\$2,000	\$3,000	\$3,000																								
B. Technology & the Learner's Experience	B.1.1. Process for hard/software review B.1.2. Additional Thin Client installations B.1.3. Network security B.1.4. Additional full-time technician B.2.1. Integrating tech. into instruction B.2.2. Learning software – Citrix v. PC B.2.3. Expand support for the integrated approach to technology skill development	B.1.1. 2008-12 B.1.2. 2008-12 B.1.3. 2008-12 B.1.4. 2010-11 B.2.1. 2008-12 B.2.2. 2008-12 B.2.3. 2008-12	B.1.1.,B.1.2., B.2.1. Tech Coord & Principals B.1.3. Tech Coord B.1.4. Superintendent B.2.2. Asst. Supt. & Principals B.2.3. Asst. Supt. & Dir of GT/Title IA	<table border="1"> <thead> <tr> <th>Source</th> <th>2008-09</th> <th>2009-10</th> <th>2010-11</th> <th>2011-12</th> </tr> </thead> <tbody> <tr> <td>Federal</td> <td>\$10,000</td> <td>\$10,000</td> <td>\$10,000</td> <td>\$10,000</td> </tr> <tr> <td>State</td> <td>\$150,000</td> <td>\$150,000</td> <td>\$150,000</td> <td>\$150,000</td> </tr> <tr> <td>Local</td> <td>\$100,000</td> <td>\$100,000</td> <td>\$100,000</td> <td>\$140,000</td> </tr> </tbody> </table>					Source	2008-09	2009-10	2010-11	2011-12	Federal	\$10,000	\$10,000	\$10,000	\$10,000	State	\$150,000	\$150,000	\$150,000	\$150,000	Local	\$100,000	\$100,000	\$100,000	\$140,000
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C. Technology & Supporting Teaching	C.1. Teacher access C.2. SIS & student achievement data analysis C.3. Strategic deployment C.4. Standardized software tools	C.1. 2008-12 C.2. 2008-12 C.3. 2008-12 C.4. 2008-12	C.1. Superintendent, Tech Coord, Principals C.2. Asst Supt, Tech Coord & Data Mgt Specialist C.3. Tech Coord C.4. Tech Coord	<table border="1"> <thead> <tr> <th>Source</th> <th>2008-09</th> <th>2009-10</th> <th>2010-11</th> <th>2011-12</th> </tr> </thead> <tbody> <tr> <td>Federal</td> <td>\$0</td> <td>\$0</td> <td>\$0</td> <td>\$0</td> </tr> <tr> <td>State</td> <td>\$150,000</td> <td>\$150,000</td> <td>\$150,000</td> <td>\$150,000</td> </tr> <tr> <td>Local</td> <td>\$100,000</td> <td>\$100,000</td> <td>\$100,000</td> <td>\$100,000</td> </tr> </tbody> </table>					Source	2008-09	2009-10	2010-11	2011-12	Federal	\$0	\$0	\$0	\$0	State	\$150,000	\$150,000	\$150,000	\$150,000	Local	\$100,000	\$100,000	\$100,000	\$100,000
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D. Technology & Assessing Student Progress	D.1. Student achievement data storage & analysis D.2. FirstClass, IRIS, and BSD website expansion	D.1. 2008-12 D.2. 2008-12	D.1. Asst Supt, Tech Coord, & Data Mgt Specialist D.2. Asst Supt & Tech Coord	<table border="1"> <thead> <tr> <th>Source</th> <th>2008-09</th> <th>2009-10</th> <th>2010-11</th> <th>2011-12</th> </tr> </thead> <tbody> <tr> <td>Federal</td> <td>\$10,000</td> <td>\$10,000</td> <td>\$10,000</td> <td>\$10,000</td> </tr> <tr> <td>State</td> <td>\$5,000</td> <td>\$5,000</td> <td>\$5,000</td> <td>\$5,000</td> </tr> <tr> <td>Local</td> <td>\$10,000</td> <td>\$10,000</td> <td>\$10,000</td> <td>\$10,000</td> </tr> </tbody> </table>					Source	2008-09	2009-10	2010-11	2011-12	Federal	\$10,000	\$10,000	\$10,000	\$10,000	State	\$5,000	\$5,000	\$5,000	\$5,000	Local	\$10,000	\$10,000	\$10,000	\$10,000
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E. Professional Development	E.1. Expansion of PD for integration E.2. Personal growth (expansion)	E.1. 2008-12 E.2. 2008-12	E.1. Asst Supt, Tech Coord Data Management Specialist	<b>Source</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>
				Federal	\$0	\$0	\$0	\$0
				State	\$2,500	\$2,500	\$2,500	\$2,500
				Local	\$10,000	\$20,000	\$25,000	\$25,000

\* Some budgeted dollar amounts meet multiple goals and should not be viewed as discrete allocations. State allotments are based on targeted funds.



## 9. Supporting Resources

Resources that support the use of technology in schools:

### Technical Support

- Trouble Call Tracking
- In-House Support
  - Computer Support Technician
  - Building Computer Resource Positions
  - Help Desk
- Contracted Support – Advanced Data Service, Inc. – Computer Specialist and Cianbro Data Services – network and technical support consultation

### Security

- Network monitoring
- Antivirus system
- Asset Tracking and Inventory

Major advances in our technology infrastructure include an expansion of the technical support program, various improvements in system security, the activation of a wide area network connecting all school buildings and City Hall, the installation of a thin client system broadening access to applications, and connection of Bangor High School to the Maine Distance Learning Network.

## 10. Steps to Increase Accessibility

The Bangor School Department has made a significant investment in technology, and the introduction of a Thin Client/Server-Based Computing Environment (Citrix) has allowed a wide variety of computers, old and new, to run up-to-date applications using a network connection from inside the school buildings or over the Internet. While no Ed Tech funds were used to directly support this installation, it demonstrates our commitment to provide both students and staff with increased accessibility.

Additionally, with the MLTI1 laptops, kindergarten through sixth grade students and teachers have laptop computers for use throughout the school day as appropriate. The seventh and eighth grade students and teachers and the high school teachers have laptops from the MLTI2.



## **11. Promotion of Various Curricula and Teaching Strategies that Integrate Technology**

*Describe how various curricula and teaching strategies that integrate technology effectively into the general curriculum and instruction will be identified and promoted based on a review of relevant research, and promoted to leading to improvements in student academic achievement.*

As stated in other parts of this plan, the Bangor School Department continues to develop student achievement databases, which will allow for the creation of individual student profiles K-12. We are implementing this software in grades K-12 to provide teachers with data on student achievement that they can use to improve instruction and learning.

We have also been very successful in the implementation of the MLTI laptop program at grades seven and eight. With 700 students at this level, the Bangor School Department has put laptops into the hands of students and staff in a way that is both thoughtful and integrated with existing curriculum. As part of our professional development plan, we continue to support best practices and teacher initiatives. This planning happens at the system, building and teacher level and is aligned to our *BSD Core Competencies*.

## **12. Professional Development**

*Describe how ongoing, sustained professional development for teachers, principals, administrators, and school library media personnel will be provided to further the effective use of technology in the classroom and/or library media center.*

As technology becomes a required tool for all educators in Bangor due to our MLR and student achievement software, we look to continue our strong historical efforts in providing teachers with timely and appropriate professional development. In this regard, there are two goals: (1) to help teachers utilize student information management systems in a way that improves their instructional delivery to individual students, and (2) to provide research-based proprietary software when it supports our instructional purposes. This technology plan articulates these goals.

A three-level PD plan is in place, which is embodied in our *BSD Core Competency* planning process. Goals set at the system-level are supported by building-based goal setting/planning as well as individual teacher goal setting. All goals and plans tie back into our overarching strategic plan and system Comprehensive Education Plan as required by Chapter 125 of Maine law. Ed Tech funds will also be used, as articulated in this plan, to create a database that will track our strategic planning progress. It should also be noted that significant local resources have been expended in both time and dollars for these projects as well as Ed Tech funds.

Additionally, the Bangor School Department will explore future use of the ATM network for the delivery and receipt of professional development opportunities. Small steps have been made in



this area to date, primarily in the form of state Department of Education workshops, which we have connected to and have served as the regional site for broader participation.

### **13. Innovative Delivery Strategies**

*Articulate/Describe how the development and use of innovative strategies for the delivery of specialized or rigorous courses and curricula through the use of technology, including distance-learning technologies, will be encouraged, particularly in areas that would not otherwise have access to such courses or curricula due to geographical distances or insufficient resources.*

The Maine Technology Learning Initiative (MLTI) laptop program has had a major impact in the middle schools, providing teachers and students in the seventh grade with routine, one-to-one computer access for daily learning activities.

Major advances in technology infrastructure include the activation of a wide area network connecting all school buildings and City Hall, the installation of a thin client system broadening access to applications, and connection of Bangor High School to the Maine Distance Learning Network.

The Bangor School Department is on the cusp of expanding our critical use of our ATM technology, exploring both uses for the professional development of teachers (of which we have some experience), as well as opportunities for student courses. As part of this latter objective, the Bangor School Department is very interested in serving as a regional and perhaps state-wide (particularly northern Maine) program provider for high schools who do not have the resources to offer specialized and upper-level coursework. As part of this effort, our Adult Education program will explore opportunities for adult learners in both program receipt and delivery.

### **14. Accountability Measures**

*Describe the process and accountability measures which will be used to evaluate the extent to which the plan activities are effective in integrating technology into curriculum and instruction, increasing the ability of teachers to teach, and enabling students to reach Maine's Learning Results.*

While this technology plan will be evaluated for its effective implementation by the system-level technology committee and the Administrative Council, the Bangor School Department's strategic planning process will provide the main mechanism for plan accountability. The school department and individual schools set goals every year based upon our *Core Competencies*, with mid and year-end reviews being built into the process. With technology supporting our strategic planning efforts, regular evaluation is necessary.





STATE OF MAINE  
DEPARTMENT OF EDUCATION  
23 STATE HOUSE STATION  
AUGUSTA, MAINE  
04333-0023

JOHN ELIAS BALDACCI  
GOVERNOR

SUSAN A. GENDRON  
COMMISSIONER

June 19, 2008

This letter is to certify **Bangor School Department** has an approved technology plan valid July 1, 2008 through June 30, 2011.

In accepting this plan, the Maine Department of Education certifies that the school administrative unit has met requirements for technology planning. The Maine technology planning guidelines include:

- technology planning requirements for the *No Child Left Behind Act*.
- five elements for the E-rate program to qualify as an approved technology plan for a discount and to meet the requirements of the FCC's Fifth Report and Order (FCC 04-190, released August 13, 2004).
- "use of technology for student learning and efficient school administrative unit operations" for the Comprehensive Education Plan as described in Chapter 125 Basic Approval Standards: Public Schools and School Administrative Units.

Sincerely,

A handwritten signature in blue ink that reads "Sylvia K. Norton".

Sylvia K. Norton  
SLD-Certified Technology Plan Approver  
School Library/Technology Planning Coordinator

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