
Pennsylvania Department of Education



Commonwealth of Pennsylvania
Department of Education
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Educational Technology Report **Monday, October 31, 2011** **(Last Approved: Saturday, October 29, 2011)**

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Mission

The mission of the Northern Lehigh School District community is to create a challenging and supportive environment dedicated to meeting the diverse educational needs of all learners.

Vision

Our learners will have:

- Creative and critical thinking skills necessary to be successful.
- Self-esteem, self-discipline and a sense of responsibility that enables them to meet challenges, be team players and respect others' differences.
- Communication, technical, and life skills to gather information, solve problems and adapt to change.
- An awareness of physical and psychological well-being.
- A vision for success.
- An appreciation for the arts and sciences.

Shared Values

We believe that ...

- *all students can learn and succeed if given sufficient time and appropriate instruction.*
- *students will master a core of knowledge based on academic standards.*
- *communication skills are essential to success.*
- *positive attitude, motivation, self-esteem and responsible behavior are vital to the learning process.*
- *all students should develop skills and appreciation in areas of interest beyond the core of basic knowledge.*
- *ongoing staff development is essential to quality learning.*
- *learning is a life-long process.*
- *the school, community, family and students all share in the responsibility for learning.*
- *students must be challenged to think critically, problem solve, and use appropriate decision-making skills.*
- *students must have a nurturing environment that is physically, emotionally, and spiritually safe.*
- *the appreciation of diversity is an integral part of a student's educational experiences.*

Needs Assessment

Reflections

There are currently no reflections selected for this section.

From research conducted by the U.S. Department of Education and Apple Computer, Inc., we know that schools generate impressive results for students, including improved achievement, higher test scores, improved student attitude, enthusiasm and engagement, richer classroom content, and improved student retention and job placement rates when technology is readily

accessible to students. We also understand that student achievement is enhanced when teachers integrate technology into daily instructional practice. Of the hundreds of studies that show positive benefits from the use of technology, two are worth noting for their comprehensiveness. The first, a U.S. [Department of Education](#)-funded study of nine technology-rich schools, concluded that the use of technology resulted in educational gains for all students regardless of age, race, parental income, or other characteristics. The second, a 10-year study supported by [Apple Computer](#), Inc., concluded that students who are provided with technology-rich learning environments continued to perform well on standardized tests but were also developing a variety of competencies not usually measured. Students explored and represented information dynamically and in many forms; became socially aware and more confident; communicated effectively about complex processes; became independent learners and self-starters; knew their areas of expertise and shared that expertise spontaneously." (ACOT).

Our Network Infrastructure and equipment changes since this plan commenced:

In order and be prepared for new technology developments in the future we have recently upgraded our network infrastructure in each of our four (4) schools. We have replaced all our wired switches with switches that support up to one gigabit (1Gbps) data rates to the desktop. In addition, every port on the new switches supports power over Ethernet (PoE), so that as the number of wired devices decreases those ports that are freed, can be used to support wireless access points to support those ever increasing number of wireless devices. Those same switches connect to each other to form our campus back bone between our Slatington Elementary School, Northern Lehigh Middle School and Northern Lehigh High School which supports ten gigabit Ethernet (10Gbps) between main switches of each school and to the edge switches within each school. The fiber optic cable that connects these three schools has been upgraded to single mode fiber this past summer in order to support those data rates. Our wide area network connections have also been upgraded. Our wide area connection to Carbon Lehigh Intermediate Unit #21 has been upgraded from one hundred megabit (100MBPS) Ethernet point to point to one gigabit (1Gbps) Ethernet point to point. Our wide area connection to our outlying Peters Elementary School was upgraded from a one hundred megabit (100Mbps) point to point Ethernet to a ten gigabit (10Gbps) point to point Ethernet connection over leased dark fiber. Additionally, we have replaced our wireless networking equipment (controller) and wireless access points (802.11g) with wireless access points that are 802.11n capable. Each core curriculum classroom has its own wireless access point. These network connections allow us to provide video conferencing, video streaming, and other Internet-based and network-based services to our schools. They also allow us to utilize research-based benchmark assessment products over the Internet such as AIMSweb, 4Sight, and Study Island which are academically correlated to the PSSA and which provide benchmark information to inform our Response to Intervention (RTI) initiative. These connections allow us to outsource our financial accounting system (CSIU), student information system (CLIU), and our data warehousing (Onhand Schools) through an Application Service Provider (ASP) arrangement which relieves the burden on our small IT staff (3) of maintaining, updating and backing up these systems and allows them more time to support academic services and needs.

Within our school buildings, we have insured that every classroom has at least one computer and a printer which is student accessible. Within Northern Lehigh High School (grades 9-12), we have five (5) computer labs consisting of twenty-five (25) student computers, a laser printer, teacher computer, a data projector, and classroom management software; a separate Computer Aided Design (CAD) lab of eighteen (18) student and one (1) teacher computer; and at least two (2) student computers per classroom, although some classrooms have up to four (4) computers. There are separate computers for teachers in each classroom and five (5) faculty preparation areas, each having two (2) computers and a printer in them. Each of our high school mathematics (6) and science classrooms (5) has a data projector, interactive whiteboard, and document camera. Through a generous donation from the Northern Lehigh Educational Foundation, Northern Lehigh School District has purchased five (5) laptop carts of thirty (30) laptops each, as well as interactive graphics tablets that tie in with the interactive whiteboard and

a classroom response system for our five (5) science classrooms. The library/research media center, outfitted with eighteen (18) computers and a color laser printer, is a place where students can search our online card catalog, use word processing, spreadsheet, database, and presentation software applications or search the Internet. Adjacent our library is what we call the "Study Island" lab which consists of twenty four (24) student computers, one (1) teacher computer, a data projector and classroom management software. The lab is primarily for the use of Study Island by our students but can function as a general purpose computer lab when not used for that purpose. The library also houses ten (10) laptops that can be checked out for the day by students and a mobile laptop cart that me be checked out by faculty for use in their classroom. Every classroom in the high school, except the music room and choral room, is equipped with permanently mounted data projector. Most of the classrooms with permanently mounted projectors have a sound system installed in the classrooms.

In the Northern Lehigh Middle School (grades 7-8), we have two (2) technology education labs consisting of twenty (20) and twenty-four (24) computers respectively with a teacher workstation along with classroom management software, a data projector and a color laser printer in each lab. The Library has twenty-six (26) student workstations, a mounted data projector, classroom management software and a color laser printer. Each classroom has at least two (2) and as many as four (4) student computers and a printer. All core curriculum classrooms have a permanently mounted data projector, sounds system and interactive whiteboard. Most teachers in this building have their own laptop computer and additionally there are two (2) faculty prep rooms which contain two (2) computers and a laser printer for their use. There are three (3) mobile laptop carts, two (2) consisting of twenty-five (25) laptops each and one (1) consisting of ten (10) laptops.

Slatington Elementary School (grades 3-6) is currently in a building addition and renovation program which should be completed by the end of the 2011-2012 school year. The school currently has a computer lab with twenty-nine (29) computers, an interactive projector, color laser printer and classroom management software with two more computer labs coming on-line as the building project concludes. Each regular education and special education classroom is equipped with two laptop computers and an interactive projector and each teacher in the building has a district provided laptop. There are four (4) mobile laptop carts of thirty (30) laptops each, to be shared per each grade level. We purchased twenty (20) Barnes and Noble color eReaders to be used within the school as a pilot project to encourage students to read more. We are also piloting twenty (20) Apple iPad 2 tablet computers to explore their uses in the classroom and how they may enhance our student's education.

Peters Elementary School, (grades pre-K-2) has a computer lab consisting of twenty-four (24) student computers plus a teacher's workstation, classroom management software, a data projector, and a laser printer. Every classroom has at least two (2) computers per classroom with many having four (4) computers. Each grade level classroom has a data projector, sound system and interative whiteboard. Every teacher within the school has a district provided laptop. The building also has eight (8) mobile laptop carts consisting of twenty-four (24) laptops each.

Goals:

In the area of academic achievement, we will be looking to continue to use existing software and to acquire new software which will enable us to assess student progress toward meeting AYP goals established by NCLB. We will also be looking at how we can continue to create a technology-rich learning environment for our students through the replacement of older technology and the acquisition of newer technologies that are shown to help students reach higher achievement levels. We are using new technology such as eReaders and Apple iPads to further infuse technology into the classroom and curriculum. We have a Curriculum and Technology Committee comprised of teachers form each of our schools along with the Assistant Superintendent, building Principals, Director of Technology and Technology Coordinator to revise

our technology curriculum K-12. This committee will develop standards of technology proficiency that need to be attained by all faculty so that they will integrate technology into their classrooms every day in order to provide an even more technology-rich environment for our students and use the NETS technology standards as a guide to develop district-wide technology standards for students.

The next focus of our Plan is communications, communications with our Parents/Guardians, our community, our administration, our faculty and our students. Starting with communication with our Parents/Guardians, we are currently using PowerSchool:Parent to allow parents to see what their child's assignments and grades are, as well as attendance information for grades 3 - 12. System statistics show us that between 54% -56% of our parents/guardians are accessing this information via PowerSchool:Parent. We require faculty to put as much information into their electronic gradebooks as possible and to update them faithfully so that parents/guardians have the latest most up to date information available on their student. Along with this, we are encouraging all faculty to have a personal web page and keep it updated often so there is a place where parents/guardians can go to see what is being taught in the classroom as well as find resources that may provide additional help to their student outside the classroom. We are using our parent contact system, BlackBoard Connect, to provide automated attendance calling to parents/guardians, making them aware of student absences immediately. This same system is used to communicate information about school events, outstanding excuses, detention notices and school closures or emergencies.

We are continually updating our district web site to provide our community with more information about our district and the resources that are available to the community at large and to our students in particular. We post events and information that are of interest to the community as well as our school board agendas, minutes, and meeting announcements. We are using our technology capabilities to cut down on the amount of paper used in the district by utilizing our GroupWise system to provide commonly used forms, documents, and other publications of interest to our faculty and staff rather than making numerous copies and distributing them. We post common forms and instructions on our web site that are required by the community, including such documents as kindergarten registration forms, requests for information forms, etc.

The goal which covers managing our technology resources by planning for its eventual replacement has been developed and is being updated again to reflect the changing needs of the district, advances in technology, and current economic realities. The Curriculum and Technology committee that has been formed is using the curriculum to drive our technology needs for the district a definite shift from the way we had done things in the past.

We are using our network resources to provide a conduit through which the various energy management systems in our buildings are connected and managed by the Director of Support Services office. As part of the Slatington Elementary building project we have built a new central communications closet which is equipped with new more energy efficient switching equipment. The closet will also be the focus of our initiative to replace our aging stand-alone servers with a new energy efficient blade server system and associated storage area network by the end of this school year.

Maintaining the level of technology we already have while expanding in other areas such as interactive whiteboards, classroom performance systems, eReaders, and tablet computers, applications software, and on-line software subscriptions is going to be very challenging in light of the current economic conditions and the uncertainty of state and federal funding. Utilizing leasing; adding and replacing technology in phases over multiple school years; negotiating pricing below those offered by PEPPM and/or CoStars; working in consortium with other school districts and our local intermediate unit, and utilizing district staff to install and setup technology instead of

paying for vendors or contractors to do it are ways we are trying to stretch our resources to provide as much technology to our students, faculty, and staff as economically feasible.

Goals and Strategies

Goal: ACADEMIC PROFICIENCY

Description: As measured by the PSSA, PASA, and/or District assessments, students will be proficient in the core subject areas of reading, math, science, and social studies, so the District can meet Adequate Yearly Progress (AYP) each year for all students leading to successful academic transitions from elementary, to middle to high school and beyond.

Strategy: ASSESSMENT

Description: Effectively utilize well-designed benchmark assessments and formal and informal formative assessments and analyze all assessment data for the purpose of designing classroom instruction, revising curriculum, and purchasing curriculum materials and resources to meet the needs of all learners.

Activity: Assessment

Description: All teaching staff in grades K-12 will be trained in using the selected benchmark assessment tool and in interpreting the results by grade level, subgroup, and/or content area and for individual students.

Person Responsible Timeline for Implementation Resources

Nicholas, Karen	Start: 9/2/2008	-
	Finish: Ongoing	

Status: In Progress — Upcoming

Strategy: SCHOOL CLIMATE

Description: A positive school climate is conducive to effective teaching and academic performance. School personnel will be encouraged to increase their mental, physical, and emotional wellness in order to enhance their own health, which will be reflected through increased student performance.

Activity: CAT Committees

Description: District-Wide Curriculum and Technology Committee created for the purpose of assessing technology needs and making recommendations to the Technology Department and to Curriculum and Instruction.

Person Responsible Timeline for Implementation Resources

Horizuk, John	Start: 10/1/2009	-
	Finish: 6/30/2015	

Status: In Progress — Upcoming

Date Comment

9/27/2011 This committee is meeting on a quarterly basis.

Goal: TECHNOLOGY UTILIZATION

Description: All students and staff will utilize technology as a means to achieve academic proficiency and increase operational efficiencies.

Strategy: ACADEMIC ACHIEVEMENT

Description: Teachers will utilize instructional strategies that integrate technology into the classroom and data from instructional/benchmarking software/web applications to demonstrate improved student achievement.

Activity: Benchmark Assessments

Description: Purchase and administer on-line research-based benchmark assessments that are highly correlated to the PSSA, such as AIMSweb, 4Sight, and Study Island.

Person Responsible Timeline for Implementation Resources

Nicholas, Karen	Start: 10/1/2009	\$123,500.00
	Finish: 6/30/2015	

Status: In Progress — Upcoming

Activity: Educational Technology Replacement and Acquisition Plan

Description: Plan has been developed for replacing out dated technology and acquiring new technology such as interactive whiteboards, mobile laptop carts, and laptops for teachers, as well as subscriptions to content-specific, interactive web applications.

Person Responsible Timeline for Implementation Resources

Horizuk, John	Start: 9/30/2011	\$500,000.00
	Finish: 6/30/2015	

Status: In Progress — Upcoming

Activity: Proficiency Standard for Teachers

Description: Develop a standard of expectation for teachers in using technology for communication, organization, and instruction.

Person Responsible Timeline for Implementation Resources

Nicholas, Karen	Start: 10/1/2009	-
	Finish: 6/30/2015	

Status: In Progress — Upcoming

Activity: Use of Software to Increase Student Achievement

Description: All teachers will continue their use of web-based learning resources to which the district subscribes (ie. AIMSweb, Study Island, DORA, SAS, Discovery, Power Teacher, Power Grade, etc.).

Person Responsible Timeline for Implementation Resources

Nicholas, Karen	Start: 10/1/2009	\$2,000.00
	Finish: 6/30/2015	

Status: In Progress — Upcoming

Strategy: COMMUNICATIONS

Description: To enhance electronic communications with all members of the Northern Lehigh School District Community.

Activity: District Web Site

Description: Create a content-rich web site, with all departments contributing information.

Person Responsible Timeline for Implementation Resources

Hzizuk, John	Start: 10/1/2009	-
	Finish: 6/30/2015	

Status: In Progress — Upcoming

Activity: Facilitate Attendance Communications with Parents/Guardians

Description: Automated attendance calling implemented, school event notification, school closing and emergency notification being used on a regular basis utilizing BlackBoard Connect.

Person Responsible Timeline for Implementation Resources

Mrizuk, John	Start: 10/1/2009	\$5,000.00
	Finish: 6/30/2015	

Status: In Progress — Upcoming

Activity: Paperless System

Description: Forms, documents, and publications will be available for use on the intranet or internet as applicable.

Person Responsible Timeline for Implementation Resources

Nicholas, Karen	Start: 10/1/2009	-
	Finish: 6/30/2015	

Status: In Progress — Upcoming

Activity: PowerGrade

Description: Maintain PowerGrade in High School, Middle School, and Slatington Elementary School and extend it to Peters Elementary to provide parents with daily internet access to student progress.

Person Responsible Timeline for Implementation Resources

Bachman, Jeffrey	Start: 10/1/2009	\$8,500.00
	Finish: 6/30/2015	

Status: In Progress — Upcoming

Strategy: MANAGEMENT

Description: Monitor, maintain and evaluate the district information systems for security, cost effectiveness, and functionality.

Activity: Evaluating our current information systems

Description: Survey end users on the functionality and usefulness of our current information systems, including but not limited to financial accounting, student information system, data warehousing, etc.

Person Responsible Timeline for Implementation Resources

Horizuk, John	Start: 10/1/2009	-
	Finish: 6/30/2015	

Status: In Progress — Upcoming

Activity: Information Systems Infrastructure

Description: Monitor and evaluate the energy consumption by the district's Information System's infrastructure in order to make appropriate recommendations for any necessary changes.

Person Responsible Timeline for Implementation Resources

Horizuk, John	Start: 10/1/2009	-
	Finish: 6/30/2015	

Status: In Progress — Upcoming

Activity: Infrastructure and Administrative Technology replacement and acquisition plan

Description: Plan for the eventual replacement or upgrade of our network infrastructure, wide area network, servers, administrative computers and laptops, and any additional technology acquisitions that may be needed in the future.

Person Responsible Timeline for Implementation Resources

Horizuk, John	Start: 10/1/2009	\$300,000.00
	Finish: 6/30/2015	

Status: In Progress — Upcoming

Benchmark Assessments	\$7,500.00	\$7,500.00	\$7,500.00	\$22,500.00	010 - ADMINISTRATIVE BUDGET
Benchmark Assessments	\$6,375.00	\$6,375.00	\$6,375.00	\$19,125.00	010 - ADMINISTRATIVE BUDGET (Secondary)
Benchmark Assessments	\$17,000.00	\$17,000.00	\$17,000.00	\$51,000.00	390 - EXTRA GRANTS
Educational Technology Replacement and Acquisition Plan	\$85,000.00	\$62,000.00	\$60,000.00	\$207,000.00	010 - ADMINISTRATIVE BUDGET
Educational Technology Replacement and Acquisition Plan	\$85,000.00	\$62,000.00	\$60,000.00	\$207,000.00	010 - ADMINISTRATIVE BUDGET (Secondary)
Use of Software to Increase Student Achievement	\$500.00	\$500.00	\$0.00	\$1,000.00	010 - ADMINISTRATIVE BUDGET
COMMUNICATIONS	2012-2013	2013-2014	2014-2015	Total	Funding Source
Facilitate Attendance Communications with Parents/Guardians	\$1,000.00	\$1,000.00	\$1,000.00	\$3,000.00	010 - ADMINISTRATIVE BUDGET
PowerGrade	\$500.00	\$500.00	\$500.00	\$1,500.00	010 - ADMINISTRATIVE BUDGET
PowerGrade	\$2,000.00	\$1,000.00	\$1,000.00	\$4,000.00	208 - Staff And Program Development
MANAGEMENT	2012-2013	2013-2014	2014-2015	Total	Funding Source
Infrastructure and Administrative Technology replacement and acquisition plan	\$100,000.00	\$50,000.00	\$50,000.00	\$200,000.00	010 - ADMINISTRATIVE BUDGET
Subtotal	\$304,875.00	\$207,875.00	\$203,375.00	\$716,125.00	
Grand Total	\$304,875.00	\$207,875.00	\$203,375.00	\$716,125.00	

Staff Development

The district will be providing professional development opportunities to all faculty with regard to integrating technology into routine classroom instructional practice. This will be done with both in-house professional development, provided by staff members who are leaders in using technology in the classroom, and outside professional development provided by our local IU (CLIU #21) or surrounding intermediate units which ever is appropriate. Faculty will also be attending conferences such as High Schools That Work (HSTW), PETE&C, and others to learn about the latest in best practices from their peers. When new technology hardware/software is purchased, we will contract with trainers to provide hands-on training on equipment such as

interactive whiteboards, etc. Our Technology department will also conduct trainings on in-service days and at faculty meetings on various topics depending on the needs of the faculty. Our local IU (CLIU #21) also offers many professional development opportunities throughout the school year and Summer Academies over the summer months. In our area, the community college (LCCC) offers professional development for teachers as well as the local four-year colleges that offer teaching degrees and certificates.

At the beginning of each school year, we offer professional development opportunities on PowerGrade, the electronic grade book software we use in conjunction with our SIS, and basic training on utilizing our network, e-mail, personal web page creation, CPE tracker, NetTrekker, etc. Professional development is always a component that is provided whenever we add new technology to our classrooms and schools or implement new systems such as a student information system.

Since one of our goals is to set standards of technology proficiency for faculty, we will also be evaluating them against these standards and using that information to drive our professional development for technology.

The district will also provide technology training and professional development to our administration and staff on various software and hardware that is required for them to perform their job duties on an as needed basis either during regularly scheduled teacher in-service days or during the summer months.

Monitoring

The Technology/Building and Grounds Committee of the School Board, consisting of School Board members, the Superintendent, Director of Technology, Technology Coordinator, Director of Support Services, Director of Curriculum and Instruction, teachers, and community members, will evaluate the Technology Plan at least annually. The Administrative Team, which the Superintendent chairs, will also be responsible for monitoring the plan. The Director of Technology and/or his designee will meet with the Principals at least semi-annually to discuss the progress of the plan and any changes that need to be implemented. School technology committees for each school will be created consisting of the school Principal, teachers and students that will meet monthly to discuss the plan and technology issues affecting the school. This committee will serve as a monitoring tool for the Technology Department. We will also use surveys, meetings with stakeholders, and other tools such as PATI and on-line surveys to help us measure the effectiveness of the Technology Plan.

Evaluation

Given the rapid changes that are occurring related to technology, we will need to continually review and make adjustments to our Technology Plan. The Director of Technology, along with the Director of Curriculum and Instruction, will be responsible for ensuring that the approved Technology Plan is implemented. We will gather data from on-line surveys of our students, teachers and administrators; face to face meetings with these constituents; the number of hours of technology-related professional development logged; and student testing and assessment results to evaluate the effectiveness of our Plan. Using this data we will make any adjustments or corrections to the Plan as necessary. The Director of Technology and/or his designee will meet with building technology committees monthly to review goals, accomplishments and monitor progress. Additionally, these goals and accomplishments will be reviewed at regularly held Administrative Team meetings. Reports related to the goals and accomplishments of the Plan will be shared with the School Board members through the Technology/Building and Grounds Committee and input from them will be used to make adjustments and improvements to the Plan.

We will also communicate the approved Plan to the community and make annual reports regarding progress and effectiveness of the Plan via our web site and district newsletter.