

**NORTH SHORE REGIONAL VOCATIONAL SCHOOL DISTRICT
LONG RANGE TECHNOLOGY PLAN (2007 – 2011)
JUNE 2007**

The Role of Technology

Educators in the North Shore Regional Vocational School District (NSRVSD) must face the challenge of preparing students to lead productive lives in this 21st Century. Confronting these challenges means dealing with some very fundamental societal conditions. Children are graduating from high school into a society where technology expands and redefines how they live, learn, work, and play. Communities where homes, businesses, schools and libraries are all interconnected are commonplace. Citizens are active participants in the democratic process using the Internet; fax machines, and cellular telephones. Access to the various communication media is creating a more global lifestyle. Solutions to 21st Century problems must be bold and innovative.

In this context, the integration of technology is essential for the success of all students and the school system as a whole. The integration of technology into the instructional process has potential to significantly improve teaching and learning and is essential in order to bring schools and students to the level required for success in an information oriented society. Technology has changed the ways in which we communicate and access information, and it is essential that the school and community maximize these opportunities. In addition to the curriculum integration of technology, the integration of technology into the administrative and organizational functions of our schools is critical to creating effective and efficient management systems. In order to take full advantage of these technologies throughout the school, appropriate levels of support in the form of equipment, software, training, and technical personnel are necessary ingredients.

Our Vision

It is our vision that the North Shore Regional Vocational School District creates the technological integration of home, school, community, and world, enabling each student to reach his or her full potential as a worker and citizen. The North Shore Regional Vocational School District is becoming a technology-rich environment for students and teachers at all grade-levels and within and across all disciplines. We are an educational community dedicated to students' using technology to become active participants in a global society - as lifelong learners, as productive workers, and as responsible citizens – and to help schools meet the challenges of the future.

Our Philosophy of Technology in Education

Computer technology represents a powerful tool that can greatly enhance the teaching and learning process. The use of this tool must be tightly integrated with curricula, i.e. technology should not be taught as a separate subject area. The focus should be on the learning process and not the tool. Professional development for teachers is absolutely essential for successful technology integration. This must be on-going and “embedded” within the school day as much as possible. Teachers make tremendous gains in the use of technology when training relates directly to their classroom needs and includes follow up and support.

The purchase of hardware, software and infrastructure must occur in conjunction with quality professional development and a concerted effort to integrate technology with curricula. We do not want to place hardware in classrooms where the curricula does not support the use of technology nor do we want to train teachers and develop curricula without providing the tools for implementation. We also want to make hardware purchases that equal our capacity to provide technical support, another critical element to successful technology integration. We must always be forward thinking when planning for these purchases and make every effort to be cost effective. In summary our strategy/philosophy is to emphasize Curriculum Integration along with Technology Professional Development that is supported with a high quality/cost effective infrastructure of technical support, hardware and software.

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2007 Technology Goals

Our district goals for technology over the next three years have evolved from our vision for North Shore Technical High School (NSTHS) and our philosophy of technology in education. At NSRVSD we service one school, NSTHS. These goals fall within the context of six major categories identified by the Massachusetts Department of Education (MA DOE) which are shaped by major goal statements as shown in the table below.

Category	Major Goal
1. Vision and Mission Statement	To have a clear set of technology goals that are funded and evaluated on a yearly basis.
2. Technology Integration	To continue to integrate the use of technology into all aspects of curriculum, instruction and administrations so that its use extends opportunities and potential for all students and staff.
3. Technology Professional Development	To continue to provide quality technology professional development to all teaching staff for effective use of technology to improve student learning.
4. Accessibility of Technology	To provide students and staff with access to technology ongoing technical support with a high level of service.
5. Infrastructure for Connectivity	To provide a communications network that will connect all classrooms, schools, offices, public libraries, state, national, and international networks, and the community.
6. Access to the Internet Outside the School Day	To insure that students and parents have access to on-line educational information and resources outside of the school day.

Priorities for the 2007-2008 School Year

NSRVSD technology priorities for the next three years will adhere to our goals and philosophy. A summary of our 2007-2008 priorities is as follows:

- Support technology integration with curriculum in both academic and vocational classrooms.
- Gather data on the use of technology in order to prioritize needs and strengthen technology professional development.
- Purchase hardware and software to maintain benchmark student-computer ratios.
- Devise and implement strategies for improving technical support capability.
- Continue the use of EZ-Post for on-line posting of class announcements and assignments.
- Continue to provide network folders for school wide access to saved work.
- Maintain NSRVSD E-Mail addresses for all faculty and staff
- Update our student information database in iPass.
- Provide the proper technology training to faculty and staff in using the new student information database.
- Maintain a technology committee.

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Priorities for the 2008-2009 School Year

NSRVSD technology priorities for the next three years will adhere to our goals and philosophy. A summary of our 2008-2009 priorities is as follows:

- Support technology integration with curriculum in both academic and vocational classrooms.
- Gather data on the use of technology in order to prioritize needs and strengthen technology professional development.
- Purchase hardware and software to maintain benchmark student-computer ratios.
- Devise and implement strategies for improving technical support capability by implementing on-line "Help Desk" software.
- Continue the use of EZ-Post for on-line posting of class announcements and assignments.
- Continue to provide network folders for school wide access to saved work.
- Maintain NSRVSD E-Mail addresses for all faculty and staff
- Update our student information database in iPass.
- Provide the proper technology training to faculty and staff in using the new student information database.
- Utilize Plato Software to improve MCAS scores and student performance in Math and English.
- Maintain a technology committee.

Goals, Benchmark Objectives & Strategies Summary

The Massachusetts Department of Education has defined some benchmarks that all districts should strive to meet during the next 3 years. These benchmarks are the basis for the goals and objectives outlined in the district's Technology Plan.

Benchmark 1 Vision and Mission Statement: A commitment to a clear vision and implementation strategy. To have a clear set of technology goals that are funded and evaluated on a yearly basis.

Benchmark 1 Objectives:

- A. The district commits to a technology plan that is realistic and has clearly stated goals and strategies that align with the district improvement plan. It is committed to achieving its vision by 2010-2011 school year.
- B. The district has a technology team with representatives from a variety of stakeholder groups.

Summary of Strategies

- 1. A Technology Committee has been established, meetings are held bi-weekly to review pertinent technology issues and implementation status of the Technology Plan. The plan is updated at a minimum yearly.
- C. The district assesses the technology products and services that will be needed to improve teaching and learning during the budgeting process. Include yearly funding for technology in the operational budget. Leverage the use of state, federal, and private resources.

Summary of Strategies

- 1. Investigate and pursue alternative sources for technology funding.
- 2. Present technology plan to parent organizations as a potential source of funding.
- 3. Continue to pursue "high need" districts as partners for DOE competitive grant proposals.
- 4. Research the state technology surplus list on a regular basis.
- 5. Pursue grants that provide funding for hardware, software and professional development.
- 7. Evaluate progress with the goals set in this plan each year and make adjustments as needed and assess technology products and services as needed.

Summary of Strategies

- 1. Technology meeting agendas include an update and evaluation of progress with the benchmark objectives in this plan. Revisions should be made on a yearly basis.

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2. Attend at least one technology conference per year.
3. Subscribe and read high quality technology publications, e.g. ISTE magazine.

- D. The district has a CIPA-compliant Acceptable Use Policy (AUP) for Internet and Network use. The policy is updated to ensure safe and ethical use of resources by staff, faculty and students.
- E. A Technology budget is developed by the Technology Coordinator and the Instructional Technology Specialist. This budget includes funding for staffing, infrastructure, hardware, software, professional development, technology support, contracted services and services that are non-discounted through the e-rate reimbursement program.
- F. The district continually evaluates the effectiveness of technology resources toward the attainment of educational goals through the use of the TSAT, TTUS and real-time evaluation processes. Corrections and adjustments are made as needed.

Benchmark 2 Technology Integration and Literacy: To integrate the use of technology into all aspects of curriculum, instruction and administration so that its use extends opportunities and potential for all students and staff.

Benchmark 2 Objectives:

A. Technology Integration

1. Outside teaching time: At least 85% of teachers will use technology everyday including some of the following areas: research, lesson planning, multimedia, simulations, data interpretation, communications, and collaboration. Teachers share information about technology uses with their colleagues. Presently our 76% of our teachers are at this goal.
2. Teaching and Learning: Our goal is to have at least 85% of the teachers using technology appropriately with student's everyday to improve student learning of the curriculum. Activities include research, multi-media, simulations, data interpretation, communication and collaboration. Presently, at least 63% of our faculty use technology in the classroom with students on a weekly basis.

Summary of Strategies

1. Continue to survey all faculty/staff using TSAT and TTUS to assess their skills using technology to help determine training needs.
2. Explore possibility of offering technology courses for college credit.
3. Integrate Technology" specific training into Professional Development Days.
4. Support classroom technology integration using the Instructional Technology Specialists and Technology Coordinator.
5. Support classroom technology integration via Library Media Specialists.
6. Utilize Assistive Technology equipment in a way that it becomes universal design so all students can access the curriculum.

B. Technology Literacy.

1. At least 85% of students entering our high school will show proficiency in all Massachusetts Technology Standards by the end of the 9th grade.

Summary of Strategies

1. All freshmen participate in a technology integration program in the science classroom for implementation of technology standards within that curriculum.
2. All incoming freshmen are assessed to determine the level of training required.
3. Align technology performance indicators for 9-12

2. Currently 33% of teachers are at the proficiency level in technology, as defined by tools such as the Massachusetts Technology Self-Assessment Tool (TSAT) and the TTUS which is based on the National Educational Technology Standards (NETS). Our goal is to have at least 60 % of the teachers at the proficiency level by the 2010-2011 school year.

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Summary of Strategies

1. Administer TSAT and TTUS for faculty/staff annually to determine skill level and development goals/objectives and training as required.
2. Report results to Leadership Team and incorporate into professional development planning.

C. Staffing:

1. The district has a Technology Coordinator.
2. The district also provides a full-time dedicated instructional technology specialist per 30-60 instructional staff.
3. In addition, the district has dedicated staff for data management and assessment.

Summary of Strategies

1. Utilize IST instructors and students to support computer workstation repair and application support via a "Help Desk" supported 100% of the school day.
2. Utilize the Instructional Technology Specialist to support Technology Integration with faculty and staff.
3. Utilize Technology Coordinator to perform Technology Director associated duties along with Data Base management.

<p>Benchmark 3 Technology Professional Development: To provide quality technology professional development to all teaching staff for effective use of technology to improve student learning.</p>
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Benchmark Objectives:

- A. At the end of the three years, at least 85% of district staff will have participated in 45 hours technology professional development covering technology skills and the integration of technology into instruction.

Summary of Strategies

1. Gather building and district level data on teacher technology professional development needs yearly.
2. Provide EZ-Post training, Assistive Technology Tools training, MassONE, iPass and specific Technology Curriculum training utilizing the Full Time Instructional Technology Specialist and Technology Coordinator. Provide follow-up training and support as required.
3. Continue in-class coaching in technology Integration.
4. Provide MassONE training as required for faculty.

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

Summary of Strategies

1. Explore free on-line courses and tools as a way to offer professional development to faculty/staff.
2. Instructional Technology Specialist, Library Media Specialist and Technology Coordinator continue to provide in-class support for classroom technology integration.

- C. Professional development planning includes an assessment of teacher's needs, using tools such as the Massachusetts Technology Self-Assessment Tool (TSAT) and the TTUS tool, available on the Department's web site and on MassONE.

Summary of Strategies

1. TSAT and TTUS will be administered on an annual basis to determine faculty skill level and to determine training needs.

- D. Administrators and teachers consider their own needs for technology professional development planning using tools such as the Massachusetts Technology Self-Assessment Tool (TSAT), available on the Department's web site and on MassONE.

Summary of Strategies

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1. The 25% Technology Professional Development expenditures goal will be administered as a function of funds available from approved state and federal grants.
2. TSAT will be administered as required.

Benchmark 4 Accessibility of Technology: To provide students and staff with access to technology and ongoing technical support with a high level of service.

Benchmark 4 Objectives:

A. Hardware Access

1. The goal is to have a 1-1 high capacity, Internet connected computer ratio by the school year 2010-2011 pending financial feasibility with a replacement cycle established for 5 years or less.
Summary of Strategies
 1. NSRVSD currently meets this goal with 2.57 students per high capacity computer; the plan is to maintain this ratio as budget constraints allow.
 2. Provide students with access to handheld electronics (e.g., PDA's, graphing calculators, Alpha Smarts).
Summary of Strategies
 1. Instructional Technology Specialists to determine universal needs and application in the learning environment for PDA's.
 2. 60 Alpha Smarts are in use at NSRVSD; our strategy is to maintain the use of this device.
 3. The district will maximize the general education curriculum for all students including students with disabilities using technology in classrooms with universal design principles and assistive technology devices.
 4. The district will maintain procurement policies for information and instructional technologies that ensure usability, equivalent access, and interoperability.
 5. The district will provide classroom access to devices such as digital projectors and electronic whiteboards.
 6. The district has established a computer replacement cycle of five years or less.

B. Internet Access

1. All classrooms are 100% connected to the Internet.
2. All rooms connected to Internet via LAN/WAN with significant wireless connectivity with sufficient bandwidth for effective student access. Minimum 10/100 mb Cat 5 switched network. Servers for providing secure storage, backups, schedule, e-mail, web. Students, teachers and parents have easy access to educational resources from home and school (e.g., EZ Post and MassONE).

Summary of Strategies

1. NSRVSD classroom are 100% connected to the Internet using Cat 5 with a fully switched environment providing full band width to all workstations.
2. Servers provide secure storage, backups are performed daily.
3. EZ-Post is available for students and parents to access homework assignments.
4. All staff and faculty have school e-mail accounts to facilitate communication with parents.

C. Networking, LAN/WAN

1. The district provides a 100 mb Cat 5 switched network with wireless connectivity with three access points providing wireless connectivity meeting the 802.11b/g/n specifications.
2. Through a contracted service we provide web hosting and email accounts. We provide locally file sharing, secure storage and backups for faculty and students.

D. Access to the Internet outside the school day.

1. The district provides access to the Internet via library resources before and after school. Parents

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- are provided training and technology support via PAC meetings held bi-annually.
2. The district website provides an up to date list of places where students and staff can access the Internet after school hours.

E. Staffing

1. Provide a dedicated network administrator.

Summary of Strategies

1. Utilize our Technology Coordinator to perform Network Administration duties.
 2. Utilize an outside consulting firm to provide expertise in reviewing the status of our network and update as required.
2. The district will provide timely access in order to strive to make in-classroom technical support available with clear information on how to access support so that technical problems will not cause major disruptions to curriculum delivery.
3. The district provides at least one FTE person to support 200 computers. Technical support can be provided by dedicated staff or contracted services.

Summary of Strategies

1. NSRVSD is currently at 494.3 computers serviced by 1 FTE Technical Support personnel. Budget constraints make it virtually impossible to meet this goal. Our plan is to continue to use IST students to resolve support issues as they arise.
2. Ensure quality of existing systems through a preventive maintenance program that is on-going and specific computer lab maintenance is performed during down times such as vacations.
3. Provide training to teachers in antivirus, security, and operating system maintenance issues.
4. Review the procedures for requesting technical support with Leadership Team on a yearly basis and communicate such procedure to faculty and staff.
5. Develop a system for acknowledging technical support requests and reporting the status of requests as they are met or partially met.

Benchmark 5 E-Learning and Communications
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Benchmark 5 Objectives:

- A. Encourage the development and use of innovative strategies for delivering specialized courses through the use of technology.

Summary of Strategies

1. Evaluate on-line courses that are available for free or at low cost.

- B. Develop connections for access to web-based and/or interactive IP-based video learning on the local, state, regional, national, and international level.

Summary of Strategies

1. Utilize video learning subscription that we purchased from Unitedstreaming by Discovery School.

- C. Develop classroom applications of e-learning to include courses, cultural projects, and virtual field trips.

Summary of Strategies

1. Pursue virtual field trip type learning with interested teachers this year.

- D. Maintain an up-to-date web site that includes information for parents including a list of places where students and staff can access the internet after school hours. Work with community groups to ensure that students and staff have sufficient access to the Internet outside of the school day.

Summary of Strategies

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1. NSRVSD has a complete web site maintained daily by the Instructional Technology Specialists. The URL is www.nsths.mec.edu.
- E. The district complies with federal and state law and local policies for archiving electronic communications produced by its staff and students. The district informs staff and students that any information distributed over the district or school network may be a public record.

Summary of Strategies

1. All staff and faculty members of NSRVSD have an e-mail account that is maintained by our ISP, Mecnet. E-mail account management is maintained by the Technology Coordinator.