RSU 20 Technology Plan 2010-2013

Online at http://sites.google.com/site/techplanrsu20/technology-plan-committee

Adopted May 25, 2010

Ad Hoc Technology Plan Committee

As a newly consolidated RSU, we have made great effort to prepare a plan reflecting the perspectives and needs of both former districts. Many documents and resources from both sides of the river were consulted to create a plan that accurately reflects the best practices and needs of both.

Members:

Greg Applestein	BAHS Technology Integration/Teacher
Bob Bradford	RSU 20 Technology Director
Tracy Hayslip	K-5 Technology Integration
John McDonald	RSU 20 Curriculum Director
Alden Overlock	THMS 6-8 Technology Integration
Barb Rehmeyer	K-5 Technology Integration
Laurie Rule	SDM/HS 6-12 Technology Integration
Andrea Staples	BAHS LMS
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1. Community Involvement

Technology has economic, social, ethical, and aesthetic ramifications that depend on where and how it is used, as well as, on attitudes toward its use. Our students and staff rely on the use and the availability of technology in their everyday school and work lives. As technology advances accelerate, it is essential that our students and educators possess the knowledge and skills to make informed decisions maximizing the leveraging affect of technology to improve teaching and learning. The communities we serve stand to gain from the increased learning that results.

It is equally imperative that the communities RSU 20 serves understand their part in providing these technology tools. Linking our schools and communities through technology expands learning beyond the school walls and addresses the larger issues of community responsibility. Technology offers unique opportunities to improve communication with parent and community stakeholders. Parental and community involvement are systemically challenging issues at all levels of public education. RSU 20's technology and educational goals reflect this concern. As a newly created entity RSU 20 can benefit from the successes of the former districts and the appropriate expansion of worthy initiatives where viable. Technology tools make that collaboration possible and timely. Our technology plan also includes the following innovative approaches geared towards improving community involvement:

RSU 20 Website & First Class

A work in progress, continued expansion of the RSU 20 website is a vital information and communication source regarding consolidation news and progress towards RSU 20 goals. First Class, a content management and intranet communication tool previously implemented in the former MSAD 34, will be expanded throughout the RSU. Full implementation will provide all schools and educators with a consistent, coordinated internal communication tool and a web presence for communication with community, parents and students.

Communication & Increased Achievement Through One to One Laptops

Through the Maine Learning Technology Initiative (MLTI 1, 2 and 3) and local efforts Searsport District Middle/High School and Troy Howard Middle School provide one-to-one technology to all

students in grades 6-12 and 6-8 respectively. Traveling with the students at school and at home, this portable technology tool is totally integrated into teaching and learning. The benefits to student learning and student/parent/teacher communication about student learning are exponential. Parents now have the ability to monitor and view their student's work as never before. One to one also shows parents and the community what students do with the technology tools provided, and how important continuing to provide those tools has become to teaching and learning.

Increased Opportunity Through RSU 20 Adult Education
The community also benefits from access to district computers, networks and technical support through the Adult Education program. Several General Educational Development (GED) and literacy based courses are accessed through Plato, a course content provider tailored to each student's particular needs and available at the Belfast and Searsport Adult Education sites.

Contributing to Community Needs
RSU 20 continues to contribute to community needs in a variety of technologically enhanced ways. BAHS students film, edit and broadcast on the local cable channel a variety of school related productions including assemblies, concerts, plays and other school related events. SDHS Ethnography and Videography students interview, record and produce community history stories that are broadcast on the SDHS student run radio station. The radio station also provides an outlet for student produced public service announcements and other expressions of student audio work for a public audience. An SDHS GIS (Geographic Information System) course trains students to collect and analyze local GPS (Global Positioning System) data and provide custom maps for requested community needs.

RUS Grant **and Equipment**
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All RSU 20 schools are included in this grant which provides videoconferencing equipment, infrastructure and training by matching local RSU technology expenditures. The RSU communities benefit doubly by the match in local technology funding dollars and in the availability of new and better videoconferencing capabilities.

2. Vision

Learners, education and technology woven together as a single strand.

Curriculum, NETs, graduation standards, learner outcomes and the needs of our staff will drive our technology use. Integration of technology in the curriculum must emphasize training staff in the use of technology in their professional lives as a tool for planning, organizing, researching and educating students. As technology inevitably changes we aim to regularly plan and assess current practices to enable us to stay abreast of new developments as they evolve. Integrating technology into the curriculum will provide an optimal learning environment giving our students the skills necessary to function in today's and tomorrow's global society.

3. Goals

Goal A - RSU#20 provides technology to increase academic achievement and support the development of the 21st Century skills necessary for success in society.

Objective *A1 TSW develop 21st Century skills.*

Curriculum Focus	Staff Development Focus	Infrastructure Focus
A1.1 Review the Needs Assessment survey results, select, prioritize areas of focus (i.e., information literacy, robust research skills). Develop an implementation timeline .	A1.1 Assess the professional development implications, plan and provide appropriate training. Develop and coordinate an implementation timeline.	

Objective *A2 TSW efficiently use technology tools and digital/online resources to communicate, collaborate and meet their needs for research, publications, communications, and productivity.*

Curriculum Focus	Staff Development Focus	Infrastructure Focus
A2.1 Review and adopt the student NETS and create an implementation plan and timeline.	A2.1 Review and adopt the teacher and administrator NETS and create an implementation plan and timeline.	A2.1 Conduct peripherals needs assessment and provide the technology tools needed (i.e., digital cameras, LCD projectors, interactive white boards, etc.)
A2.2 Students will demonstrate basic keyboarding proficiency by the end of grade 5.	A2.2 Assess the professional development implications and provide appropriate training.	A2.2 Provide necessary software/equipment
A2.3 Students will demonstrate basic word processing proficiency by the end of grade 6.	A2.3 Assess the professional development implications and provide appropriate training.	A2.3 Provide necessary software/equipment
A2.4 Students will develop grade specific information literacy/communication skills to be taught as part of the library skills program.	A2.4 grade specific information literacy/communication skills instruction to be incorporated as part of the library skills program.	
A2.5 Provide appropriate communication and collaboration tools/access for students (i.e. FirstClass, ePals, etc.)	A2.5 Assess the professional development implications and provide appropriate training.	A2.5 Provide necessary accounts and software/equipment.
A2.6 Students will develop safe & appropriate digital communication skills, including online safety (i.e.,	A2.6 Develop curriculum/instruction teaching safe & appropriate communication skills,	A2.6.1 Provide appropriate communication and collaboration tools/access for students and staff (i.e.,

NetSmartz, etc.).	including online safety (i.e., NetSmartz). Provide appropriate general training for k-12 staff.	email accounts, network & public folders, Moodle tools, Google domain, etc.) A2.6.2 Develop a digital communication & retention policy.
A2.7 At appropriate grade levels students will access course content through online sources, i.e., Plato, course management systems, videoconferencing, etc.	A2.7 Assess the professional development implications and provide appropriate training	A2.7 As content management systems are brought on line provide appropriate tech support.
B2.1 Continue to train, utilize and expand the iTeam.		

Goal B - RSU#20 provides professional development that supports the RSU's learning goals and promotes effective use of technology.

Objective *B1 The teachers will share a common understanding and knowledge of 21st Century skills.*

Curriculum Focus	Staff Development Focus	Infrastructure Focus
B1.1 Review the needs assessment results, select, prioritize, develop a timeline and implement areas of focus (i.e., information literacy, robust research skills).	B1.1 Assess the professional development implications, plan and provide appropriate training.	

Objective *B2 The administrators will share a common understanding and knowledge of 21st Century skills.*

Curriculum Focus	Staff Development Focus	Infrastructure Focus
	B2.1 Assess the professional development implications, plan and provide appropriate training.	

Objective *B3 The teachers will use the best practices for applying technology to teaching and learning.*

Curriculum Focus	Staff Development Focus	Infrastructure Focus
B3.1 Continue to train, utilize and expand the iTeam.	B3.1 Collect, disseminate and provide training for research-based, best practice resources and models. B3.2 Conduct frequent needs assessments & schedule/provide fall, spring & summer training that focuses on developing common understanding & knowledge of 21st Century skills (A1, B1 & 2).	

	B3.3 Create an online knowledge base of resources, tutorials and technology information; subscribe to Atomic Learning for staff & students.	B3.3 Support, update & expand the RSU's web page; update/revise the current web publishing policy to include guidelines/procedures for teacher, student and school organization needs/requests.

Objective ***B4 The teachers will apply technology to facilitate a variety of effective assessment and evaluation strategies.***

Curriculum Focus	Staff Development Focus	Infrastructure Focus
	B4.1 Assess the professional development implications of assessments & evaluations (i. e., NWEAs, MEAs, PSATs, SATs, Abante, standards-based curriculum, etc.) and provide appropriate training for administrators & teachers.	B4.1 Support, install & update the technology aspects of the selected assessments.

Objective ***B5 Provide (K-5, 6-12) Technology Integration Specialists.***

Curriculum Focus	Staff Development Focus	Infrastructure Focus
B5.1 The TISs work with staff & students modeling best practice technology integration methods.	B5.1 The TISs provide training & staff development using teachers of teachers model, “just in time”, in classrooms, & after school.	

Goal C - RSU#20 provides the equipment, infrastructure and technical support necessary to support implementation of the RSU's goals.

Objective ***C1 Provide adequate/appropriate hardware and equipment.***

Curriculum Focus	Staff Development Focus	Infrastructure Focus
		C1.1 Develop and implement a plan providing the equipment needs for 1 to 1 laptops in grade 6-12 & desktops/other units K-12.

Objective ***C2 Provide adequate/appropriate software and timely upgrades.***

Curriculum Focus	Staff Development Focus	Infrastructure Focus
		C2.1 Develop and implement a plan for evaluating and selecting a

		common "desktop" to support; evaluate CO/administrative needs for consolidation where possible. C2.2 Evaluate needs, create plan, purchase necessary equipment/software & implement appropriate district back up & disaster recovery protocols. C2.3 Create & implement an online work request system. C2.4 Assess the current asset management systems & merge where possible.

Objective ***C3 Provide a robust network & wireless infrastructure K-12.***

Curriculum Focus	Staff Development Focus	Infrastructure Focus
		C3.1 Bring wireless connectivity equity among all K-5 schools. C3.2 Maintain and increase 6-12 broadband speed and ability to support curriculum needs.

Objective ***C4 Provide adequate personnel to maintain, grow, repair, & support the system.***

Curriculum Focus	Staff Development Focus	Infrastructure Focus
		C4.1 Establish & fund a ratio of tech support personnel to the numbers of units supported.

Goal D - RSU 20 provides technology to improve productivity, communication, data management, and administrative efficiencies that support the teaching and learning process.

Objective ***D1 Support use of district databases/software (i.e., Student Information System (SIS), fiscal, human resources, assessment management, etc.).***

Curriculum Focus	Staff Development Focus	Infrastructure Focus
	D2.1 Provide appropriate training to technology staff and all users in the software applications required for their work.	D2.1 Provide, support and maintain the hardware and infrastructure necessary for those applications and usage. D2.2 Provide training to technical staff for those applications and usage. D2.3 Provide training to technical staff to enhance timely, cost-effective repair

		and maintenance of necessary equipment.

4. Necessary Technology

(See Appendix for budget projections based upon the Draft Proposed Technology Budget as of 3/2010)

Newly consolidated in 2009, RSU 20 has spent 2009-10 acquainting the westside and eastside personnel and campuses, creating a joint vision and calibrating joint goals. As that process continues, the 2010-13 technology plan will be a "bridge plan" incorporating RSU 20's vision and goals as they are completed. During Year 1 (2010-11) we will develop and administer our first RSU 20 needs assessment tool. The information provided will determine technology-wise where "we" are as a consolidated entity and become the guide for bringing the two districts together. In Years 2 and 3 (2011-13) work will focus on identifying how technology will equitably and consistently support those goals RSU-wide, based upon RSU 20's teaching and learning goals and the needs assessment data analysis.

- 2010 - An in-house created needs assessment will provide a current technology snapshot and yield valuable data regarding our place as an RSU on the integration continuum. As part of this technology plan the data will be examined, focus areas identified and action plans implemented. Plans to retake the survey and measure progress are scheduled for April 2011 and April 2013.
- 2009-10 - Complete an extensive hardware survey for the newly formed RSU #20. Inventory will be completed and updated annually. Equipment and software identified in the plan will provide equity and parity objectives for infrastructure and hardware

5. Adult Literacy

Presently we offer many support services to Adult Literacy programs. Support comes in the following areas:

Increased Opportunities Through RSU 20 Adult Education
Computer technology is essential to the RSU 20 Adult and Community Education Program. The communities benefit from access to the school computer labs, networks, website hosting, technical support and email support of the RSU 20 Adult Education program. Data storage and retrieval for all local and federal grant reporting, including those required by the Adult Education program, are managed electronically in house. Internet connectivity is provided through MSLN (Maine School and Libraries Network) to the schools is available to adult learners via Adult Education courses.

General Educational Development (GED) and literacy based courses are accessed through Plato, a course content provider tailoring content to each student's particular needs and available at the Belfast and Searsport Adult Education sites. Using the computer labs, Adult Education instructors teach courses in keyboarding, basic computer applications, desktop publishing, multimedia presentations and digital photography.

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including the two at BAHS and SDHS. Over the last decade each district provided videoconferencing services out of the ATM rooms - students took courses not offered at their attending schools and community members received distant trainings virtually. Anticipating a need to replace these services MSAD 34 and 56 applied for a USDA distance learning grant in 2009. In December 2009 the Island Institute received one of eight Distance Learning and Telemedicine grants totaling $3.7 million. The nearly $500,000 award made to the Island Institute will be used to purchase and install telecommunications equipment that will connect 24 Maine-island and rural coastal schools, as well as two community resource sites, to a wealth of instructional opportunities worldwide. More than 75 teachers and 260 secondary and adult students will take full advantage of the inter-island virtual activities, co-teaching, curriculum-sharing and coordination, teacher support networks, and increased availability of professional-development and higher-education opportunities that this funding will provide.

All RSU 20 schools are included in this grant which provides videoconferencing equipment, infrastructure and training by matching local RSU technology expenditures. The RSU communities benefit doubly from the match in local technology funding dollars and in the availability of new and better videoconferencing capabilities. We anticipate the expansion for Adult Education programming outreach and services as this grant rolls out

6. Strategies for Improving

Redefining the Target: What Should Students Know?
One of the goals of Title II, Part D of the No Child Left Behind Act of 2001 (NCLB), is to ensure that ***every student be technologically literate by the end of eighth grade***. The State Educational Technology Directors Association (SETDA) represents the state directors for educational technology and each state's director has the final responsibility for ensuring that their state's students meet the goal of improving student achievement through technology. Since enactment of NCLB, SETDA has agreed on common language and definitions to assist states as they comply with the federal NCLB requirements and guidelines. RSU 20 has adopted this goal and definition.
SETDA's definition of technological literacy is the ability to responsibly use appropriate technology to communicate, solve problems, and access, manage, integrate, evaluate, and create information to improve learning in all subject areas and to acquire lifelong knowledge and skills in the 21st century.

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With that target in our sights over the next three years RSU 20 will adopt the ***NETS*** *(National Educational Technology Standards)* ***standards for*** students, teachers ***and*** administrators. Developed by ISTE (International Society for Technology in Education) and thousands of educators, the NETS standards define, describe and model ***"what K-12 students should know and be able to do to learn effectively and live productively in an increasingly digital world …".***

Professional Development: Identifying & Supporting Best Practice
The Maine Learning Technology Initiative (MLTI) one-to-one middle school experience has proven a successful model of technology integration. and one-to-one is being duplicated as financially possible in grades 6-12. In 2009-10 every K-12 educator was provided access to a technology integration specialist (TIS) to scaffold them as they integrate technology. As the data identifies practices and computer-based instruction proven to increase student achievement, supporting those practices with appropriate expansion and professional development is our goal. The former #56 developed the following criteria for all district provided professional development:

- Staff development will create a shared understanding and knowledge of 21st Century skills.
- Staff development will use the best teaching and learning practices for applying technology to maximize student learning.
- Staff development will apply technology to facilitate a variety of effective assessment and evaluation strategies.
- The Technology Integration Specialists (TISs) will deliver just-in-time, coordinated and collaborative staff development to all staff and students when appropriate.

In 2010-11, the now separately functioning MSAD 56 and MSAD 34 Professional Development Committees will be blended into one committee. That group will recalibrate the professional development goals and criteria for the RSU K-12. Data collected from our needs assessment will inform that work.

Currently three full time **Technology Integration Specialists** (one at SDM/HS 6-12 and two cover grades K-5) collaborate with teachers to support use of technology in delivery of curricula through a variety of instructional methods. Two teachers with part time **Technology Integration Specialist** duties assist at BAHS and THMS. In partnership, the Technology Integration Specialist and the teacher work toward integrating the use of hardware, software and online resources supporting student learning and assisting teachers in meeting learning objectives. The TISs identify, create and/or disseminate learning resources including Web sites, tutorials, interactive programs and databases that support teachers in integrating technology. Ideally, teachers will be guided and encouraged to locate, share and develop their own resources, while the Technology Integration Specialist scaffolds their efforts with additional support as needed.

Establishing a Baseline and Measuring Progress
Once the RSU 20 future search work is completed, the vision developed through that process will guide the development of an RSU 20 needs assessment to be administered in the fall/early winter of 2010. The assessment will provide a baseline for measuring progress from the school and district levels and will be re-administered in early 2012 and spring 2013. The formative assessment from each

set of results will provide guidance and direction for mid-course corrections.

Addressing Equity and Access
Prerequisites of effective technology integration are ubiquitous and reliable access to hardware and networks, adequate technology support and appropriate training. The consolidation necessitates a complete RSU 20 hardware and software inventory, as well as, an RSU 20 needs assessment to establish a current baseline of uses and needs. This data will provide the basis for developing RSU-wide goals and priorities over the next three years including minimum computer/laptop specifications and refresh rates, designating a common desktop/image, and equitable allocation of technology resources - including robust bandwidth and network capabilities - K-12. Using the RSU 20 goals administrators and teachers will analyze student data and identify the most effective computer-based interventions for their students.

RUS Distance Learning Grant **and Equipment**
In 2009 the state retired equipment and support for all ATM (Asynchronous Transfer Mode) sites, including the two at BAHS and SDHS. Over the last decade each district provided videoconferencing services out of the ATM rooms - students took courses not offered at their attending schools and community members received distant trainings virtually. Anticipating a need to replace these services MSAD 34 and 56 applied for a USDA distance learning grant in 2009. In December 2009 the Island Institute received one of eight Distance Learning and Telemedicine grants totaling $3.7 million. The nearly $500,000 award made to the Island Institute will be used to purchase and install telecommunications equipment that will connect 24 Maine-island and rural coastal schools, as well as two community resource sites, to a wealth of instructional opportunities worldwide. More than 75 teachers and 260 secondary and adult students will take full advantage of the inter-island virtual activities, co-teaching, curriculum-sharing and coordination, teacher support networks, and increased availability of professional-development and higher-education opportunities that this funding will provide.

7. Technology Integration

Professional Development
Staff training and development must always be a primary focus in our technology planning. Teachers not receiving adequate training and support for integrating technology into the core of day-to-day classroom instruction often use technology as a supplement rather than an integral part of their instruction. Time and effort is needed to integrate technology into the flow of lessons, and some teachers continue to treat computer activities as special events, rather than as central to the curriculum. Our emphasis in this plan is to increase the immersion of technology into routine instructional practices by providing the tools and opportunities for teachers to seamlessly integrate technology. While working with teachers to remove the barriers, both real and imaginary, we must train teachers to move beyond outdated designs of classroom management to new standards that encourage integration. True integration will take our most skilled and innovative teachers leading the way. Although our plan is ambitious we need to be patient and in some cases measure progress in years not weeks or semesters.

Included in our overall plan are teacher competencies (NETS – National Education Technology Standards) for technology. Our success will be greatly enhanced by the addition of TISs (technology integration specialists) to our tech team. Committing support to working "just in time" with individuals and small groups makes training more realistic and practical to the everyday experience of our staff.

Fine-tuning the equitable and appropriate use of the technology integration specialists RSU-wide will be essential to obtaining the desired professional development outcomes.

Basic computer skills will be taught to students at younger ages and computer-based learning will emphasize skills in literacy, numeracy, and problem solving. Our students and staff will learn to gather, organize and analyze information, communicate, work in collaborative teams - all necessary for a life of learning. Meeting the challenges of technology integration will help us create an atmosphere of flexibility and innovation. Our students and staff are being challenged by a rapidly changing society and we must be ready to adapt to their needs.

8. Technology Costs

This plan provides an adequate budget to acquire and support the non-discount elements of the plan: the hardware, software, professional development, and other services that will be needed to implement the strategy. The proposed technology budget supporting this 2010-13 RSU 20 Technology Plan is as follows:

	Year 1	Year 2	Year 3
	2010-11	2011-12	2012-13
Total/year	**$255,404.07**	**$257,958.11**	**$260,537.69**
Software/Application	$97,873.00	$98,851.73	$99,840.25
Leases	$474.00	$478.74	$483.53
Hardware	$102,035.00	$103,055.35	$104,085.90
Repairs/Maintenance	$24,700.00	$24,947.00	$25,196.47
Supplies	$30,322.07	$30,625.29	$30,931.54
		Year 1 +1%	*Year 1 +1%*

Based on Proposed Technology Budget as of 3/9/10

ERATE

Funded by telephone user fees this federal program provides states with funding, and schools and libraries with reimbursement monies based on their free and reduced lunch numbers. Qualifying services for reimbursement may include telephone service and eligible internal network infrastructure.

Local funding

Through the regular, annual budgetary process, RSU #20 provides a technology budget that supports data acquired in the technology needs assessments including personnel, software, hardware, and professional development for the technology team.

9. Supporting Resources

Online Resources and Computer-based learning

The chart linked identifies specific digital and online resources supporting teaching and learning, and where they are being used. The needs assessment will provide a more complete inventory.

Currently three full time **Technology Integration Specialists** (one at SDM/HS 6-12 and two cover

grades K-5) collaborate with teachers to support use of technology in delivery of curricula through a variety of instructional methods. Two teachers with part time **Technology Integration Specialist** duties assist at BAHS and THMS. In partnership, the Technology Integration Specialist and the teacher work toward integrating the use of hardware, software and Internet resources in support of student learning and assisting teachers in meeting technology-learning objectives. The TISs create learning resources for teachers, staff and students. These include Web sites, tutorials, interactive programs and databases that support teachers in integrating technology. Ideally, teachers will be guided and encouraged to develop their own resources, while the Technology Integration Specialist scaffolds their efforts by providing additional support as needed.

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10. Increased Accessibility

Addressing Equity and Access

Prerequisites of effective technology integration are ubiquitous and reliable access to hardware and networks, adequate technology support and appropriate training. The consolidation necessitates a complete RSU 20 hardware and software inventory, as well as, an RSU 20 needs assessment to establish a current baseline of uses and needs. This data will provide the basis for developing RSU-wide goals and priorities over the next three years including minimum computer/laptop specifications and refresh rates, designating a common desktop/image, and equitable allocation of technology resources - including robust bandwidth and network capabilities - K-12. A 2010 technology hardware and infrastructure inventory indicates several areas of need to address wireless access and network file storage in some buildings. Backbone upgrades to wiring and servers have been prioritized and summer work scheduled.

Using the RSU 20 goals administrators and teachers will analyze student data and identify the most effective computer-based interventions for their students. This work will also be coordinated with and complement the RSU's implementation of RTI (Response to Intervention).

Currently three full time **Technology Integration Specialists** (one at SDM/HS 6-12 and two cover grades K-5) collaborate with teachers to support use of technology in delivery of curricula through a variety of instructional methods. Two teachers with part time Technology Integration Specialist duties assist at BAHS and THMS. In partnership, the Technology Integration Specialist and the teacher work toward integrating the use of hardware, software and Internet resources in support of student learning and assisting teachers in meeting technology-learning objectives. The TISs create learning resources for teachers, staff and students. These include Web sites, tutorials, interactive programs and databases that support teachers in integrating technology. Ideally, teachers will be guided and encouraged to develop their own resources, while the Technology Integration Specialist scaffolds their efforts by providing additional support as needed.

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Training Resources
Atomic Learning provides web-based software training for applications our students and educators use everyday. The short, easy-to-view-and-understand tutorials are an integral part of our professional development program, a valuable curriculum supplement, and an anytime/anywhere training resource for RSU 20 staff and students.

11. Curricula & Strategies that Integrate Technology

Expansion of technology in all areas is ongoing. Methods of integration are reviewed and researched by technology staff, the TISs, individual teachers and teams. Testing, demonstration and evaluation of any recommended curricula or strategy follows discussion, piloting, more discussion and, if positive results are seen, implementation. We recommend adoption of the ISTE standards, the NET-S and NET-T standards and 21st Century Skills. RSU 20 will seek to promote the integration of technology in all curriculum areas using the following three approaches:

Providing close technology integration support
Currently two Technology Integration Specialists (one full time and two part time grades 6-12 and two full time grades K-5) collaborate with teachers to support their use of technology in delivery of curricula through a variety of instructional methods. In partnership, the Technology Integration Specialist and the teacher work toward integrating the use of hardware, software and Internet resources in support of student learning and assisting teachers in meeting technology-learning objectives. The TISs create learning resources for teachers, staff and students. These include Web sites, tutorials, interactive programs and databases that support teachers in integrating technology. Ideally, teachers will be guided and encouraged to develop their own resources, while the Technology Integration Specialist scaffolds their efforts by providing additional support as needed.

Identification of "best practices" by classroom teachers
Principals, departments, peers, and the TISs will all define ways to encourage and recognize teachers who develop new ways to integrate technology. Those teachers who take a lead, and demonstrate innovative approaches will be recognized so that their innovations can be expanded to other classes and lead to further refinement and advances.

Established selection criteria
Decisions about technology selection and use will be based on student-centered criteria. District decisions about technology must support these uses of technology to increase student achievement. The following highlight practices and conditions established by the State which the RSU will support:

- Technology is used and continuously evaluated by a broad base of stakeholders in a variety of ways for program assessment and improvement
- Learning styles, needs of students and technologies have created diverse strategies in curriculum content and pacing
- Student exchange through the network is occurring continuously and is a natural part of the learning process
- Technology is fully implemented in the collection and analysis of data, student assessment and local implementation of the Learning Results
- Software to support aligned curriculum, instruction and assessment connected to the Learning Results is developed and shared throughout the district
- The hardware, facilities, network and software necessary to support Learning Results implementation for all students is in continual daily use.
- Time is provided to support professional development activities that encourage creativity, application and synthesis
- The district's vision is the basis for all decision making

- District inventories of people, programs and resources are used to find creative ways to make connections and to maximize technology to support student learning
- Training and technical support services come from within the district and the community
- The uses of staff time and local resources change continuously in response to changing student learning needs
- The district provides comprehensive support for facilities, hardware and their use by staff and community

12. Professional Development

Identifying & Supporting Best Practice
We will provide ongoing and sustained professional development through the development of the RSU 20 professional development committees. The RSU 20 Technology Committee will survey the entire staff about their technology needs and improvements and make recommendations to the building principals and professional development committees. Staff development opportunities are offered in a differentiated manner in order to meet the staff at their skill level and move them along the learning continuum. Staff are encouraged to include technology integration as a component of their Professional Learning Plan (PLP). The areas of focus will be:

1. Creating a shared understanding and knowledge of 21st Century Skills
2. Identifying and utilizing the best teaching and learning practices with technology to maximize student learning
3. Applying technology to facilitate effective, data driven assessment and evaluation strategies

The Maine Learning Technology Initiative (MLTI) one-to-one middle school experience has proven a successful model of technology integration and one-to-one is being duplicated as possible in grades 6-12. In 2009-10 every K-12 educator was provided access to a technology integration specialist (TIS) to support them with technology integration. As instructional practices proven to increase student achievement are identified, supporting those practices with appropriate professional development is our goal. The former #56 developed the following criteria for all district provided professional development:

- Staff development will create a shared understanding and knowledge of 21st Century skills.
- Staff development will use the best teaching and learning practices for applying technology to maximize student learning.
- Staff development will apply technology to facilitate a variety of effective assessment and evaluation strategies.
- The Technology Integration Specialists (TISs) will deliver just-in-time, coordinated and collaborative staff development to all staff and students when appropriate.

In 2010-11, the now separately functioning **MSAD 56 and MSAD 34 Professional Development Committees** will be blended into one committee. That group will recalibrate the professional development goals and criteria for the RSU K-12. Data collected from our needs assessment will inform that work.

Currently three full time **Technology Integration Specialists** (one at SDM/HS 6-12 and two cover grades K-5) collaborate with teachers to support use of technology in delivery of curricula through a

variety of instructional methods. Two teachers with part time **Technology Integration Specialist** duties assist at BAHS and THMS. In partnership, the Technology Integration Specialist and the teacher work toward integrating the use of hardware, software and Internet resources in support of student learning and assisting teachers in meeting technology-learning objectives. The TISs create learning resources for teachers, staff and students. These include Web sites, tutorials, interactive programs and databases that support teachers in integrating technology. Ideally, teachers will be guided and encouraged to develop their own resources, while the Technology Integration Specialist scaffolds their efforts by providing additional support as needed.

RUS Distance Learning Grant **and Equipment**
In 2009 the state retired equipment and support for all ATM (Asynchronous Transfer Mode) sites, including the two at BAHS and SDHS. Over the last decade each district provided videoconferencing services out of the ATM rooms - students took courses not offered at their attending schools and community members received distant trainings virtually. Anticipating a need to replace these services MSAD 34 and 56 applied for a USDA distance learning grant in 2009. In December 2009 the Island Institute received one of eight Distance Learning and Telemedicine grants totaling $3.7 million. The nearly $500,000 award made to the Island Institute will be used to purchase and install telecommunications equipment that will connect 24 Maine-island and rural coastal schools, as well as two community resource sites, to a wealth of instructional opportunities worldwide. More than 75 teachers and 260 secondary and adult students will take full advantage of the inter-island virtual activities, co-teaching, curriculum-sharing and coordination, teacher support networks, and increased availability of professional-development and higher-education opportunities that this funding will provide.

Subscription-based Atomic Learning provides **web-based software training** and **curriculum resources** for dozens of applications RSU 20 students and educators use every day. The just-in-time approach focuses on answering the common questions people have when learning a new software application. Atomic Learning provides thousands of **short, easy-to-understand tutorial movies** and a **library of curriculum resources** that can be used as an integral part of our professional development program, a valuable curriculum supplement, and an anytime/anywhere software training resource.

Seeking outside resources
RSU 20 will continue to explore and utilize low cost, outside resources, including Atomic Learning, Web 2.0, the RUS grant equipment/training, MLTI training and others.

13. Innovative Delivery Strategies

Exploring innovative delivery strategies has always been a cost effective measure to overcome rural isolation and utilize to their maximum the resources provided. Our communities' commitment to funding technology and ensuring its effective use enables our students to "connect" in many ways and at many levels. See a chart showing where on

One-to-One
The Maine Learning Technology Initiative (MLTI) and a local expansion provides one-to-one technology to all SDM/HS students in grades 6-12 and all THMS students in grades 6-8. Traveling with the students at school and at home, this wireless technology tool has become totally integrated.

The benefits to student learning have been exponential. All one-to-one students have wireless access to vast learning resources--encyclopedias, dictionaries, libraries, research, experts--when ever and where ever they need it. Currently providing one-to-one devices for all grades 6-12 overreaches our financial capabilities although it remains our desire model and goal. **Expanding access through refreshing equipment, increasing numbers of carts and keeping computer labs current** will suffice for now.

Online Resources and Computer-based learning
The chart blinked identifies specific digital and online resources supporting teaching and learning, and where they are being used. The needs assessment will provide a more complete inventory. (See Appendix for complete list of online resources and computer-based applications/assessments used by school)

Videoconferencing Equipment and Training - ACTEM **(Association of Computer Technology Educators of Maine) Awarded $997,000 in RUS Grants**
In October 2009, Agriculture Secretary Tom Vilsack announced that 111 projects in 35 states have been selected to receive more than $34.9 million in grants that will increase educational opportunities and access to health care services in rural areas. The funding will be provided through USDA Rural Development's Distance Learning and Telemedicine Program. Maine again led the nation in both award money (almost $3.8 million) and number of grants (8). ACTEM received two grants in the 2009 cycle, one of which was highlighted in a USDA press release: "The Association of Computer Technology Educators of Maine, was selected to receive a $498,222 grant to purchase video conferencing equipment to link 22 schools in an eight-county area with four designated hub sites – including a library and a university," the release noted.

Also awarded grants were MSAD 64 (Corinth), Region 2 (Houlton) School of Applied Technology, **the** Island Institute **(RSU 20)**, Caribou School Dept., and Gorham School Dept. The USDA Bangor office is planning a brief recognition ceremony for grant winners during the regularly scheduled ACTEM meeting on December 14 at the Augusta Cross Office Building.

The focus of the new grants is to provide endpoints to districts that do not have them. Many schools were impacted with the suspension of ATM coverage in June of 2009. Hopefully 163 sites will be added through the grant. In every grant additional licenses were put in to anticipate increased demand, especially with the pending release of the Mac MOVI client in 2010.

Training is a key component to the ACTEM grants, and the concept of regional trainings is being considered. Mona Baker of the Western Maine Educational Collaborative has approached UMF proposing a 3-hour graduate course delivered by distance learning specialist Lance Ford. CBE will be sponsoring a series of 1hr informal technical workshops in the months of January and February 2010. LIVE-C continues to hold monthly trainings focused on integrating video conferencing into the classroom. A complete schedule is available at www.livec.org.

Student-Created Content Trainings have been established to assist teachers in instructing their students on how to deliver their own Virtual Fieldtrips. The training package includes the training program for 2 teachers, a Virtual Field-trip through CILC.org as well as entrance into a Student Created Content Contest.

14. Accountability Measures

The only real measure of the effectiveness of technologies and technology-enhanced educational programs is the extent to which they promote, increase and support students' engaged learning and collaboration. Evaluation of progress will be based on the extent to which the plan supports these practices:

- effectively integrates technology into curriculum and instruction,
- increases the ability of teachers to teach effectively, and
- enables students to meet the standards in Maine's Learning Results.

Newly consolidated in 2009, RSU 20 has spent 2009-10 acquainting the westside and eastside personnel and campuses, creating a joint vision and calibrating joint goals. As that process continues, the 2010-13 technology plan will be a "bridge plan" incorporating RSU 20's vision and goals as they are completed. During Year 1 (2010-11) we will develop and administer our first RSU 20 needs assessment tool. The information provided will determine technology-wise where "we" are as a consolidated entity and become the guide for bringing the two districts together. In Years 2 and 3 (2011-13) work will focus on identifying how technology will equitably and consistently support those goals RSU-wide, based upon RSU 20's teaching and learning goals and the needs assessment data analysis. The needs assessment will be re-administered in spring 2013 and progress determined. Data will inform creation of the next three year technology plan.