

## Laurens Central School Technology Plan September 2007-June 2010

Laurens Central School is a K-12 District located in Laurens, NY. The district serves approximately 450 students. Presently the district facilities consist of one main building that dates back to 1929, with additions in 1955, 1967, and 1990. The bus garage is located one mile from the main building. The district is currently in the midst of a \$17.75 million dollar capital project which will include the construction of thirteen classrooms, a gymnasium, multipurpose theater arts/music performance area and major renovations of the original parts of the building.

Most of the goals of the previous technology plan have been met or are in the process of being met. For example, new servers have been purchased on a schedule. Wiring will be upgraded to CAT-6 throughout the building. A layer two switch has been purchased as part of a three year schedule. Numerous wireless access points have been installed throughout the building. Our Sonic Wall proxy blocking capabilities have increased substantially in the past year.

In looking toward the future, the school district vision with regards to technology is focused on the development and improvement of both the infrastructure and equipment available for educational use in both the current building and the new additions. We plan to offer substantial professional development to make users familiar with the new pieces of hardware and software and envision a learning environment for students and teachers where technology is easily accessible at all times for the purposes of improving learning, instruction, communication, and ease of work related tasks.

### **I. Standards-based Learning and Student Academic Achievement through Technology Use**

The district has made significant advances over the past two years in order to help students meet and exceed challenging state academic standards through the use of technology. Wireless access points have been installed throughout the building and our business lab and technology labs are now wireless, which not only creates more workspace and convenient access to the Internet but improves student safety with the removal of countless Ethernet cables. Students and teachers now have access to two wireless mobile laptop labs that consist of twenty laptops each. Projects and research can be done with ease in classrooms as opposed to taking up time in the library or computer labs. Teachers are effectively using document cameras and Smart Boards and their colleagues are receiving training with these pieces of technology. Global positioning systems are being used in the science department.

The district has invested heavily in software that will improve instruction and student learning. We identified the need for students to learn keyboarding at an earlier age in order to be competitive in the digital world; as a result we have purchased the *Scholastic Keys* program to familiarize students with keyboarding before they reach middle school. Students in grades kindergarten through six will be exposed to *Scholastic Keys* during the 2007-2008 school year. We have purchased a building-wide site license for the Adobe Creative Suite to enhance student projects and teacher presentations. Our fifth grade classes have used our recently created domain accounts to offer individualized student practice for the state English Language Arts exam. For students who are struggling with reading, we have installed the *Fast For Word* program on the machines in our Learning Center and have installed new machines to enhance the operability of the program. Students are given remediation at their pace and the program has led to significant progress in many of our students, some even getting up to grade level in reading in a relatively short period of time. We are in the early stages of implementing a Musical Instrument Digital Interface (also known as MIDI) lab in our music room so that students have access to the latest technology in musical production hardware and software. Several of our secondary teachers use

online Regents review as a supplement to their classroom review for the exams. We currently offer a course in robotics for high school students that relies heavily on technology and our MST class uses computers to plan, execute, and evaluate the launches of model rockets. Our seventh graders are all required to take an Information Technology course that is offered by our school librarian, who has significantly upgraded the digital capabilities of both our elementary and high school libraries. Our foreign language students have been maintaining consistent online communication with a group of students from France and created a blog while in France in November, 2007 so that parents and the school community could learn about their trip. We have a group of seniors that are presently taking an online AP course in English Literature and Composition being offered through the University of North Carolina. Students are currently working on collaborative projects such as e-portfolios and city/state projects using Microsoft Publisher. We hope to expand the use of technology with more collaborative efforts through tools like pod casting and blogging.

Student improvement is difficult to achieve without an improvement in instruction. We have also used technology to help improve teaching in our classrooms. This fall the staff will be analyzing data generated from the New York State Accountability Reporting Tool, also known as NYSTART, to identify and address gaps in instruction in both mathematics and English Language Arts. Our teachers have been creating online curriculum maps using School Tools in an effort to align curriculum and assessments with ever changing standards and performance indicators. Information on students with disabilities is now accessible through IEP Direct as opposed to searching through filing cabinets. The Powerschool student management system allows for staff to consistently update parents on student achievement, progress, and attendance, which will lead to more effective communication between school and home and more consistent academic achievement from our students.

We have numerous goals for implementing technology in a way that will improve teaching and learning at Laurens. Teachers will be given codes to access NYSTART so they have the ability to analyze student test results and areas of need and work with teachers at other grade levels to differentiate lessons and assessments in a manner that will address student deficiencies and gaps in instruction. The chief information officer will monitor teacher use of NYSTART to ensure that it is being used by all 3-8 staff and that collaboration with other grade levels is occurring based on the information available through NYSTART. Students will receive more instruction on the effective use of their domain profiles. By 2009 the district expects that all classes in grades 3-8 will be using domain profiles to offer digital review for state assessments and that teachers at the secondary level will take advantage of both Regents review software and online Regents review sites. Our BOCES has made the creation of professional learning communities a priority for member districts. We plan to use technology to foster increased and enhanced communication between teachers in our school and teachers throughout the region, the country, and the world and hope that our teachers are actively involved in online professional learning communities by the year 2010. By the conclusion of this plan we also expect that students and teachers will be using available tools such as the Virtual Learning System (VLS) and web quests more frequently.

Students do not have unfettered access to the district's technological resources. Parents and students are required to read our Acceptable Use policy and sign a permission slip in which they acknowledge their responsibilities when using school technology. E-mail for personal, non-school related use is prohibited, as is instant messaging and access to sites such as Myspace. This policy is part of our Student Code of Conduct and a violation of the policy could lead to disciplinary consequences up to and including the loss of privileges on school computers.

## **II. Access to Advanced Technology for Effective Teaching and Learning**

The current capital project includes an aggressive effort by the District to upgrade infrastructure in the current building and provide access to cutting edge technology for all students and staff in the new areas under construction. The Technology Committee is confident that by the conclusion of

this plan Laurens Central School will be able to compete with almost any small school in the region with regards to availability and integration of technology.

The classroom addition that is currently under construction and scheduled for completion by the summer of 2008 includes the possibility for new technology in every one of the thirteen rooms being built. It is the district's goal to have ceiling-mounted LCD projectors in each of those classrooms by the end of the year 2010. Each room will be wired for mounting the projectors and projectors and mounts will be purchased and installed as resources allow. It is also a district goal to invest in Smart Boards as more staff members become comfortable using them. Wireless access points will be installed throughout the addition and the district's bandwidth will be upgraded to 1gigabit by that time, increasing our intranet capabilities anywhere from ten to one hundred times its current capacity. Network attached storage is now in place for archiving electronic communications and meeting the demands of "e-discovery" laws that are now in effect. This is important to Laurens because a great deal of communication occurs via e-mail.

The district is currently exploring the possibility of installing thin clients in classrooms and offices as an alternative to our current operating systems. Thin clients would drastically reduce power consumption, conserve space, and provide the opportunity for "virtualization" where multiple operating systems could be run off of thin clients on a single server. Because we are a "mixed environment" of Windows and OS10 at this time, this capability would be extremely practical for Laurens. Our technology coordinator is experimenting with thin client use in science classrooms. It is the district's goal that based on an analysis of their effectiveness in the science rooms, thin clients would be installed in the new classroom addition and would become part of the replacement schedule in other parts of the building.

The renovations in the 1929 section of the original building will include the creation of a new library media center where the cafeteria is currently located. Next to this space will be a room originally designed for distance learning. The technology committee questions the plausibility of joining the ONC BOCES distance learning network at this time. We have questions about the effectiveness of the connections and the programs currently being offered. A goal for the duration of this plan is to investigate alternatives such as the installation of web cameras on every machine in that space and the possibility of offering a wider variety of courses through the Internet and products like Moodle and Blackboard.

It is also important that office staff and teachers have access to new and improved productivity hardware and software in order to ease the burdens of daily tasks. The building principal, technology coordinator, data steward, and head of buildings and grounds currently use PDA's for scheduling, storage of documents, etc. One goal of this plan is to expand use of PDA's to our teachers, students, the superintendent, and the superintendent's secretary. In the case of the superintendent's office, it would allow for easy synchronization of the superintendent's calendar with the secretary's PDA and would reduce scheduling conflicts. We currently have several students that use PDA's as an organizational tool. Due to their relatively inexpensive nature, there is definitely the potential for expanding use of these devices and providing training for our students on using them. Administrators and their staffs have access to shared folders where important documents can be viewed and modified by all who have access.

The district has recently purchased two pieces of software that will be useful in both offices and classrooms. Mind Mapper 2008 from Windows will allow for quick note taking during classes and meetings and will easily convert the maps created into PowerPoint presentations or outlines for meeting minutes or class notes. The Excel Power Pack will provide added functionality that does not exist with the standard version of Excel that the machines in the district are currently running. This will be extremely useful in business classes and for the school business manager and superintendent as they create the district budgets. Individual licenses for Teacher Web, Reading A-Z, Enchanted Learning, and ABC Teach allow teachers to digitally communicate with the community and give students and parents opportunities to interact with school staff and practice skills learned in the classroom at home. The district will continue to offer these to our

teachers and attempt to increase the number of staff members that are using them by the conclusion of this plan.

### **III. Technology Integration and use through Effective Professional Development**

It is very difficult to implement new technology effectively without the provision of quality sustainable professional development. In order to maximize the resources dedicated to technology related purchases, the district will actively seek professional development and provide it for teachers, administrators, and support staff. It is the technology committee's hope that, with the provision of these opportunities, we are using hardware and software to their maximum capabilities.

The district's major technology initiative for the school years of 2006-2007 and 2007-2008 has been the successful implementation of the Powerschool student management system. Teachers began using Powerschool in 2006-2007 to enter daily and period-by-period attendance and to give students their ten week and final grades for courses. That has been expanded for 2007-2008. Teachers in grades 7-12 will be submitting all of their grades electronically and continue to use electronically generated verification sheets to confirm their accuracy. The staff has received multiple training sessions on using Powerschool for attendance and setting up electronic gradebooks from the staff at the Broome-Tioga BOCES. Refreshers have been offered when necessary. By the end of the 2007-2008 school year, the building principal will be trained on the use of Powergrade and will serve as the district's key contact for questions about electronic grade books. Future trainings will focus on using the more advanced functions Powerschool has to offer, such as the creation of interim and progress reports, discipline letters, and assignment lists. The principal or his designee enter all discipline data into Powerschool and have the ability to report data and violent and disruptive students by pulling said data from Powerschool and exporting it into the format required by the New York State Education Department. Standards-based report cards generated from Powerschool for elementary students are a goal for the district by the completion of this plan. The purchase of the Phoenix Designer software package would make the creation of these report cards quite feasible by the target date.

Over the past few years, technology has become a key component of the state reporting process. Laurens has kept in step with the need for training on the myriad of reporting tools required. For example, the building principal and the district data steward have been trained in the use of Cognos and manipulation of student data present in Cognos by a staff development specialist from the ONC BOCES who also helped our staff write a K-12 social studies curriculum and enter it into the School Tools web site. More curricula will be written in mathematics, science, ELA and all special areas during the current plan. Because of the compatibility of Powerschool and Microsoft Excel, district representatives have also attended advanced training on the use of Excel. Upcoming trainings will involve the chair of the CSE, the data steward and the principal in an effort to stay up to date with new reporting requirements for students with disabilities. The principal and data steward attended training on the NYSTART reporting system and teachers will be receiving training on using the system to improve instruction and student learning. The school library media specialist offers "technology breakfasts" and "technology lunches" for staff who have questions and or concerns. The business teacher plans to offer after school trainings in the use of equipment like LCD projectors, Smart Boards, and software applications like the Adobe Creative Suite. Certified Smart Board trainers have worked with teachers and will continue to do so as the district installs more in the building.

With regard to professional development, the district's main goal is to improve the dissemination of information about upcoming training opportunities to staff and encourage them to attend these training sessions. The teachers on the technology committee have made the point that their colleagues might participate in more technology training if they know what is available to them

and when. We would like to send representatives to the state technology conference and continue participation in the Technology Resource Center at the Broome Regional Information Center. The district has also used time during superintendent's conference days to discuss e-discovery and electronic curriculum mapping and will continue to offer Powerschool training on those conference days whenever necessary.

#### **IV. Research-based Technology Programs and Accountability Measures**

When making decisions on what educational software programs the district should purchase, the technology committee takes into account that such programs should be research-based and proven to be effective in the educational environment. For example, the *Fast For Word* reading program used by the Learning Center has proven to be effective through extensive research. It can generate specific electronic data that can help develop future uses for the program; we plan to make better use of that function by the year 2009. We currently assess students in early elementary grades by using the Phonological Awareness and Literacy Screening (PALS), a research-based assessment for students in grades kindergarten through third grade at Laurens. Remediation is based on the results of the PALS and teachers are able to target not only students in need of remediation, but in what specific areas additional or differentiated instruction is required. Schools have the ability to analyze student PALS results online; at the present time the Learning Center analyzes results by hand. One goal of this plan is to utilize the ability to review student results on the PALS online and print reports from those online analyses. The district uses an elementary mathematics series in which each teacher has the opportunity to use "technology links" that are not being used to their potential at this time. Increased use of these links is a district goal that can easily be achieved within the timeframe of this plan.

As stated earlier, the creation of reporting tools like NYSTART and Reportnet (through the Broome-Tioga Regional Information Center) gives the district numerous opportunities to analyze student performance data that is presented via the Internet. The data generated can and should have a significant impact on instruction; teachers should base their lessons on data they analyze for their specific students rather than on what they have done in past years or what they assume is the best way to teach a particular student or group of students. Making informed decisions about instruction based on data is perhaps the single most important way the district can utilize technology over the three year life of this plan.

Another criterion that should be part of the evaluation of what technology to purchase is how much the technology that is *already* in house is actually being *used*. The technology committee does an annual needs assessment and bases its decisions on whether or not to fulfill requests on input from the members of the committee. The same holds true for decisions on whether or not to maintain subscriptions to online services or site licenses. The use of technology as a means of differentiating instruction is a part of the Annual Professional Performance Review used by administrators to evaluate the teaching staff.

The committee has also established a goal of creating a formative evaluative tool for the district that will give us data on levels of staff technology use as part of their daily tasks and their instruction. We plan to look to the ONC BOCES, Broome-Tioga BOCES, and the State Education Department for guidance on the creation of this evaluation.

#### **V. Effective and Integrative Uses of Resources for Educational Technology Infusion**

Despite the fact that Laurens is considered a high-needs district and possesses limited funding for technology, significant resources are devoted to responsibly upgrading our technological capabilities. Major sources of funding include monies allocated in the district budget, Title IID funds, and REAP funding. In addition, the district has applied for and received grants from local

legislators that have been used to purchase hardware. For example, the district will spend \$16,062.44 in REAP money on technology by September 30, 2008 and an additional \$27,228 by September 30, 2009. Since the 2004-2005 school year, the district has spent \$31,000 on software, \$80,000 on hardware, and \$12,000 for training. In addition, a portion of the annual library budget is allocated for purchasing equipment. Providing funds for training is a focus and we will increase our budget for training as resources allow.

The district is investigating the possibility of joining the ONC BOCES "Installment Purchase Agreement" co-ser in order to increase funding for hardware and software. The technology committee agrees that, with numerous new spaces to populate with computers, LCD projectors, etc., it is an ideal time to join this co-ser. The Supervisor of Buildings and Grounds and the Technology Director are currently formulating a proposed budget for the population of the new classroom and office spaces and the Technology Director will provide further information on the Installment Purchase Agreement after meeting with BOCES staff and other technology coordinators in the area.

District resources have been allocated in a manner such that numerous stakeholders have been affected. For example, all teachers will receive continued Powerschool training. A data steward was hired to assist the chief information officer (the building principal) with state reporting and entry of discipline data into Powerschool when necessary. The library staff is paid to do an accurate inventory of technological equipment during the summer.

The infusion of technology into our classrooms is made much more effective when parents and families are given the ability to use technology as part of the educational process. A major goal of the technology committee is to offer a "parent portal" to Powerschool for the 2008-2009 school year. Parents would be able to access their child's grades and attendance from home using a school-generated username and password. The district plans to purchase an annual secure socket license (approximately \$600.00 per year) and will offer training to parents on how they can use this feature of Powerschool. The use of technology in the classroom and in homes will expand as we promote collaboration between teachers, students, parents, and community members.