

GLOVERSVILLE ENLARGED SCHOOL DISTRICT TECHNOLOGY PLAN FOR 2006-2007

Context

The Gloversville Enlarged School District's (GESD) current Technology Plan was last revised in 2005. The goals written in that plan continue in this update but the measurable objectives have been adjusted, based on achievement of many of the previous objectives and establishment of new initiatives based on documented needs.

Funds from competitive Title IID grants have significantly increased the amount of professional development in the use of educational technology, particularly in the areas of ELA, mathematics and early literacy education. This professional development was quickly transferred into actual teaching and learning methods. An observer could not fail to notice the common use of computer labs for student research and publishing, and a dramatic increase in the use of individual multimedia computers with projection devices for direct classroom instruction. The district server now serves as a location for shared files where teachers can access effective lesson plans developed by colleagues.

In September, 2004, www.gloversvilleschools.org became the district website. A district e-mail system was developed at the same time, with every staff member given an email address. These resources have resulted in a huge increase in the level of communication between the district and the community, students, parents and staff.

Data analysis has become an increasingly important skill used by teachers and administrators to drive instruction. Technology resources such as Data Mentor and AIMS have become valuable tools used to plan strategies for increasing student achievement. Student attendance is now tracked daily and by period by the Starbase data management system.

2006-2007 Technology Hardware, Software and Infrastructure

Capital Project Technology Implementation

The Gloversville School District was fortunate to receive state funding to improve existing and implement new technology.

Two hundred PIV multimedia networked instructional computers, with flat screen monitors digital LCD projectors, DVD/CDRW and enhanced audio, on mobile carts were purchased and deployed for the high school, middle school and elementary classrooms.

Memory upgrades were purchased and installed into 390 PIII computers in five elementary buildings.

District Voice over Internet Protocol (VoIP) Telephone System Implementation

Although our new phone system is not considered a teaching tool, it will prove to be a valuable tool for faculty and staff in day to day communications with peers and parents. This Voice over Internet Protocol (VoIP) telephone system is currently installed in 70% of our classrooms and all office areas. We are focusing on completing the installation by December 2006. This system provides voice mail services for all faculty and staff, and provides us with the ability to contact any room in any building within our school district by 4 digit extensions. Voice mail is accessible from any telephone within or outside the district.

Citrix Presentation Server Deployment

Our Citrix presentation server farm is nearing completion. This system is made up of 20 high end application servers that are designed to share any software program between multiple users without the need for the resources of a client computer. Once the Citrix environment is entered, all memory and hard drive resources are provided by the server farm. This system will eliminate the need for expensive client computers for most applications. Citrix will be accessible by 1000 users at any one time and will be available to students, faculty and staff from home.

Building Level Technology Liaisons (BLTL) Title IID EETT Grant Implementation

This grant gave the district a technology liaison for each school building in the district. These individuals are valued teaching staff that have volunteered to take on the task of assisting their buildings faculty with integrating technology in the classrooms as a teaching tool.

The Title IID EETT grant, in combination with the Learning Technologies grant, received thanks to the great efforts of one of our middle school faculty members,

allowed the district to purchase twenty-two multimedia computers on mobile carts, with LCD projectors. These carts were distributed to all school buildings. Mimeo, video capture devices, were purchased and have been distributed to all school buildings.

With the Title IID EETT grant, the district was able to purchase and install Success Maker and Geometers Sketchpad software, specific to improving middle school students math concepts and skills.

This Technology Plan is written to reflect the requirements and challenges of the No Child Left Behind legislation. It establishes goals for students, teachers, administrators and parents and will outline the actions to be taken so that these goals will be reached. An evaluation piece is included to assess the effectiveness of the plan.

Vision

Our vision is to facilitate learning and communication by enabling our community to become proficient critical thinkers who can access, process, analyze, synthesize and evaluate information using a variety of technological media.

High quality learning technologies must continue to be available to all of our students on an equitable basis. The District will continue to maintain and enhance our technology resources to provide an environment where teachers, administrators, parents and the community can help all students to achieve high standards.

Research shows that educational technology applications will deepen student engagement and improve student achievement by enabling them to access and analyze information, solve problems, collaborate with others and communicate their thoughts and ideas. In this way, students are more likely to become self-directed and self-motivated lifelong learners.

Our goal is to provide teachers with learning technologies that support their own learning and professional development. All teachers will receive job-embedded, high-quality and sustained professional development in integrating technology into curricula and instruction. This will strengthen their ability to employ teaching strategies that address multiple learning styles, that motivate and engage students and that support student exploration and growth.

Technology Standards for Teachers

Every teacher will be prepared and able to integrate technology into their instructional strategies in ways appropriate to their curriculum so that students will become self-directed learners, productive members of the workforce, and contributing citizens.

Every teacher will be able to use the appropriately secure level of student performance data that will allow them to track individual progress and mastery of skills and the conditions that might affect that progress. This will enable teachers to adapt instructional practices to meet individual needs.

Technology Standards for Administrators

Every administrator will support teacher access to, and use of, learning technologies by making decisions that support equitable resource allocation; high quality, sustained professional development for all teachers; and equitable application of high quality learning technologies in all classrooms.

Administrators will develop a data-driven environment that will support teachers in developing strategies , skills and policies that will inform instruction.

Technology Standards for Students

All students will become confident users of technology so that they can access information from a variety of sources. Students will use this information to assist them in analyzing data, improving academic skills, communicating with others, and solving problems.

Students will meet all of the computer technology standards defined by NYSED in MST Standard 5: Technology.

Goals

Gloversville Enlarged School District will strive to develop, implement, maintain and evaluate an educational technology infrastructure that provides teachers, administrators, parents, students, and other members of the education community with the technology resources needed to support all students in achieving high standards.

1. Every student will have the opportunity to use learning technologies to access and analyze information in ways that develop higher order thinking skills and increase their ability to use technology as a tool in solving problems. They will gain confidence in using the technology skills they will need for success in their future study and employment.
2. Every teacher will meet technology competency standards, as defined by ISTE, that ensure their ability to use learning technologies effectively in supporting student achievement of the New York State Learning Standards.
3. Every administrator will be technologically literate and will provide leadership in integrating technology into curriculum, instruction, and student learning activities. They will have access to technology resources that support them in developing management systems and in creating a school climate and culture that results in high student achievement for all population groups.
4. The District will support parents in monitoring and reinforcing the instruction their child receives at school. Parents will have the opportunity to access web-based information about their children's learning environment, climate and outcomes, as well as a wide range of student activities that can help them to assist their children at home.
5. This District Technology Plan will support the achievement of high performance standards, including those for technology literacy, by all students, teachers and other education professionals. It will include Federally mandated protection from inappropriate materials. It will ensure that every school library media center is an electronic doorway library with Internet access, library and other electronic content, and training in the use of technology.
6. The District will continue to attain and maintain a high quality infrastructure so that the hardware, software and telecommunications capabilities of the system support student achievement and management needs.

Measurable Objectives: The Gloversville Enlarged School District will fulfill all of New York State's requirements for Local Educational Agencies by enacting the following plan. (The NYS requirements are in bold-face type.)

1.4 LEAs will equitably allocate fiscal, staff and professional development resources to ensure that the acquisition, maintenance and use of high quality learning technologies support all students in achieving New York State technology standards.

The Gloversville Enlarged School District will use primarily Title IID funds to make effective staff development activities available to all teachers, administrators and other staff. Every effort will be made to make the same software available to all schools in the district, based on applicability. Fiscal resources will be used to acquire technology that is necessary to maintain a high quality system that will be used to help all students to achieve the learning standards. Much of this funding will come from Title IID competitive grants in addition to the formula IID funding.

Attachment: A detailed explanation of the allocation of the Title IID funds can be found in the program narrative and budget section of the Title IID grant application.

2.10 LEAs will allocate sufficient professional development resources to ensure that all teachers are adequately supported with the resources and skills they need to confidently integrate high quality learning technologies into curricula and instruction.

The Gloversville Enlarged School District will make a concerted, focused effort to allocate resources and training on an ongoing, sustained basis. EETT and Learning Technology Grants have been instrumental in the establishment of a high-quality, sustained program of professional development.

The District will use a significant percentage of Title IID monies, as required by NCLB, to fund numerous professional development events with the goal of assisting all teachers in acquiring the skills that they need to use technology to make their instructional lessons more effective.

- The attached Title IID grant narrative lists the specific allocation of resources to professional development.

The District will allocate sufficient resources to attaining and maintaining the technological infrastructure needed to support the integration of high quality learning technologies into curricula and instruction.

- The attached budget documents the allocation of resources for the present school year.

2.11 LEA applications for technology funds will describe appropriate professional development activities for integrating technology into curricula and instruction through ongoing, sustained, intensive and high-quality professional development.

EETT funds have allowed for the creation of a Building Level Technology Trainer in each district building. This person is a teacher who works on a daily basis with fellow teachers to integrate technology into daily lessons. Professional development activities have included instruction in the use of Internet resources such as NYLearns and purchased software packages such as SuccessMaker and Autoskills. Teachers have participated in workshops that enable them to make their own websites and to develop their own teaching materials through the use of PowerPoint and videostreaming. Training has helped teachers to learn to use new hardware resources such as projection devices, SmartBoards, digital photography and scanners.

A Learning Technology grant has helped the district to establish a model for professional development in which teachers are given paid time to search for appropriate technology resources and to then develop actual lessons that effectively address learning standards in mathematics and ELA, with a particular emphasis on finding resources for students with disabilities.

The district will use formula Title IID funds to develop additional professional development opportunities fashioned after these two existing programs. Funds from all three sources will be integrated, as appropriate, to ensure that technology continues to be embedded into daily instructional practices.

2.12 LEAs will develop appropriate processes and evaluation measures to ensure that all teachers meet the technology standards identified in 2.1 and 2.2 above.

Each teacher will complete an annual survey designed to assess his or her level of competence at using technology to improve instruction. This survey will be analyzed by the building principal. Teachers will be asked to meet with the building principal. The purpose of the meeting will be to identify skill areas for improvement and to collaboratively develop an action plan for making progress toward acquiring additional skills. This plan may be completed in the context of the District's professional growth alternatives to a formal observation. The building principal will monitor the action plan and report on the amount of progress in the teacher's summative evaluation.

Teachers will demonstrate the mastery of newly acquired learning technology skills in one of the following ways:

- 1) The teacher may submit a written description of a lesson that was enhanced by using the newly acquired technology skill.
- 2) The teacher may demonstrate the use of the newly acquired technology skill during a classroom observation.
- 3) The teacher may provide a certificate documenting the teacher's successful participation in a professional development course that taught the newly acquired technology skill.

The survey will also be used at the district level to design professional development activities that will help teachers to gain additional skills. The district will personally contact specific teachers to inform them about professional development activities from which they would benefit.

- The survey for the current school year is attached to this plan.

3.10 LEAs will allocate sufficient professional development resources to ensure that all teachers are adequately supported with the resources and skills they need to confidently integrate high quality learning technologies into curriculum and instruction.

The Gloversville Enlarged School District will provide administrators with the information needed so that they can knowledgeably assess the technologies available in their respective buildings and plan for future needs. The District will provide training in appropriate learning technologies that will assist all administrators to become more efficient as communicators and coordinators of educational activities.

District administrators will allocate the necessary resources to enable teachers to meet previously defined educational technology objectives.

3.11 LEA applications for technology funds will describe appropriate professional development activities for integrating technology into curricula and instruction through ongoing, sustained, intensive and high-quality professional development.

Professional development activities for both teachers and administrators are described in 2.11. Administrators will be made aware of the professional development activities and will be active supporters of the BLTL in their buildings. Each administrator will include the increased use of technology to improve student achievement as an annual goal.

3.12 LEAs will develop appropriate processes and evaluation measures to ensure that all teachers and students meet the technology standards identified in 2.1 and 2.2 above.

District Administrators will play an active role in evaluating the use of educational technology by teachers and by students as addressed in previous sections.

3.13 LEAs will use student and other local teaching and learning data to inform curricula and instruction.

The Gloversville Enlarged School District is dedicated to using data to improve our instructional program. Extensive data analysis is being done on an ongoing, systematic basis to identify needs that will inform instruction. Much work has already taken place to create and maintain consistent student records that can be accessed throughout the District. We will continue to build capacity for the system so that additional data can be smoothly integrated with existing data.

We are working with the Regional School Support Center and data specialists from Questar BOCES, who are helping us to disaggregate our data from the past five years. Access to DataMentor has enabled us to analyze assessment results down to the individual subskill level. This is enabling us to create an overview of student needs so that we can develop and implement instructional strategies to address those needs.

A Building Implementation Team has been established in each school. These planning groups consist of teachers, administrators and parents representing grades K-12 and will meet to review the data, evaluate needs and develop intervention strategies and curriculum adjustments.

AIMS (Academic Intervention Management System) was implemented during the 2003-04 school year. This program will merge student data from Starbase with student data from AIS teachers, to produce quarterly reports describing student academic progress. This continues to allow teachers to better plan intervention strategies to improve student performance and will provide more accurate data through immediate access to disaggregated data and individual student data.

LEAP and STEP data will be utilized to identify gaps in the delivery of effective instruction to various subgroups of students. It will be used to identify students in need of additional tutorial services such as AIS.

Curricular adjustments will be made via district programming committees (DAC) to respond to identified areas from data analysis.

4.7 District technology plans will incorporate plans to engage parents through the development of electronic school-parent-community communications mechanisms, including the provision of such information as students' course-taking options, curriculum, assignment, learning standards and assessments, teacher credentials, and other factors that impact children's learning opportunities, learning climate and learning outcomes.

The Gloversville Enlarged School District will make many resources available to parents so that they are more able to help their children to reach a high level of achievement of the learning standards.

- Gloversville Middle School will provide parents with information about how to use the online resources that were acquired the purchase of McDougall-Littell's Middle School Mathematics. These resources, entitled "Parents as Partners," can be accessed at ***Classzone.com***.
- The district website, ***Gloversvilleschools.org***, contains links to a wide variety of parental resources. These include instructional activities that students can use at home. The district website will be continually amended to include more information about student courses, schedules, learning standards, curriculum, assessments, and NCLB requirements.
- The EETT grant will be used this year to encourage the creation of individual teacher websites. These will contain information about specific activities and instruction taking place in a student's classes and will serve as an important link between families and the school.
- The local cable station is housed within the district and includes a television studio. This station will be used to broadcast programs to every home in the school district. These programs will be used to inform the community about many school services. Programming will include strategies that parents can use to help their children with homework and school projects. The hope is that the television station will provide an interactive service that will lead to increased student achievement.

- Gloversville Enlarged School District has received an REA grant and a Family Literacy Grant that combine paper resources with technology. Title 1 parent coordinators work with families to teach them how to find information on the internet to help both parents and students to improve academically.
- Gloversville has collaborated with HFM BOCES to provide on-line instruction that can lead to a GED diploma for families of AIS students.

5.9 In accordance with NCLB Section 2414, each local educational agency applying for funds under this Act will submit to the State an updated local long-range strategic educational technology plan consistent with the objectives of the statewide educational technology plan.

This plan is consistent with the objectives of the statewide educational technology plan. Details concerning infrastructure are attached at the end of this document and are titled, INTERNAL ANALYSIS – INVENTORY.

5.10 Districts and BOCES will collaborate to ensure that district technology plans are consistent with Chapter 793 plans.

The Gloversville Enlarged School District and Hamilton-Fulton-Montgomery BOCES will collaborate to ensure that both organizations are consistent in their goals and objectives and delivery of services.

5.11 District technology plans will be based on a needs assessment that a) incorporates disaggregated data; b) is focused on ensuring that all students have the opportunity to meet New York State technology standards identified in 1.1 above; and c) involves classroom teachers and school library media specialists in the development of such plans.

- The Gloversville Enlarged School District Technology Plan will include a needs assessment that provides information about each subgroup of the student population as specified by NCLB and NYSED.
- The District Technology Plan will include specific curriculums that will be implemented to give all students the opportunity to meet the New York State technology standards. (attached.)
- A District Technology Committee consisting of classroom teachers, school library media specialists and other district staff will assist in the development of the District Technology Plan.

5.12 District technology plans will demonstrate how planned technology uses will support all students in achieving New York State technology standards.

The attached curriculum guides give a detailed account of the instruction that all students in the District are receiving in technology. This instruction is specifically designed to help all students attain NYS MST Standard 5.

5.13 District professional development in integrating technologies into curriculum and instruction will be high quality, intensive and sustained.

The Gloversville Enlarged School District will provide numerous professional development activities to help all teachers integrate technology into their instructional lessons. The District will commit to providing high quality learning experiences for the staff. The nature of these activities will change as the needs of the staff evolve. The District will continue to offer professional development activities to the staff as new educational technologies become available.

The Gloversville Enlarged School District will use the following definition of high quality professional development that is based on section 9101(34) of the NCLB.

High quality professional development is more than just coursework designed to fill a State or district requirement. It is a set of activities designed to produce a demonstrable and measurable effect on student academic achievement that is grounded in scientifically based research. High quality professional development in the area of educational technology includes activities that :

- *are an integral part of broad school-wide and district-wide educational improvement plans*
- *are high quality, sustained, intensive, and classroom-focused in order to have a positive and lasting impact on classroom instruction and the teacher's performance in the classroom and are not 1-day or short term workshops or conferences.*
- *For IID (technology) - do not have to be based on scientific research as do other professional development activities*
- *are developed with extensive participation of teachers, principals, parents, and administrators*
- *to the extent appropriate, provide training for teachers and principals in the use of technology so that technology and technology applications are effectively used in the classroom to improve teaching and learning in the curricula and core academic subjects in which the teachers teach.*
- *as a whole, are regularly evaluated for their impact on increased teacher effectiveness and improved student academic achievement, with the findings of the evaluations used to improve the quality of professional development*
- *include instruction in the use of data and assessments to inform and instruct classroom practice*

- *may include activities that provide follow-up training to teachers who have participated in activities described the above clauses that are designed to ensure that the knowledge and skills learned by the teachers are implemented in the classroom*

5.14 District technology plans will ensure that allocation of technology resources, including software and hardware acquisition and maintenance, and teacher and administrator professional development, is focused on any high need/low resource schools within that district.

The Gloversville Enlarged School District will identify high need/low resource schools within the District. Professional development for teachers and administrators in the identified schools will be accelerated so that proficiency in using technological resources can be attained quickly. Appropriate software and adequate hardware will be acquired that focus on the needs of identified schools. Identified schools will be a priority in terms of maintenance of technology.

5.15 District technology plans will focus on providing equitable technology access for all students for the purposes of a) ensuring equity in students' learning opportunities, climate and outcomes, and b)eliminating discrepancies between buildings and population groups.

- All students in the Gloversville Enlarged School District will be given equal access to technology resources so that all students have an equal opportunity to learn.
- All school buildings within the district will be equipped with technology resources that are equivalent in effectiveness.
- Each subgroup identified by NCLB and NYSED will be given equal access to technology resources to ensure an equal opportunity to learn and will be guided by a curriculum that is equitably and comparably applied.

5.16 District technology plans will have in place a policy of Internet safety for minors that includes the operation of a technology protection measure for any of its computers with Internet access that protects against access to visual depictions that are obscene, child pornography, or harmful to minors; and will ensure that such technology protection is enforced during any use of such computers by minors. Further, similar protection against visual depictions that are obscene, or child pornography, must be ensured for such computers even when used by adults.

The superintendent annually develops and distributes a Code of Conduct (which can be modified as technology evolves) to govern access to, and use of, electronic information networks. At a minimum this Code of Conduct provides that use of the Internet or other electronic networks will be conducted in accordance with applicable statutes and regulations regarding copyright and technology use. Distribution of the Code of

Conduct shall be made to all students and parents and they will be asked to sign a "User Agreement" complying with the guidelines outlined within the Code of Conduct.

All students and staff using computers within the District are required to act according to the Computer Code of Conduct that maintains Internet safety for minors.

- The Code of Conduct for the current school year is attached to this plan.

5.17 District technology plans will include strategies to ensure that all school library media programs achieve electronic doorway library status.

All school library media programs in the Gloversville Enlarged School District have achieved electronic doorway library status. The programs of each library will be reviewed annually and all libraries will be provided with the resources necessary to maintain this status.

All schools use automated library systems, which are either Internet based or provided by BOCES. Some library automation programs are accessed within the library only and some can be accessed from any networked computer in the building. Access to external services is accomplished via a 10 MB ATM segment on fiber optic cable at the high school and distributed on a 1 GB fiber optic WAN in a star configuration. There is no wheel design configuration for WAN redundancy, with the exception of the middle school, which is connected to the high school via buried fiber optic cable creating one flat campus network.

**Code of Conduct
for Network Services
and
Internet Safety Policy**

DEFINITIONS

Network Services refers to the services provided on the local area network within the school, and the Wide area network throughout the district including Internet connectivity available from the desktops of computers on the network.

These services include:

- Network print services
- File sharing and storage
- Internet access
- e-mail (limited accounts)

Network Users refers to students, staff and others given access to the school network services.

RIGHTS

Users have the right to:

- . Use available technology including network services in their daily learning.
- . Examine a broad range of opinions and ideas in the educational process including the right to locate, use and exchange information and ideas using network services.
- . Communicate with other individuals including those accessible using network services.

RESPONSIBILITIES

Users have the responsibility to:

- . Use and maintain school district hardware and software competently and respectfully.
- . Use Internet to facilitate communications in support of research and education.
- . Learn to appropriately use the network services.

- . Follow all State and Federal statutes regarding copyright and technology use.
- . Maintain and respect the privacy of the user accounts and activities of all (hacking).
- . Follow the established guidelines and acceptable computer etiquette.
- . Report any violation of appropriate network etiquette to network services personnel.
- . Use appropriate language at all times.
- . Respect the data and files of other users (plagiarism).
- . Consume resources such as paper, time, or access appropriately.
- . Identify all their communication on the Internet and behave in an ethical and legal manner.

INTERNET SAFETY POLICY

- . The Gloversville Enlarged School District has developed a Local Internet Safety Policy in accordance with the Children's Internet Protection Act (CIPA) and Neighborhood Children's Internet Protection Act (N-CIPA). The Gloversville Enlarged School District is currently in compliance with the CIPA by implementing a technology protection measure (web filtering software) on July 1, 2002.

PARENT OR GUARDIAN PERMISSION FORM

As the parent or guardian of this student, I have read the Terms and Conditions of the Gloversville Enlarged School District Technology Policy and Code of Conduct for Network Services. I understand that network access is designed for educational purposes. The Gloversville Enlarged School District has taken precautions to eliminate controversial material; however, I also recognize it is impossible for the school district to restrict access to all controversial materials and I will not hold them responsible for materials acquired on the network. Further, I accept full responsibility for supervision if and when my child's use is not in a school setting. I hereby give permission to issue an account for my child and certify that the information contained on this form is correct.

Parent or Guardian (please print): _____

Signature: _____ Date: _____

Daytime Phone Number: _____ Evening Phone Number _____

INTERNAL ANALYSIS - INVENTORY

In preparation for the development of a comprehensive school technology plan, it is best to review what already is in use, how it is being used and finally, how it may be effectively utilized in the future.

PROGRAM SYNOPSIS

Specifically, at the high school, technology has been actively incorporated throughout all curriculum areas. Several courses such as, Principles of Accounting, Keyboarding, CAD (Project Lead The Way), BCA, Desk Top Publishing and Web Page Creation have been cited as examples to document the use of technology. In addition, other areas involving either college courses, (SUPA-Public Policy), or research papers, (English and Social Studies), and the Math department has incorporated the use of online applications. Technology has enhanced the Foreign Language areas by giving students the opportunity to communicate directly with students from the countries they are studying. The areas of Music and Technology each have new technology areas. The Music department has an advanced computerized recording studio system to create CD's and produce demo pieces for students to submit to colleges. A new music computer lab with integrated midi keyboards will soon be in place. The Technology department participates in the Project Lead the Way program which offers advanced computer assisted design courses and computerized digital electronics courses. In the automotive course area students access the most current vehicle specifications manuals on computer. New cart computer presentation systems in every classroom have been ideal for lessons utilizing streaming video. Many classroom projects and reports are now submitted in digital (Power Point) format. In the Library Media Center students sign out books from Libraries throughout the area with an automated Library exchange system. The Guidance Department has specialized software that aids students in their search for the right colleges, which interacts with college websites on the internet, allows students to create their own profiles, submit applications and correspondence, and is available on all high school computers. Internet access has been made available to all computers on the Local Area Network (LAN).

Existing high school equipment includes two shared curriculum labs, one with 29 networked computers, the other with 25 networked computers. The Social Studies department has a computer classroom with 15 networked computers in Nova desks. Technology has a Computer Assisted Drawing (CAD) lab with 18 networked computers. All labs have teaching stations with projectors and high-speed laser printers. The automated Library-Media Center has a high speed laser printer, 8 networked computers for research and 3 networked computers for the Library Automation System. The high tech Distance Learning classroom has 17 networked computers in Nova desks. Every classroom is equipped with a minimum of one networked computers. Each classroom has a P4 multimedia networked instructional computer, with digital LCD projector, DVD/CDRW and enhanced audio, on mobile carts. Three P4 mobile systems are available in the Library Media Centers for sign

out. A total of 185 networked computers are available to all users with all systems accessible to the internet.

At the middle school, each student participates in a ten-week "computer class" in grades 6, 7, and 8 as a part of the special area rotation. Concepts taught include word processing, spreadsheet, database, keyboarding, desktop publishing, presentation creation, graphics creation and Internet browser. The 6th grade technology session is directly tied to a ten-week communications block. Together, the program focuses on improved communication skills. The areas of Music, Art, Technology and Physical Education each have networked computers equipped with specialized software and hardware designed for each area. Faculty has integrated technology into every subject area. Computer generated projects; reports and presentations are required in all three grade levels.

From an equipment view, all networked computers are connected to the Internet. Each grade level has it's own computer lab with 30 networked computers, plus an additional shared computer lab with 33 networked computers. All labs are equipped with high-speed laser printers, scanners and teaching stations with digital LCD projectors. The automated Library-Media Center has 10 computers for research and 2 for the library automation system. Every classroom is equipped with a minimum of two networked computers. Each classroom has a P4 multimedia networked instructional computer, with digital projector, DVD/CDRW and enhanced audio, on mobile carts. Four P4 mobile systems are available in the Media Center for sign out. The Middle School has 215 networked computers accessible to the internet and available to all users.

At the elementary school level, a variety of multimedia software programs are in use, as well as word processing, desktop publishing, animated presentation creation and self-paced reading comprehension. Certified and protected children's web sites are used for drill and practice that contain animation and sound. The Library-Media Centers have integrated with enhanced self-paced reading comprehension programs that utilize book titles available in the school libraries. Software programs and manuals that assist teachers with integrating curriculum and technology are available in each school. All elementary libraries have partial automation.

Currently four of the elementary schools have one computer lab with 30 networked computers, all with high speed laser printers, color printers, scanners and teaching stations equipped with digital LCD projectors. The elementary school Library Media Centers have a minimum of 2-5 networked computers with laser printers. Every classroom is equipped with a minimum of two networked computers. Each grade level has 3-4 P4 multimedia networked instructional computers, with digital LCD projectors, DVD/CDRW and enhanced audio, on mobile carts. A total of 433 elementary computers are available to all users and accessible to the internet.

EXISTING ENVIRONMENT

The Gloversville Enlarged City School District consists of five elementary school buildings - Boulevard, Kingsborough, McNab, Meco, and Park Terrace, Gloversville Middle School, Gloversville High School and a new Transportation & Maintenance/Network Operations Center (NOC). The District administration offices are located in the basement level of the middle school complex. A distance of one to five miles separates all schools from each other, with the exception of the middle school and high school that share the same campus.

The schools vary in age from approximately seven to upwards of ninety years old. Considerations impacting the implementation of a network cabling system include: solid wall construction, lack of hung ceilings or raised floors, and no consideration given to cable infrastructure in base building design.

For student Network activity, presently, all buildings have a complete and certified category 5 and 6 copper cable infrastructure with 100 Mbs FastEthernet switch closets and fiber optic backbones with high-speed gigabit switches. All buildings are connected via a leased 1 Gbs Mylan Viper WAN. Administrative computing tasks are all consolidated in the NOC, and have a secure server domain hosting financial/personnel and student demographic data that is accessible only to authorized users in each building. The NOC is the main hub for internet access, the Wide Area Network (WAN) and the VoIP telephone system.

In the present configuration, the entire district is connected with Personal Computer (PC) networks over fiber optic cable which provides district wide Internet access, interconnectivity between buildings, communications, availability of administrative servers to building offices and allows single point network administration. All elementary school computers are newer, (PIII & PIV), and are capable of running all installed applications. High school and middle school labs are newly equipped with all P4 based network computers. The high school and middle school classroom faculty networked computers will soon be replaced with thin client terminals. The thin client terminals will be used to access the districts new Citrix presentation server environment. These systems are primarily for use in New York state mandated period by period attendance reporting, utilizing a web browser and our new web based student demographic system. The districts nine domain or building servers are utilized mainly for user authentication, desktop profile access, administrative maintenance, network security, database applications, print services, Dynamic Host Core Protocol (DHCP), Domain Name Service (DNS) and personal home directory file storage. Network Attached Storage (NAS) devices are used for archive data storage, networked computer hard disk images and application updates. The internal connection speed is acceptable, for most multimedia and demanding applications, at 100 Megabits per second (Mbs), data transfer rate, from the sub-closet switches to the desktops and 1 Gigabit per second (Gbs) on the fiber

backbone that connects the Main Distribution Frame (MDF), or main closet, to the Intermediate Distribution Frame (IDF), or sub-closets.

There are no critically outdated computers currently installed or maintained in any district buildings. All elementary schools are completely networked utilizing the Windows 2003 Network Operating System (NOS) on servers and Windows 2000 pro on client computers. The districts two networked computers per classroom goal has been achieved at the elementary school level. The high school and middle school are completely networked utilizing the Windows 2003 NOS on servers and Windows 2000 pro on client computers. A one networked computer per classroom goal has been achieved at the high school and middle school, with work continuing to achieve a two networked computer per classroom goal.

PROGRAM GOALS

Staff Competency Goals (Five-Year Goals)

Professional Development

The effective planning and implementation of professional development opportunities are essential if educators and students are going to fully utilize technology. The core competencies that will be required of all information workers in the 21st Century include the ability to access, analyze and communicate the abundance of information available, today and in the future. These core skills will serve as the foundation from which lifelong learners will create their own knowledge using the abundance of information available. In order for those skills to be developed and refined, continuous professional development opportunities will be provided to educators, along with the chance for recipients of computer technology training and staff development to practice and refine their newly acquired knowledge.

The key to effective staff development related to technology is to transfer knowledge and skills into realistic learning opportunities, everyday in each classroom. The staff competency goals identified to support student learning and educational reform are those from the ISTE (International Society for Technology in Education) guidelines for Accreditation of Educational Computing and Technology (1992), which are:

- 1 Demonstrate ability to operate a computer system in order to successfully utilize software.
- 2 Evaluate and use computers and related technologies to support the instructional process.
- 3 Apply instructional principles, research and appropriate assessment practices to the use of computers and related technologies.
- 4 Explore, evaluate and use computer/technology-based materials, including applications, educational software and associated documentation.
- 5 Demonstrate knowledge of uses of computers for problem solving, data collection, information management, communications, presentations and decision making.
- 6 Design, develop and implement student learning activities that integrate computing and technology for a variety of student grouping strategies and for diverse student populations.

- 7 Evaluate, select and integrate computer/technology-based instruction in the curriculum of one's subject area(s) and/or grade levels.
- 8 Demonstrate knowledge of use of multimedia, hypermedia and telecommunications to support instruction.
- 9 Demonstrate skill in using productivity tools for professional and personal use, including word processing, database, spreadsheet and print/graphics utilities.
- 10 Demonstrate knowledge of equity, ethical, legal and human issues of computing and technology use as they relate to society and model appropriate behaviors.
- 11 Identify resources for staying current in applications of computing and related technologies in education.
- 12 Use computer-based technologies to access information to enhance personal and professional productivity.
- 13 Apply computers and related technologies to facilitate emerging roles of the learner and the educator.

Administrative Goals (Five-Year Goals)

- 1 Utilize technology to efficiently record and file important data related to:
 - a personnel
 - b facilities
 - c students
 - d scheduling
 - e attendance
 - f payroll
 - g purchasing
 - h accounts payable
 - i inventory
 - j transportation
 - k grants
 - l budgeting

- 2 Utilize technology to produce reports required by:
 - a federal government
 - b state government
 - c local government
 - d school officials

- 3 Utilize technology to effectively monitor:
 - a curricular development
 - b personnel evaluation
 - c student performance
 - d professional development

- 4 Utilize technology to efficiently and effectively communicate within the school district and between the school district and community through means such as:
 - a messaging
 - b e-mail
 - c fax
 - d voice/voice mail
 - e video conferencing
 - f educational groups (Internet)
 - g generated reports
 - h web page (Internet)

- 5 Utilize technology to locate, identify, and retrieve a variety of important information and resources through the Internet.

Information Access Goals (Five-Year Goals)

- 1 Utilize telecommunications with sufficient bandwidth to process voice, data, images and videos, in reasonable time.
- 2 Utilize both internal and external network systems to connect within our school district, and between our school district and community and with the world including linking all schools and community libraries through a network.
- 3 Utilize distance learning, to expand instruction at all levels of our school district and within the entire community.
- 4 Utilize multimedia technology to enhance teaching and learning at all levels within the school district and to more effectively keep the community informed.
- 5 Utilize the latest technology to increase the school district's and community's capacity to store information.

Instructional/Curricular Goals (Five-Year Goals)

- 1 Utilize technology to help administration:
 - a Manage curricula development, administration and revision.
 - b Monitor the implementation of instruction.
 - c Evaluate student learning outcome assessments.
 - d Identify state-of-the-art instructional resources necessary for effective teaching and learning.

- 2 Utilize technology to help teachers:
 - a Use word processing, data base, spreadsheets, graphics and other purchased software lessons when appropriate.

 - b Use streaming video technology to bring visual and audio information into the classroom.

 - c Provide a variety of hands-on learning experiences for students as they learn by interacting with computers and peripheral technology.

 - d Provide distance learning opportunities in the classroom through networks such as the Internet, etc.

 - e Present effective multimedia presentations that will increase student motivation.

 - f Provide increased research opportunities for students through computer networked research resources.

 - g Provide unique challenges to students by allowing computer aided individualized instruction and increased variety and choices.

 - h Provide cooperative learning experiences through computer peer-tutoring and group project work.

 - i Provide teachers with the opportunity to develop their own software so that computer-aided and multimedia presentations better reflect teacher prepared lessons.

 - j Integrate material between content areas, when appropriate.

 - k Generate individualized student learning plans.

 - l Generate more appropriate classroom assessments that are matched to taught curricula, Common Core and Curriculum Frameworks.

- 3 Utilize technology to help students:
- a Gain increased access to computer technology (knowledge and skills).
 - b Learn to use and apply a variety of hardware and software products.
 - c Learn to work more effectively and efficiently through computer-aided learning and task completion.
 - d Learn to individualize their learning through a variety of choices of material and resources.
 - e Learn to produce hard copies of work that are useful and of high quality.
 - f Learn to predict outcomes and solve problems with technology (e.g., critical thinking).
 - g Learn how to access, evaluate, organize and utilize information from sources throughout the school site (i.e., such as from the school libraries, department libraries).
 - h Learn how to access pertinent information from sources other than at the school site, through networks to other schools within the school district (intranet) and through networks throughout the world (Internet).
 - i Learn to work cooperatively with fellow students on group projects, aided by computer technology.

TECHNOLOGY PLAN FUNDING

2006 – 2007

Computer Hardware categorical aid	\$	50,000.00
Computer Software categorical aid	\$	43,500.00
District Wide Capital Project (04-07)	\$	1,433,333.00

2007 – 2008

Computer Hardware (District)	\$	50,000.00
Computer Software categorical aid	\$	43,500.00
District Wide Capital Project (04-07)	\$	1,433,333.00

2008 – 2009

Computer Hardware (District)	\$	50,000.00
Computer Software categorical aid	\$	43,500.00
Tentative Capital Project (07-09)	\$	600,000.00

Additional funds will be available through Federal, NY State, Title IID EETT, and Learning Technologies Grants.

EVALUATION PROCESS

On an annual basis, the Technology Committee will review the District's progress toward the 5-year administrative, information access, and instructional/curricular goals. They will recommend modifications in the process to reach the goals. If necessary they will add new goals to meet new District needs.

TASKS TO BE COMPLETED DURING THE 2006-2007 SCHOOL YEAR:

- I. Expanded Technical Configuration and Implementation Design
 - A. Upgrade the Wide Area Network (WAN) to Gigabit high speed fiber optic (Completed 2004-2005). *
 - 1. Required to support the technology upgrades approved in the District capital project of 2004-2007.
 - a. VOIP district wide telephone system (In Progress). *
 - b. Citrix application distribution system (In Progress). *
 - c. Streaming video distribution system. *
 - d. Server for high bandwidth reading/evaluation applications. *
 - e. High bandwidth web based applications.
 - f. Wireless system infrastructure in all district buildings (In Progress).
 - g. District Web Page server. *
 - h. District DNS, DHCP and Terminal servers (In Progress). *
 - i. District wide security and fire alarm system (In Progress). *
 - j. District wide automated food service system (Completed 2005-2006). *
 - k. Single domain authentication (Completed 2004-2005).
 - l. Backup and disaster recovery system (In Progress).*
 - B. Upgrade existing LAN equipment * to accommodate added servers/workstations and connectivity to existing fiber LAN backbones (Completed 2005-2006).
 - C. Appropriate UPS systems, equipment racks and cabling (In Progress).
- II. Time frame for Implementation
 - A. Technology upgrades are scheduled to begin as soon as the Gigabit fiber WAN is installed and operational (Completed).
 - B. Submitted for E-Rate funding for the 2004-2005 school year.
- III. District wide email system (Completed 2003-2004).
- IV. Resources - Future Years
- V. Software Application Structure (Citrix)
- VI. Replace High school and Middle school classroom computers with thin client terminals that will operate with the Citrix system.

* To include installation, maintenance and support.