Comprehensive Plan for Technology

Approved by the Scarborough School Board
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Scarborough School District

2010-2013
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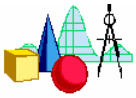
SCARBOROUGH SCHOOLS
INTEGRATED TECHNOLOGY MODEL

Technology at the point of learning for learning will result in rigorous and relevant learning through:

Spaces for collaborative student work



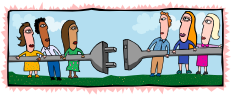
Interactive models and simulations

Community interaction and involvement

Remote learning experiences

Spaces for creative and innovative student work

Access to global learning opportunities



Internal and external communication

Interaction with parents

Easy access to data with search capability

Secure access to student information

Online, shared curriculum resources

Collaborative online meetings

Changing the way we learn via instant access to necessary and useful information, capabilities, best practices, resources, and teaching/learning tools.

Comprehensive ***on-line teaching and learning resources*** that provide the framework for teachers and administration to access the widest possible range of information and management tools to allow Scarborough students to experience a rigorous *learning environment*: providing relevant, challenging, and engaging opportunities to achieve 21st Century Skills.

Integrated technology and information resources allow the Scarborough School System to make the best possible use of all available resources, minimize the acquisition of costly materials, and allow our staff to provide more effective pathways for student learning to take place any time, any place, and at any pace.

Comprehensive Plan for Technology
Scarborough School Department
2010-2013

1. Community and Parental Involvement

The district has a District-wide Technology Committee comprised of at least three community members, teachers, the Director of Curriculum and Assessment, an IT department representative, and the System-wide Information Specialist (a position combining Technology Integrator, Data Manager, and District Library/Information Specialist).

Since our first Comprehensive Plan for Technology in 1996, we have surveyed community and staff regarding technology for their involvement. Parents have been involved with our district and building level technology committees. Parents and community will be surveyed again in the fall of 2010.

The district maintains a district web site as well as school sites to promote involvement and increase communication. The school district site is periodically reviewed and reformatted to be more useful to the parents and community.

The district has invested in PowerSchool, not only a powerful student information software application, but a web-based communication application where parents can access student progress reports, grade, attendance, etc. In addition, the district utilizes Moodle where teachers have developed sites for parent use.

2. Vision

Vision for Technology throughout Scarborough Schools and Beyond

'Technology at and for the Point of Learning'

Incorporation of *technology at and for the point of learning* will allow students to acquire academic skills and knowledge, to develop the ability to relate those skills and knowledge to applications in life, and to develop the innovation, creativity, communication, research, and analysis (21st Century) skills necessary to be successful in a changing, global society.

Appropriate technology shall be utilized throughout the school system and beyond to enhance the teaching/learning process.

The Scarborough Schools recognize the need to:

- Be increasingly responsive to individual developmental needs,
- Respond to society's demand for excellence in education, and
- Make use of the global educational opportunities presented by technology.

To create this environment, Scarborough schools will provide the following:

- Access to and effective use of appropriate technology at and for the point of learning

- Wide range of opportunities for developing student and staff proficiency in 21st Century Skills
- Access to and effective use of a range of external and internal communication, collaboration, and information management capabilities
- Continuous and appropriate professional training with a sufficient support staff structure
- Ongoing funding structure for keeping current, updating, and expanding capabilities

Scarborough is committed to an ongoing system-wide process designed to make cost-effective use of a broad array of technologies in line with this vision.

3. Goals

Goal #1: Effective and efficient use of appropriate technology to enable students to demonstrate 21st Century Skills.

Objectives:
1A. Provide applications through technology that will augment or enhance the pedagogy thus enhancing the learning process (in alignment with the district's focus on 'best practices' and 'methods that matter')
1B. Embed the National Educational Technology Standards of the International Society for Technology in Education and the AASL Information Literacy Standards into all curricula so students will demonstrate 21st Century Skills
1C. Incorporate the National Educational Technology Standards of the International Society for Technology in Education and the AASL Information Literacy Standards for Administrators and Teachers in professional development planning and evaluation processes
1D. Provide personnel with the support necessary to access, develop and implement 21st Century learning experiences for students such as those that promote collaboration, creativity, innovation, and digital citizenship

Implications/Resources/Organizational Support:
Allocate funding for:
- Equipment
- Software
- Personnel
- Time for training, planning
- Facilities

Goal #2: Access to and effective use of comprehensive, interconnected instructional resources.

Objectives:
2A. Provide full range of quality instructional resources linked to curriculum objectives such as experts, online conferencing, project collaboration, creative/collaborative spaces, and primary source information, etc.

2B. Develop and maintain professional resources such as access to data bases, online professional development opportunities, examples of 'best practices', and samples of student work, etc.
2C. Provide personnel with technical expertise to develop and manage the instructional resources and the student information system

Implications/Resources/Organizational Support:
Allocate funding for:

- Equipment
- Software
- Personnel
- Time for training, planning

Goal #3: Provide, manage, and leverage comprehensive internal and external data and analytics for decision making.

Objectives:
3A. Provide easy-to-use, on-line student information such as personal and academic information including: grades, schedules, attendance, etc. consistent with policy and regulations regarding security and privacy
3B. Provide time and training for staff to access and analyze online reporting of student performance data consistent with policy and regulations regarding security and privacy.
3C. Provide on-line reporting (academics, activities, events) consistent with policy and regulations regarding security and privacy
3D. Use data to make curriculum, management, and budgetary decisions and to address mandated requirements for tracking student performance
3E. Develop and maintain protocol for information/data entry, retrieval, validation, consolidation, retention, and security
3F. Purchase and update applications that are interconnected, share common data (talk to each other: ODBC)

Implications/Resources/Organizational Support:
Allocate funding for:

- Equipment
- Software
- Personnel
- Time for training

Goal #4: Provide infrastructure and organizational support to ensure effective use of technology.

Objectives:
4A. Maintain sufficient and appropriate infrastructure for the use of technology to meet needs of all students and personnel
4B. Provide town, district, school and classroom support systems (including planning, policy, leadership, training, and resources)

4C. Build the time and the expertise (staffing) for all personnel to engage in necessary training by providing a 'just in time, just enough' delivery of opportunities
4D. Build leadership that embraces and models the National Educational Technology Standards (of the International Society for Technology in Education) for Administrators and Teachers
4E. Plan, design, renovate, and/or construct spaces (facilities and or online communities) to support integration of technology

Implications/Resources/Organizational Support:
Allocate funding for:

- Appropriate facilities
- Equipment
- Software
- Personnel
- Time for training

4. Identify Necessary Technology

Needs for technology are assessed on an ongoing basis. Through our committees, as well as our curriculum meetings, held regularly at each of the phase levels, we gather feedback on how to use technology to improve learning. The System-wide Information Specialist coordinates these meetings. He provides administration with technology needs including software applications. Each year we review current use of technology and discuss areas of need. Reflecting on our goals and our 3-year budget plan, we decide to move forward with requests for funding. For example, the 6-12 teachers have had laptops where the K-5 teaches have not. Given the request for webcams, Skype, and for remote access for planning, and other needs, the district put forward a request for laptops for the K-5 teachers. This request was supported at both the school and town level.

5. Collaboration with Adult Literacy Service Providers

Adult Education in Scarborough provides adult literacy services. All adult education programs use the facilities, including the technology available at the school sites.

6. Strategies for Improving Academic Achievement and Teacher Effectiveness

All funds expended for the purpose of Staff Development are done so with the expectation that student learning will improve. The goal for our district's entire staff development model is to improve student learning in the content areas by improving teaching practices.

For example, we have a study group model for staff development where teachers form study groups where they focus on content areas and instructional practices as outlined in our 'best practices' resources. They propose a plan for that time and then, when approved implement their plan for the year.

As we interview applicants for supportive, teaching or administrative positions, one or more, of the interview questions prompts the applicant to describe their level of technology expertise or give examples of how it is effectively used for learning.

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

Specific examples of effective integration of technology currently include the use of webquests, virtual field trips, interactive web sites, online writing programs, and the use of Moodle to develop online educational programs. The district has invested in off-site hosting of the Moodle site, and monthly training for staff K-12 to use this online course management tool to deliver instruction. The site address is: http://scamoodle.scarborough.k12.me.us/. It is widely used by staff and students.

A teacher example of effective integration and sharing with the global educational community, is the Forces of Nature Webquest at http://www.scarborough.k12.me.us/wis/index.htm.

We have identified technology embedded core activities that all students experience. Because the technology is embedded, so the assessment is too. Several technologies are core resources for the delivery of this core content. In addition, we are considering implementing an online student assessment in the area of technology as resources become available.

Technology integration will be ensured through content curriculum instruction and staff development programs. Staffing includes a K-12 Technology Specialist who assists in this process. The Resource Librarians and library support staff also provide support to teachers.

Although there is a draft of the Technology and Information Literacy Curriculum, it will need to be updated and presented to the School Board for their consideration. Revisions will need to include the core content areas and themes within the 21st Century Skills recommendations as well as the revised National Educational Technology Standards.

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

To achieve the benefits of technology in the learning environment of our schools, we have established a foundation level of computers, printers and other hardware, provided the software tools which make the hardware useful, and provided the network to connect the resources for easy access.

Scarborough has standardized on hardware and operating systems which insures uniformity across the system. All computers are connected to the network and have Internet access. This has lowered support costs and given the staff and students a common platform to work from. A five year replacement plan assures all phases have up-to-date technology tools to use at and for the "Technology at and for the Point of Learning".

Funding is presumed to be provided by capital improvement appropriations and building funds where available. The five year replacement plan has been funded with local capital improvement appropriations. However, it is the intention to move replacement of equipment funding into the regular operating budget when possible.

Scarborough's approximate three year funding levels by phase is as follows. We operate from a 5 year funding plan. Funding for 2010-11 has been approved and appropriated.

As described in Section 4, as our needs are assessed, aligned with our goals, and prioritized, more specific budget recommendations are made. For example, the funding for the Intermediate School is for replacement of desktop computers (as they are 7 years old and fell in line with our goals and rose to the top of our priority for that phase level). The K-5 project, as described in Section 4 is for teacher laptops, a direct result of assessing our needs and alignment to our goals. District-wide is the for the software licensing to allow Windows 7 operating system to be loaded onto the middle school and high school teacher laptops. Again as a result of the need for teachers to have access to two operating systems, that priority determines the request for sufficient funding.

Year	Level	Funding	Amount	Goal
2010-2011	Intermediate School	Local	$ 137,000	#1, 4
	K-5 Project	Local	$ 144,000	#1, 2, 3
	District Wide	Local	$ 11,500	#2, 4
			$ 292,500	
2011-2012	Network Upgrade	Local	$ 145,000	#1, 4
	Middle School	Local	$ 45,000	#1, 4
	High School	Local	$ 60,000	#1, 4
			$ 250,000	
2012-2013	Primary School	Local	$ 185,000	#4
	District Wide	Local	$ 105,000	#4
			$ 290,000	

9. Supporting Resources

The municipal's Information Services Department and the school's Computer Technology Department were combined into one department to meet the ever-increasing technology needs of the Town of Scarborough and Scarborough Schools in a cost efficient manner. This consolidation has led to a single combined staff of specialists that can better serve the technology needs of the schools. Both the town and schools are now sharing administrative computing hardware, software, operating systems and networking capabilities.

The schools are taking advantage of the fiber optic network that connects eight sites in the Oak Hill "campus". The network allows the sharing of resources, hardware, software and information between these eight locations. All schools have been wired and every classroom is connected to the network. All sites have wired and wireless options.

In the schools, we have a large array of service, software, and other electronically delivered learning materials. The System-wide Information Specialist (again, a position combining Technology Integrator, Data Manager, and District Library/Information Specialist) and the Director of Curriculum and Assessment meet regularly to review and identify gaps, overlaps and use of the whole range of our learning materials. The curriculum standards and best practices drive our decision in identifying the materials that we will acquire or will drop. A key factor in that is how successful and effective the use of technology is in the learning materials. If it does not help students learn more or better, or align to our curriculum, it is either dropped or not considered for acquisition. There has been a significant shift from print based resources (text-books) to online (software) resources. Even within online resources, fewer stand alone, one-time purchase, software applications are being acquired. There is an increase in subscription-based, web delivered applications.

10. Steps to Increase Accessibility

As described above, every staff member and every student has access to technology. The core curriculum requirements include, require, the use of technology. Every year as we plan for the use of district and federal funding, increasing the number of laptops, desktops and other instructional equipment, such as mobile computing devices, scientific probes, etc. are considered. We have been expanding access each year and will continue to do so. Presented for the last 4 years has been a plan to expand the middle school laptop program to the high school. This past year, the plan was supported by the School Board and fell short by one vote at the Town level. Planning continues for another proposal next year.

The Special Services Department has contracted with Pine Tree to assess what we have and how we are using technology, including software as well as hardware and other equipment. They will be helping us to identify what we might do to expand and improve our use and access for students.

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

The district believes technology enhances learning and improves student achievement by offering real-world contexts for learning and problem solving; by making connections with global information and experts; by providing tools for visual learning and data analysis; and by providing opportunities for collaboration, feedback, and reflection. “Classroom Instruction that Works” and “Methods that Matter” provide the basis for instructional best practices.

Specific examples currently include the use of webquests, virtual field trips, and the use of Moodle to develop online educational programs. Other applications include Gizmos, Voicethreads, Plato Learning Lab, My Access online writing, and a wide range of online databases K-12. Several of these applications are core resources for the delivery of content curriculum. For example, the use of the Library Information Centers’ online collection of resources and databases are incorporated in the curriculum for all Freshmen and Sophomore core research projects. In addition, teachers use a range of available

online applications for student collaborative learning such as wikis, blogs, and social networking sites (i.e. Ning).

The promotion of technology integration will be through content curriculum instruction and staff development programs.

12. Professional Development

The district has in place a variety of programs designed to provide educational technology and technology integration skills to teachers, staff, and administrators. Based on the National Educational Technology Standards (NETS) and 21st Century Skills Recommendations, ongoing programs have been developed to effectively use technology for productivity as well as embedding technology into content curriculum. Programs include Sebago Alliance Technology Camp which focuses on best practices and technology. During the school year, method groups and professional release days are available for this purpose. The district's K-12 Technology Specialist works with staff providing for their specific needs.

The district's intranet also provided teachers with the opportunity to collaborate with their peers across the district. Forums, cohort groups, and individual teachers are sharing lesson plans, success stories and assessment solutions. They are developing intranet resources. We are planning on updating our intranet this coming year to be able to allow more collaboration and remote access. Moodle has become another application through which online collaboration occurs for staff. Orientation, training and support is provided throughout the year.

13. Innovative Delivery Strategies

Delivery strategies are now in place or are in the developmental stage to encourage anytime- anywhere- any pace learning, collaboration, and global communication.

Interactive web-based classrooms, interactive video distance education, and online classes are available for students who are unable to participate on the campus or to access educational resources not available locally. For example, the high school participates in the Virtual High School where students can access online courses. And, Skype will be on all images K-12 enabling classrooms to communicate world-wide next year.

Collaborative online learning communities and international cohort programs will continue to be developed to encourage international collaborative learning.

14. Accountability Measures

We will continue to use the measures which have been used in the past such as our technology surveys, and our review of professional development evaluations. We will review this plan monthly with administration and quarterly with the district-wide Technology Committee.

As our student and staff data management systems evolve we will look at a variety of data, including student performance data to measure not just the teachers' ability to teach, but also the students' performance in meeting content area curriculum standards. These standards will include standards in technology and information literacy as well as the content areas outlined in the Learning Results and 21st Century Skills Report.