

INSTRUCTIONAL/INFORMATION TECHNOLOGY

<u>Staff</u>	<u>Students</u>	<u>Budget</u>	<u>Cost Per Student</u>
20	5,648	\$1,677,893	\$297

The focus for 2008-2009 continued to be on building the instructional technology capacity across schools, while implementing the technology plan. The first year of a four-year replacement and maintenance plan was implemented.

Instructional Technology and Professional Development

The 2008-09 school year was the first of the four year proposed computer equipment replacement plan. During the year, most of the computer labs received new equipment, as did each of the elementary school classrooms and many of the secondary classrooms.

The Information Technology Steering Committee focused on building models of technology-infused classrooms at each level, and standardizing on a common set of software tools for those classrooms. Presentations of best practices and new software tools coupled with research were used to form this vision. The emerging standards for a model classroom include multi-media capabilities such as electronic whiteboards, projectors and document cameras, as well as computer workstations for students and an increased number of laptop computers to be used flexibly to support lesson units and projects.

The infusion of the technology led to new ways to ensure that teachers could receive the training they needed to make the best use of the tools in different settings. In November, elementary school teachers made use of instructional videos created in-house that demonstrated how technology tools could be used with students.

The model of providing technology resource teachers in each building continued. These teachers provided training and coaching on the use of the technology to support teaching. This year, the technology resource teachers provided workshops for teachers during the March Superintendent's Conference Day. In addition to the technology resource teachers, the number of other teachers creating and teaching courses has increased. To support this, the process of creating, submitting, teaching and receiving credit for courses was offered online.

In addition to the online courses and conference day events, professional development for technology integration was offered through curriculum development workshops, individual consultations, summer workshop work and specialized tutorials. This work was supported in turn through the district web site for teachers, <http://www.ncolonie.com>, and through the newly developed wiki web page options, which provided teachers with an easy-to-use ability to build classroom web sites and

INFORMATION TECHNOLOGY (cont.)

services. 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.

This year, the Information Technology Department continued to revise the instructional technology plan to include expectations for student technology proficiencies district wide. The committee reviewed various methods for assessing student proficiencies with technology, and began the analysis of technology literacy standards across grades.

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 2008-09 school year include a new emergency contact system, the implementation of wireless network access in all schools, data sharing capabilities with the school transportation systems, and the implementation of a curriculum mapping software system. Approximately 600 workstations and laptops were deployed as part of the replacement and upgrades to classrooms, computer labs and libraries, and a software tool kits was consistently implemented across all schools for student and teacher use.

The following objectives provide more specific detail in each of these areas.

OBJECTIVES

- Provide direct support for the integration of technology into the teaching and learning environment.

Evaluation: Did the implemented technology support teaching and learning? Did students increase their technology literacy? Did teachers have access to rich professional development opportunities to increase their ability to infuse technology into the classroom? Were electronic communications with the North Colonie learning community strengthened and extended?

The newly implemented technology is directly supporting new opportunities for teaching and learning. As the upgraded computer equipment was installed across the district, students and teachers had more access to software tools that foster collaborative work, creative multi-media projects and the deepening of critical thinking skills. Beginning in the Summer of 2008, the district embarked on a significant upgrade to the computer workstations, presentation tools and software tool kit for every school in the district. The upgrade has brought every computer lab into a consistent environment with current operating systems and new instructional tools, and has upgraded at least one

INSTRUCTIONAL/INFORMATION TECHNOLOGY (cont.)

computer in every classroom as well as computers in libraries and other instructional areas. The evidence of the use of computer labs indicates that they are in continual use across schools and content areas. The newest tools provide rich support to both teaching and learning; e.g. Smartboard software and technology to create interactive teaching environments; increased access to the Internet, including the software tools designed to accompany textbooks; increased use of Web 2.0 interactive tools for writing and research; and specialized use of new tools to support music and composition, family and careers and nutrition, technology education design needs, art classrooms and design tools, science labs, math and computer programming, and overall data analysis.

The increased access to computer resources for students has resulted in an increase in the technology literacy skills that are appropriate for education. The current sampling of student work shows a level of sophistication with web-based interactive tools. Much of this work has been made available on the district web site, <http://www.ncolonie.com>. A current example is the creation and use by students of shared wiki and conference spaces to communicate with students in other countries and languages.

Teachers continue to participate in a variety of professional development opportunities that leverage the new software and hardware tools. The March 27 Superintendent's Conference Day provided additional focus on the use of technology to support teaching and learning. All teachers participated at some level to learn about technology infusion through courses taught by the North Colonie Technology Resource Teachers, online courses, video tutorials, and grade-based collaborative projects. This work extended the workshop model begun at the November Superintendent's Conference Day. Gary Cimorelli continues to develop short training videos for all grade levels and content areas. That series has been added to so that it is a permanent resource for teachers, and can be accessed at <http://www.ncolonie.com>, at the section called NCCS video tutorials.

This year the role of the Technology Resource Teacher has been slightly reconfigured. The twelve teachers provide direct support to their colleagues for the use of technology to enhance instruction. In turn, the TRTs are receiving enhanced training through a Moodle course set up for them, as well as after school training meetings throughout the school year. The TRTs have directly taught their colleagues during workshop days and after school, and are providing a strong resource to teachers at each school.

The continued use of interactive web sites has allowed the creation of a profusion of communications to teachers, parents and students. Teachers are exploring options for parents to see homework assignments, classroom information and grades. The addition of online tools to support professional

INSTRUCTIONAL/INFORMATION TECHNOLOGY (cont.)

development has increased the number of teachers who can participate in training. Additional video-based tutorials have been used to supplement this training during professional development days. Surveys of staff show a very strong interest to continue to use web-based tools to communicate with parents and students.

- Maintain and enhance the use of existing and proposed data systems to support administrative and instructional decision-making.

Evaluation: Were the data systems able to meet state and federal reporting requirements for student assessment and growth for all students, and meet the requirements for students with special needs? Was the resulting data used to support a data-driven decision model for best practices?

The current data systems continue to meet the state and federal reporting requirements. However, this year there have been some changes at the state level that have made reporting more difficult. The acquisition of the Maplewood School District meant that the data for students needed to be folded into the overall North Colonie student data as of July 1, 2008. Maplewood did an excellent job of preparing for this transition. The NYS Education Department changed the school district code for North Colonie to reflect the enlarged school district, but did not make provisions for the data associated with that new code. That change has resulted in delays at the BOCES and state level in the reporting of North Colonie assessment results. The delays have also affected the reporting on children with special needs. As we continue into the next calendar year, NYS Education Department is trying to address each change and problem, so that the reporting will become smoother for the 2009-2010 school year.

The data team has implemented five major projects this year: the conversion to an emergency messaging system, and the review and confirmation of emergency contacts for each household; the implementation of a software tool, SIF, to allow the student information system to directly communicate with the transportation and bus routing systems; the implementation of new software tools to analyze assessment data using the student management system and the state test results; the collection and management of special education data for state warehouse reporting in the new state formats; and, the review and revision of the overall registration process. The ongoing review of the existing data has prompted some changes in the data collection procedures, which in turn has provided new opportunities to use data to support decision-making at the student and school level.

- Continue to monitor the progress of NYSED movement to a growth model for accessing accountability in 2008-2009 and a value added model in 2011-2012.

INSTRUCTIONAL/INFORMATION TECHNOLOGY (cont.)

Evaluation: Did the state move to a growth model? What was the extent of the impact of this move on North Colonie.

NYSED was not approved by the Federal DoE to move to a “growth model.” Thus the specifications for looking at the impact of good teaching on assessment remains at the district level. The new data analysis and reporting tools implemented in March 2009 will provide some additional information about North Colonie teachers and students.

- Maintain and expand the network infrastructure as new software and hardware tools are added to instructional areas.

Evaluation: Were equipment purchases made in a timely and effective method to ensure that systems were operational and to support a replacement and maintenance cycle? Were network systems upgraded to support wireless access in all locations? Was a disaster recovery plan designed and implemented for the network and data systems?

As of July 1, 2008, the district embarked on a replacement cycle for computer equipment with the objective to replace 25% of computer equipment each year to build towards a four-year cycle. The first purchases were made and installed during Summer 2008, with the last of the specialty installations being completed as of December 2008. The majority of installations were completed prior to the start of school, including replacements for computer labs and classrooms in all buildings. The completion of the Maplewood network infrastructure allowed the completion of the Maplewood equipment installation in April 2009.

A similar replacement cycle was maintained for the network infrastructure equipment, with a resulting gain in storage space and backup capability. At this point, all of the hardware and software targets have been met, and additional requests for support and software tools have been implemented in April and May 2009.

The network systems are being upgraded to support wireless access in all locations at all schools. In October, 2008, a survey of wireless connectivity needs was conducted for all buildings. The resulting analysis provided a plan for the purchase of a management wireless switch and software system, with 100 additional wireless access points to complement the 25 in place. This system has been installed, and individual schools are now coming online with wireless connectivity.

An initial disaster recovery plan has been designed. It includes increasing the storage ability to provide complete backup for all electronic files across the network. The design for an off-site data storage service was completed but the

INSTRUCTIONAL/INFORMATION TECHNOLOGY (cont.)

implementation will be delayed to determine the most cost-effective means to store data. At this point, the recommendations from the Comptroller's office for storage and updates have all been met, and we are completing the implementation of the electronic archiving requirements for electronic mail.

- Provide the right level of support to faculty and staff through the user helpdesk system.

Evaluation: Did faculty and staff receive needed support in an effective and timely manner, within the constraints of current policies? Were communications about helpdesk support enhanced and strengthened?

A review of the helpdesk web system indicates that requests for helpdesk support are being resolved in a timely manner across the school year. At the elementary school level, the number of outstanding requests for any given day has hovered at ten or less. For the secondary schools, the outstanding requests average 30 to 50 at any given day, and the turnaround time for most requests is about 48 hours.

We have received many commendations for the technology assistants' work this summer and fall, from teachers and administrators across the district. The number of computers increased significantly, and the number of computer to be installed to replace older machines was the biggest it has been for at least 8 years. The technology team was able to put all of this into place to meet instructional goals, through a great deal of hard work and some new computer and network management tools. The removal of the oldest computers has meant fewer calls for computer repair and replacement, and a lower level of frustration.

The communications about support were directly enhanced by the inclusion of the computer lab aides in the technology team and on the Instructional Technology Steering committee, and through the use of the internal web pages and wiki pages. Computer lab aides meet on a regular basis as part of the overall technology team, and are thus better able to consistently support teachers. In addition, computer lab aides have received additional training this year so that they can continue to be proficient on the new hardware and software selections. Web and wiki pages for individual schools have been created to add a level of communication and resource sharing within and across schools.