

## INSTRUCTIONAL/INFORMATION TECHNOLOGY

<u>Staff</u>	<u>Students</u>	<u>Budget</u>	<u>Cost Per Student</u>
19	5,644	\$1,604,952	\$284

The focus for 2007-2008 continued to be on building the instructional technology capacity across schools, while implementing the technology plan. A detailed survey of instructional technology needs was conducted. The result of analyzing those needs was a proposal for an equipment and software maintenance and replacement plan that will allow the district to upgrade technology in all schools.

### **Instructional Technology and Professional Development**

This year, the Information Technology Department continued to revise the instructional technology plan to include expectations for student technology proficiencies district wide. Based on these expectations, the Instructional Technology Steering Committee began to work on their objective of developing a vision for what instructional technology should or could look like at each level. Presentations of best practices and new software tools coupled with research have been used to form this vision. The department and the Instructional Technology Steering Committee shifted the focus away from sampling technologies to determining what had to be upgraded, and how those upgrades would be staged.

The professional development efforts continued throughout the year, with workshops on a variety of software and hardware options. The NCCS Intranet ([www.ncolonie.com](http://www.ncolonie.com)) continued to provide resources and activities for teachers to sample as they planned for integrated technology use in classrooms.

Two key additions were the ability to register for professional development using an in-house system, and the use of an electronic application for the instructional grant process. The emphases on technology integration in that grant review process lead to a high number of submissions that included technology tools.

In order to effectively disseminate information regarding new electronic and digital resources, the department continued the model of building level technology resource teachers. These teachers served as ambassadors of technology providing for guidance, assistance, mentoring, and staff development in their buildings and across the district.

Understanding that professional staff development is crucial for the effective integration of technology into instruction, the department continued its ongoing professional development program that combined curriculum development workshops, individual consultations, and an increased number of technology-based in-service courses. The

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department also has been working successfully on increasing teacher involvement as staff development course presenters.

In addition, many teachers participated in mini-workshops and individual consultation sessions working with the instructional technology specialist before or after school to expand their knowledge of technology. These mini-sessions were customized based on different audiences and their needs and were designed to train teachers on new technologies. Summer workshops provided another avenue for becoming more familiar with the existing technology and its multiple uses in the classroom.

The department also continued to work on increasing student and parent access to instructional technology outside of the traditional school day. A number of teachers began to use our intranet resources in their classes. Teachers also continued to use Internet and educational resources to provide students with technology-based materials to practice outside of the classroom.

### **Administrative Software Systems and Database Support**

The administrative support systems provide the backbone of services that make it possible for teachers and students to use the available technology resources. New initiatives for the 2007-08 school year include a new electronic mail upgrade, new servers deployed for increased storage and for specialized software tools, an increase in workstations of @100, bringing the total up to @2,000 across schools, increase in the use of wireless access points across schools, and new methods of software support. The following objectives provide more specific detail in each of these areas.

## **OBJECTIVES**

- Revise and monitor the implementation of the 2007-10 District Instructional Technology Plan.

Evaluation: Has the District Instructional Technology Plan been revised: Is there evidence that the instructional technology plan is being utilized in instructional planning, curriculum development, staff development, hardware and infrastructure planning, data collection and analysis, student and parent access to instruction technology resources?

**Goal One:** Expectations for students to become technology literate while increasing opportunities to use technology to develop critical and higher level thinking; that is, to be able to make the best use of available technologies for research, multi-media projects, hands-on learning and simulations, as well as master how to use various operating systems and functional software tools such as word processing.

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The Instructional Technology Committee met on a monthly basis through the school year. The committee meetings were structured to include a demonstration of some of the best practices that North Colonie teachers have developed, and a discussion of how those practices can be made available to teachers and students.

The committee reviewed the current instructional software tool kit available in each grade, and recommended additional software and upgrades for the upcoming school year. The committee has considered the software tools that will be standardized for all teachers and students, as well as content-specific tools. Teachers require a toolbox of technology tools with standard, reliable tools that can be used by students to create, investigate, organize and communicate across content areas

Based on the committee's review and recommendations, a list of standard software will be installed on all new computers for the 2008-09 school year. The committee is also developing a longer-term review process that can be used in the upcoming school year to drive the selection of additional software titles.

During this school year, in response to the goal to increase student technology literacy skills, new software tools and network settings have been added to encourage teachers and students to create information that can be shared on teacher web sites. This includes podcasting for foreign language and the Audacity software, blogging, additional Quia web sites, additional video resources and some additional web-based software tools. The goals for student use of these software tools are being cross-referenced to the national standards for technology literacy and use for all schools. The national standard has been adopted by New York State as a guideline for expectations for student use of technology in all content areas.

An excellent example of new work is the Instructional Grant award to a seventh grade science teacher at the Junior High School. Working directly with students, Mr. Slyer's classes have developed web-based video demonstrations, audio podcasts, and student-created study guides. More of this work can be seen at the web page developed by Mr. Slyer with his students at <http://www.MrSlyTheScienceGuy.com>. The instructional grant process was enhanced by the development of an online submission format, and the number of overall submissions more than doubled due to the ease of presenting a proposal using this system of forms. The system made the review of the applications much easier as well.

As part of the use of these newer technologies, the Network Use policy was reviewed and updated, with the guidance of a committee of teachers and administrators, a review by the district legal advisor, and a review by the

School Board. The new policy will ensure that students can access additional Internet resources in a safe, secure way.

**Goal Two:** Expectations and opportunities for teachers to integrate the use of technology into regular classroom practices, and the professional development to allow teachers to master the best classroom practices.

Technology workshops continued to be held throughout the school year, and include the use of specific software and tools, such as the electronic whiteboard software, as well as curriculum-driven workshops. In March, one of the students at Shaker High School offered a course on the use of MS Word, with the support and mentorship of a faculty member. That course was very well received, and paves the way for additional student support and participation.

A new web-based system was developed so that participants can register for courses directly online, including registration and evaluation forms. This system was piloted with four courses, and provided an excellent way to manage professional development enrollments and tracking.

The process of developing online tools for teacher training has continued through the Spring semester, with several pilots of online course materials, and the continuing use of the Atomic Learning support site.

The Professional Development Steering Committee has made use of the available technology to post the materials for the March 28<sup>th</sup> workshop on 21<sup>st</sup> Century Learning Skills on the district intranet site. The workshop made use of 33 classrooms at Shaker High that are now fully equipped with computer and projector technology.

**Goal Three:** Enhance the development of curriculum and instruction through data collection and analysis.

The focus has been on the use of the student information system, Infinite Campus, and enhancements to that system. A variety of specialized reports has been developed during the school year to provide specific information about students who will need additional assistance on statewide assessments, and students receiving additional AIS support.

Assessment results for the ELA exams in grades 5 have been imported into the system to serve as a pilot of how this system might produce specialized reports on overall student performance. In addition, other software tools that can provide analysis of statewide assessments have been previewed, as part of the curriculum mapping initiatives, and as part of the ITBS and Cognitive Abilities tests for elementary school students.

A committee is continuing to review the student scheduling portion of Infinite

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Campus, to determine if a more optimal student scheduling pattern can be created for High School students.

A committee has been formed to review the implementation of elementary school level scheduling and report cards. Specialized training through web seminars and on-site meeting is taking place through May and June to create a set of standards and an implementation plan.

**Goal Four:** Support the integration of technology through a strong software and hardware base, and the ability to expand the network infrastructure.

As part of the ongoing review of network functions, the number of wireless network devices has been increased, a replacement schedule for network equipment is being implemented, and a new network server to enhance streamed video and other NCCS 2.0 functions is being implemented. A major upgrade to the electronic mail system is complete. We have also reviewed and will enhance the network backup systems by doubling the storage capacity of those systems. A review of the E-rate requirements and the addition of the Maplewood School have provided an implementation plan for expanding the wide area network connections within the district, and a proposal to increase the bandwidth for Internet access.

A classroom was set up as a model for the use of projection devices, Smartboards, and multi-media tools. This model is now being used as a type of template to bring projectors and other tools into more classrooms through the maintenance department mounting of projectors. The increasing use of these tools has led to teacher collaboration on lesson plans, particularly in the area of Math.

A four-year replacement cycle for workstations has been developed for all schools within the district, and the quantities and estimated cost have been reviewed and endorsed by the Instructional Technology Steering Committee as well as district leadership.

**Goal Five:** Use technology to support the North Colonie learning community, including teachers, students and parents.

This goal is being realized primarily through the opening of more options for teacher web sites. The goal of opening up additional resources is still in the planning stages, pending any proposed changes to the High School scheduling pattern.

A committee is reviewing Parent Notification software that would give district leaders the capability to rapidly contact parents and the community for

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emergencies and also for event notification.

- Continue to support the Technology Resource Teacher Program by providing Technology Resource Teachers with more defined methods to disseminate information and resources and also training for assisting colleagues in any curriculum area in developing lessons, projects and packets.

Evaluation: Has the program made teachers aware of the many resources on the NCCS intranet? Are higher-level thinking activities being created?

The amount of content resources on the district resource web site and server continues to increase rapidly. The increased needs have prompted an upgrade to the server and operating system. The number of teachers who are posting lesson plans and units has increased, as have the number of student and teacher projects that incorporate video technology.

The intranet web site, <http://www.ncolonie.org> indicates the increasing number of student and teacher projects that have made use of the new software tools. The video projects by students are notable, as are the shared lessons and resources on shared teacher web sites. For example, students from Shaker High School and Blue Creek Elementary School collaborated on a scientific experiment involving balloons, gases and force, and recorded the resulting lab work with spreadsheets to analyze the data, and with video to illustrate the basic concepts.

- Continue to develop the district resource database and server for providing teachers with materials for integrating technology in all curriculum areas.

Evaluation: Were curriculum development workshops developing technology based materials and projects planned and implemented? Were technology-based resources shared through the district database?

The technology resource teachers have been meeting on a regular basis to share materials and best practices for technology integration. Teachers are alerted to new links for materials on a daily basis, and those links are then added to the district resource web site.

- Continue implementation of the new student information system Infinite Campus. Monitor its effectiveness in providing information as well as tracking student activity. Ensure that the system provides value in enhancing student learning and greater communication for all stakeholders.

Evaluation: Was our data submitted in a timely and accurate manner? Was appropriate and effective staff development provided for all users? Were

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policies and procedures developed and refined as needed? Are the daily tasks of attendance, progress reporting, quarterly grade reporting, scheduling and parent communication proceeding effectively?

The Information Technology Department has continued to meet all of the State Education Department and Regional Data Warehouse requirements for the current school year. All data was submitted in a timely manner. Data was accurate, and in two cases, our own district data proved to be even more accurate than what was being stored at the state level, and forced some changes at the regional data warehouse level. During this year, staff development was provided to all users, which special focus on the new health module requirements and the ongoing registration process. Policies and procedures have been refined, and this year included new policies for grading in the high school, transcript and summary grade changes, and specialized reports and links for state and local testing.

The daily tasks are proceeding as expected. As users gain a second year of experience with the attendance system, the use has become easier and more automatic. The progress reports have become more automated, as has the report card procedure, which includes some additional policies about timeline and distribution.

Scheduling, itself, for the Junior High School has become extremely effective. For the High School, we have maintained the preferred 32 day schedule pattern, and will maintain that again for the upcoming school year. The use of that schedule prevents the implementation of some of the parent communication tools for the immediate future, but we are exploring ways to make the information more accessible next year.