

# TECHNOLOGY PLAN · 2006–2009

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ESPAÑOLA PUBLIC SCHOOLS

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November 1, 2006

## **Mission**

EPS Public Schools Technology Department mission statement: To support the Districts EPSS by continually developing and implementing high quality technological programs to improve student learning and providing students with the latest Technology and Technical skills to compete in the job market, ensuring that no child is left behind.

### **State of New Mexico Technology Goals**

1. Learning is significantly improved, using appropriate technologies, leading to high achievement in State Board of Education adopted content standards.
2. Educators have the capacity to establish student-centered, technology-enhanced learning environments that results in increased student performance and economic viability.
3. K-12 students and educators in New Mexico public schools have affordable, universal access to high-speed, robust telecommunications, and schools modernized for technology.
4. Funding available to support planning, implementing, and assessing initiatives for integrating technology into New Mexico classrooms and schools.

### **Espanola Public Schools EPSS Goals**

The main focus for the district's Educational Plan for the Student Success (EPSS) is the 1995 – 1996 Language Arts Curriculum

Goal III: Students will use technology as a tool to learn the language process and to apply the language functions.

In support of this goal are the statements that students will be able to:

- Locate and use information from a variety of sources, including new technology and
- Use a variety of technological equipment in the writing, reading, and listening process.

In order to achieve these goals, Espanola Public Schools has created this technology plan with the intent to infuse technology into every aspect of the teaching, learning, and administrative environments. The following sections discuss the reasons for that decision and the implications for technology deployment, funding, and professional development.

## **Executive Summary:**

Espanola Public Schools is in the 12<sup>th</sup> year of operation. The district continues to grow in enrollment keeping pace with the growing and challenging instructional programs to meet the diverse needs of our families. We have engaged in an ambitious and aggressive plan to establish a strong technological infrastructure and to expand the use of technology to enhance and improve teaching and learning. A long-range technology plan, which is aligned with the state technology goals as well as the districts overall goals and objectives, guides this work. The technology plan emphasizes infrastructure development and technical training.

To a large extent, those initial goals list above have been met as evidenced by the following:

- Computers have been installed and networked in all schools and classrooms with a realistic equipment replacement cycle
- District-wide training in technology for all staff has been initiated and continues to be supported
- District offices and schools buildings are networked with secure and CIPA Compliant monitored internet access
- Administrative and instructional software is installed like A+, (short cycle assessment, and Plato to name a few
- Libraries are automated at 15 schools sites
- Distance learning capabilities have been established
- Telephone and voicemail systems have been either upgraded or have plans to be
- Voice over IP is being evaluated as a viable telecommunication tool
- Mechanisms for ongoing automated and centralized maintenance of technology are in place
- Websites for staff and community have been developed with further enhancements planned
- Plans for Wireless and mobile computing using laptops have been developed

Application of technology in order to:

- improve instructional practices in the classroom;
- provide students with more opportunities for engaged learning;
- support accountability and administrative functions at the school and district level; and
- create new avenues for parental and community involvement.

The new goals, objectives, and strategies set for in the revised technology plan are tied to the goals and objectives of the districts Strategic Plan, support priorities in the area of accountability, are aligned with the Baldrige Criteria for Performance Excellence, and continue to meet state guidelines for technology planning. The overarching vision is that technology will become an integral part of district-wide improvement efforts and not be seen as a separate, tangential, or ancillary component. Thus, the purpose of this plan is to provide a clear vision for all stakeholders (administrators, teachers, support staff, students, parents, board

members, community members, and business owners) regarding how this can be accomplished. At the same time, the plan is intended to provide maximum flexibility in order to empower these stakeholders to use technology in ways that best meet their unique needs.

The revision of the technology plan has been a collaborative process, with multiple avenues of input from all interested parties. Draft versions of the plan were made available for review within the district, as well as to parents and community representatives. Mechanisms have been established to allow for ongoing input and feedback, making the plan a living document. At all times, district-level personnel from instructional and technical departments will work together to ensure that the plan is based on proven research and best practice in the area of educational technology.

The following narrative provides additional information on the district, our progress in technology, the revised goals and objectives for technology, our strategies for implementation, and our plan for continuous improvement.

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## ***Strategies for improving academic achievement and teacher effectiveness***

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*The integration of technology throughout the EPS instructional and administrative environments will be done in order to:*

1. *Build technology-based skills for improved learning.* Our efforts are to ensure that our students and staff are competent in the use of the state-of-art technologies found in their environments. Specifically, technology skills, such as faculty using word processors, spreadsheets, databases, and other various applications. Achievement of this will be demonstrated by staff and students who exhibit mastery of technology-based skills as specified in the International Society for Technology in Education (ISTE) standards.

2. *Use technology as an instructional tool.* Having regular use of various technologies integrated into the daily classroom environment, will assume that instructional staff who has not only mastered the skills mentioned above, also easily integrate technology use into the classroom curriculum. Examples of which are the need for Web access for research, CD-ROM's as non-print instructional materials, and LCD panels or projectors for group presentations. Achievement of this will be marked by staff utilizing technology in an every day learning environment.

3. *Teach technology-centered content areas.* Technology-based courses will be offered in the high school, in such classes as Computer Aided Design, Programming, Hardware Repair, and Network Administration. This would assist in preparing our students for specific technology-based jobs. The practical word required for hardware repair and network administration will also benefit the district because this will enable us to recruit from our own community rather than hire from outside our community. This differs from item #1 in that it prepares a subset of our students for specific technology-based work environments. Where hardware, software, and staff professional development requirements will be significantly more rigorous.

4. *Use technology to enhance business operations and instructional administration.* This addresses the need for school administrators and teachers to have access to data about students (demographics, attendance, grades, schedules, etc.) in order to make data-driven decisions in support of the district's goals, automation of functions when library, facility work orders, and food services for improvement of operations, and easy-to-use financial data for district and site-based management. Its achievement would put appropriate tools and data for efficient school management and instructional leadership into the hands of all teachers and administrators. This will increase instructional time by providing tools to make administrative tasks more effective. Parent communication will be available on a consistent and more effective basis.

5. *Parental and community involvement.* The utilization of technology labs at each school, voice mail system and WEB pages to keep the parents and community informed and provide access to the latest software and technology.

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## ***1. Build Technology-based Skills for Improved Learning***

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**Goal:** Students and staff will master the technology-based skills necessary to be successful throughout their education, and their careers.

Success Indicators:

- Students will regularly achieve and surpass the technology competencies as defined in the ISTE standards, (See Appendix)
- Post secondary and employers will indicate EPS graduates arriving in their institutions and workplace with the appropriate skills.
- Staff technology competencies, as measured by the skills survey (See Appendix), will fall above a rating of “3”.

Instructional Justification

Students must function and be successful in an environment that is highly integrated with technology. It is our responsibility to ensure that this can be done by teaching them the skills required to use technology effectively. Beginning in the elementary schools with keyboarding proficiency and basic computer fundamentals and also continue throughout all grades with instruction in word processing, spreadsheet usage, databases, and the use of other technology tools as they are developed. These the skills required by employers and post-secondary institutions and more importantly, they are the skills our students will require to use technology in their classrooms and.

Our staff must all have an equal or higher level of technical competency as our students. Staff and faculty must be proficient in the use of office applications (word processors, spreadsheets, etc.) and communication tools (e-mail, newsgroups, etc.) in order to make the most effective use of the technology in their classrooms and offices.

Implications for Technology Deployment and Professional Development

In order for these skills to be developed, our students and staff must have convenient and reliable access to technology. Such as computers in all classrooms having controlled and secure internet access for research, word processing, presentations. Laptop computers assigned to teachers and administrators for mobile computing and remote access to systems that may be used for planning and implementing curriculum and enhanced email communication with parents, fellow teachers, administration and others. Computers in administration offices used to automate office tasks and procedures. Computers available in labs at every school to provide group instruction. In the early grades, it is especially important to have computer labs available for teachers to present the uses of technology-based tools and software to an entire class and to allow the entire class interactively towards enhancing their skills with word processing, database development, spreadsheets, graphics rendering, presentation software, short cycle assessment and other technology-based tools.

Accountability measures

\* A+ and Plato Software will provide student pre and post assessment information to include access and usage of software. The partnership with Northern College to provide professional technology development training to teachers and administrators and online Computer Based Training will provide teacher pre and post assessment information to include access and usage of the district-wide implemented software standards.

## ***2. Use Technology as an Instructional Tool***

**Goal:** Technology is used as a regular tool in the instructional process and technology-based instructional materials will be used with print-based instructional materials.

**Success Indicators:**

- Use of electronic lesson plans, and unit plans, grade books and instructional materials that will reflect the day-to-day use of technology.
- Teachers' Professional Development Plans reflect an expectation that they will integrate technology regularly into their instruction
- Administrators will be able to determine effective uses of technology in classrooms and evaluate and advise instructional staff accordingly.  
Students will be successful in utilizing the Advance Learning System Software.

**Instructional Justification**

Beyond simple skill building, technology use in classrooms result in changed instructional methods. Technology increases the ability for students to direct their own learning (for example, through research on the Internet) and the ability of teachers to modify instruction for each student's needs and learning styles.

**Implications for Technology Deployment and Professional Development**

In order to use technology in day-to-day classroom instruction, not only does the technology deployment need to mirror that described in the previous section. These changes have huge implications for teacher professional development. In addition to classes and training sessions to build the technology skills of the instructional staff, the district must arrange for on-going professional development that focuses on curriculum integration. Options for this type of professional development are listed in the Professional Development section below.

**Accountability measures**

- The Advance Learning System Software will provide hard copy of student pre and post assessment information to include access and usage of the software. The Act Now on line training will provide hard copy teacher pre and post assessment information to include access and usage of the software.

### ***3. Technology Centered Course Content***

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**Goal:** Our students will be offered courses with specific technology-based content.

**Success Indicators:**

- Employers indicate that our graduates are readily employable in specific technology-based jobs. (CAD program)
- Post-secondary institutions grant advanced-placement credit in computer science to our graduates. Currently NNMCC give higher education credit hours to our High school students enrolled in the Web page design and Robotics classes.
- Our graduates pass CLEP tests in order to advance past introductory computer
  
- Our high school students enrolled in the Aries A+ Certified Computer Technician and Network + courses will be provided the skills and knowledge to pass the A+ and Net + certification examination

**Instructional Justification**

This is a main focus of a school-to-career program. It exists in order to produce graduates who are employable in specific technology-centered careers. It is also through these specific courses that we can provide cost-effective support for our network infrastructure using students who have concentrated in specific areas.

#### Implications for Technology Deployment and Professional Development

When our high schools provide technology-centered school-to-career tracks, the district will have a trained cadre of students, who can provide LAN Support and network administration for school-site networks. This relieves our technology department and the associated district budget from providing the levels of support required for the significant technology deployment this plan encompasses.

In terms of professional development, we will have to develop staff at the high school level so they will be capable of teaching these courses.

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#### **Accountability measures**

Students acquiring Higher Education credit hours and their A+ Certified Computer Technician and Network+ certifications.

#### *4. Technology to Improve Business Practices and Instructional Administration*

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#### *5. Parental and community involvement*

**Goal:** To provide computer training to teachers and parents to assist in bridging the technology generation gap. Create a program designed to allow parents to learn/practice new strategies for helping their children be academically successful.

#### **Success Indicators:**

- Create technology clubs at each school for teachers, students and parents.
- Utilize the district voice mail system to provide parents information on students home work assignments.
- Utilize the "PASSport to Success" Parent training program in collaboration with the Rio Arriba County Cooperative Extension Service and the EPS to conduct parenting classes at 5 elementary schools.

#### **Instructional Justification**

Through the involvement in school technology clubs parents and students will become acquainted to the latest technology. These clubs will have access to computer lab district wide. Teachers will be trained to utilize their voice mail to provide parents with homework assignments on a daily basis. The district WEB pages will keep parents informed on school activities.

#### **Implications for Technology Deployment and Professional Development**

Parents will become more computer literate thus bridging the technology gap between parent and student. No child or parent will be left behind

#### **Accountability measures**

Utilize sign in sheet for all technology club meetings and utilization of computer labs. Keep the community informed by utilizing the voice mail system, school new letters and the district web page.

# Professional Development Requirements

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In order to take full advantage of the significant amount of technology deployed within the district, our staff must be well trained. This section will describe the skills and knowledge required, and presents some options for acquiring the required training.

***The district will compose a comprehensive plan for staff professional development,*** scheduling on-going sessions and skill-building workshops throughout the entire school year.

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### **Skill Development**

Before teachers can begin to integrate technology into their curriculum, they must be competent and skillful in its basic uses. Basic training in the use of word processors, spreadsheets, communication tools, databases, and other common applications is required. There are also multiple options for providing this training to the entire district staff. They are:

Training workshops: RETA, Intel training, and Math and Science academy training workshops integration technology into the classroom where applications are focused on classroom environments. The use of electronic grade books, lesson, and unit plans will be part of the instruction.

- On-line courseware. Act Now on line training is currently utilized for training. As well as multiple sites on the Internet that provide skill development training.
- CD-ROM training materials.  
Tutorials provided with software.
- Administrator training workshops that will train school administrators in the use of PC's, Microsoft Office suite and hand held organizers.
- NNMCC. The community college provides classes, which can be arranged to be taken for credit.

## *Administrators*

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### **Classroom Evaluation**

A teacher must know how to integrate technology into the curriculum and a school administrator must know how to evaluate effective technology use in a classroom. This goes far beyond observation of students using computers. It must include the ability to determine whether the technology use is effective in increasing student learning. Both the RETA and Intel training programs have professional development strands that focus on administrators and classroom technology evaluation. *Each school administrator will know how to evaluate effective instructional technology use.*

### Skill Development

See the skill development options under *Teachers*.

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## *Support Staff*

### Skill Development

See the skill development options under *Teachers*.

## Support -lequirements

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## *Maintenance equirements*

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The district will require regularly-budgeted operations funding for at least the following maintenance items:

- Hardware replacement on a 5-year cycle
  - Consumable budget at each school and administrative site
  - Budget for the technology support program for repairs and upgrade parts
- Maintenance contracts for infrastructure. This budget should take into account the eventual disappearance of e-rate funding
- District-wide software licenses as well as individual school budgets for software

**Goal: The district budget will reflect the above items for maintenance of technology**

## The Implementation

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Standardizing, purchasing, deploying, and maintaining of hardware, software, and networks. The items included are driven by a requirement from the previous section.

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### ***Technology Deployment Levels***

The district defines three levels for technology implementation at a school or administrative site. These levels are:

**Level I:** Minimum standard deployment. Teachers and administrators must have this level of technology in order to provide and support quality instruction. It should be considered as integral to the instructional process as having electricity, plumbing, and a sound building. The goal of this technology plan is to have all schools and administrative facilities at Level I within its 5-year scope.

**Level II:** Intermediate deployment level. When schools and administrative sites have reached Level I in all categories, the next step is planning to reach Level II. This level is designed to support site-based planning and these items would be appropriate for grant and special legislative requests.

**Level III:** This is the pinnacle of technology level. This is intended to dedicate a building in which technology is truly ubiquitous.

Reflecting the reality of budget constraints, this plan details Level I implementation, briefly touches on laptops for Level II, and does not address Level III. Should additional funding become available, Level II and III implementation standards can be written.