

## History of Technology Implementation in Plano ISD

Plano ISD schools have used technology in the classroom for more than two decades. Classroom use began with terminals and timeshare access over modems in math classrooms. Today, every classroom in the district is equipped with a minimum of one computer workstation connected to the district network with Internet access. In addition, these classrooms have large screen viewing capability through either a 27” TV/monitor or a DLP projection system fully networked to display a minimum SVGA computer resolution with access to the internal district video network, cable TV and various other video input devices such as VCRs, laserdisc players and video image display cameras (VIDs). The overall computer-to-student ratio is 2.2 to 1.

All elementary classrooms now have fully networked computer workstations for student use in a minimum ratio of three students for each computer along with large screen TV/monitors, laserdisc players, VCRs, laser printing and access to software directly designed and correlated to the curriculum. Each elementary campus also has a wireless laptop cart that can transform a classroom into a lab setting where every student has access to a computer at the same time.

Secondary classrooms also have access to student computers in the overall ratio of less than three students for each computer. Location of these computers varies by content area and campus but includes both large group lab settings and distributed, classroom-based settings. Specialized peripheral equipment such as video image display devices, laserdisc players, VCRs, video/audio digitizers and projection devices are used throughout curriculum areas as needed. Over 1,000 classrooms in the core curriculum areas have DLP projection systems that provide enhanced video and audio display. Students and teachers are taking advantage of a wide variety of software packages to enhance and extend many curricular areas.

Through the use of a districtwide network directory structure, all 56,000 students and staff have access to their own desktop from any of the more than 26,500 computers that are connected to the network infrastructure. The combination of standards for both hardware and software as well as equity in implementations throughout the district campuses provides a powerful tool for all Plano ISD district users.

### ***The early years***

Early use of remote access computing, facilitated by Region 10, allowed the district to purchase time on mainframe computers. This made it possible to teach programming at senior high levels through the math curriculum.

The first personal computers were purchased in 1979-80 for use with a computerized math program at three elementary schools. An additional system was placed at Plano Senior High School for Computer Math.



From 1980-85, computers were placed at all schools to support curriculum use. In 1983-84, Plano ISD implemented the state mandated Computer Literacy course at the eighth grade level.

In 1985-86, Plano ISD participated in the IBM Model Schools Program and placed labs in two elementary schools and the senior high schools.

In 1986-87, Plano ISD implemented “Writing to Read” and placed network labs in all elementary schools.

In 1986-87, Plano ISD implemented “Writing to Write” in all elementary schools.

From 1987-93, Plano ISD continued to place computers at all schools to support curriculum.

### ***Initial plans developed***

In the fall of 1989, Plano ISD completed a comprehensive study of technology use and developed a plan to guide instructional use of technology. This plan closely followed the guidelines set out in the 1988-2000 Long-Range Plan for Technology published by the Texas State Board of Education.

The passage of a technology bond in 1990 signaled community support for Plano ISD to invest more heavily in technology for student use. Proceeds from that bond enabled a large-scale curriculum project at the elementary level to begin in 1993 that infused technology into each classroom along with an integrated curriculum approach. That project was completely implemented with the 1998-99 school year.

In 1995, the district began the design and implementation of a Wide Area Network (WAN). The WAN provided the infrastructure to connect all district sites and improve district communications with the implementation of districtwide email software.

Funds from the 1996 technology bond have had the greatest impact on extending technology throughout the district. One of the main objectives of the bond issue revenue was to bring the level of technology in every elementary classroom up to the level of the “model classrooms” to support the integrated curriculum project. Additionally, funds were allocated throughout the secondary curriculum areas to improve and expand student access to technology resources. As a result of this and previous work, the district has addressed many of the issues identified in the 1989 and 1992 technology reports.

As a result of reorganization in the district administrative structure during the 1996-97 timeframe, the technology division is more appropriately organized to assist with instructional technology issues including cluster support teams, campus technical support, curriculum integration of technology and staff inservice.



The technology plan update for 1997-2000 provided a precise implementation plan for the 1996 technology bond initiatives and gave a comprehensive picture of the integration of curriculum and technology and the desired impact on student achievement. This roadmap served Plano ISD well and has resulted in the districtwide opportunities now available for all students and staff.

Year 2000 compliance presented some unique opportunities to Plano ISD in assessing the status of over 1,000 software and hardware systems. The community passed an additional technology bond in 1999 to cover costs associated with upgrading and replacing a variety of systems that were not compliant. In addition, the 1999 bond provided funds for the construction and maintenance of a private fiber optic, ATM-based, wide area network infrastructure for all Plano ISD sites. This network was envisioned in the 1997-2000 technology plan update and began construction early in 2000. The network was completed and placed in operation in Summer 2001.

The most recent technology bond was approved in September 2000. Funds from this bond enabled a consistent technology environment in all secondary classrooms and, in particular, gave support to the recently developed middle school curriculum in a similar manner as the 1996 bond provided to our elementary curriculum development. This bond also provided the first iteration in our technology replacement strategy and resulted in over 10,000 desktop computers being replaced as well as other technology resources throughout our inventory. This replacement strategy will require regular voter approval for bond elections devoted to technology with the next bond election scheduled for August 2003.

### ***Phone network enhances communication***

In 1995, Plano ISD began implementing a new PBX phone system network. The system now provides full access to voice mail for all district staff and parents. As the system was being installed, staff in the district's Telecommunications and Technical Support groups were trained to provide appropriate support for the new phone and voice mail systems, email and group calendar functions.

Funds from the 1999 technology bond were allocated to complete the implementation of this phone system to all Plano ISD sites. The last site was installed in December, 1999 to provide all staff and community members equal access to a critical communications system. Support of this system is provided by means of an outsourcing arrangement with Verizon.

A comprehensive call accounting and online telephone directory was implemented in Fall 2001 with the installation of Switchview.

### ***Administrative Technology***

Office personal computing began between 1983 and 1985 when computers were placed in each school office. These were used to facilitate word processing tasks and provide a simple database of student information downloaded from Region 10. Currently, all student grades are kept in electronic grade books and the district is using electronic



attendance from all classrooms at secondary schools. Classroom electronic attendance is being piloted currently at the elementary school level. All of the secondary and elementary campuses use networks to share commonly-used data including schedules, health, IEPs and more. In addition, Plano ISD uses Microsoft Office as the standard productivity software package on all staff and student computer systems.

At the central Administration Building in 1987, fewer than 25 staff had personal computers on their desks. Now virtually every staff member in the central office has a personal computer, and every department has invested in computerized applications for their specific areas.

Plano ISD began the process of converting their administrative and student system software from Region 10 to the CIMS product line from NCS during the 1997-98 school year. The need for an integrated database containing finance, payroll, human resources and student data could not be met with the current software applications. The NCS product also included a major enhancement to our curriculum management (assessment) capabilities down to the classroom level with the ability to view and annotate individual student progress as part of the implementation. This Abacus database was integrated with the CIMS product to bring realtime access to all pertinent district data by staff as necessary. This implementation was complete at the classroom level during the 2000-01 school year.

During the spring of 2002, the recommendation was made to migrate from the Abacus client based software to a completely web-based application from EdSoft. The transition of historical data from CIMS as well as the development of appropriate reports and charting capability was completed during the summer and fall of 2002. Access to the system along with training was provided to each teacher, counselor and principal throughout the district during fall 2002.

Support for the information management system is provided on an outsourced basis by Prologic Technology Systems on equipment owned by Plano ISD. Plans are in place to provide Web-based access to much of the information for more efficient staff use.

There has been significant internal development of curriculum and auxiliary services databases using Microsoft Access and SQL platforms. Real-time interfaces between the CIMS databases and these internally developed databases are being deployed as necessary. More recent development has resulted in web-based applications tied directly into our legacy administrative applications.

The superintendent brought together a database review committee during Summer 2002 to provide a recommendation for future development. The committee recommendation, along with support from the technology steering committee has resulted in a significant commitment to an accelerated web-based development effort that will provide improvements and ultimate replacement of current administrative applications. At the same time, a data warehouse solution for student assessment and mastery information has been put in place to allow access at the classroom level.



### ***Staff Development / Technical Support***

Through the first years of the district's experience with technology, support and training were provided on a relatively limited basis. Beginning with the elementary curriculum integration project in 1993 and the Wide Area Network implementation in 1996, training has been provided by the instructional technology department as well as curriculum coordinators and curriculum design center teachers. As a result of a mandatory training course on network and productivity tools, all staff have become familiar with and are using technology in a wide variety of tasks. Site trainers are available at each campus to assist with new staff as they are hired throughout the year.

Currently, staff in Plano ISD are required to participate in 30 hours of professional development each year, some of which is technology based. The Professional Development Center was opened in the fall of 1996 at the Jasper High School campus to facilitate the training of all Plano ISD staff. This facility included four fully equipped computer labs as well as a large group presentation area.

Through an agreement with the local taxing entities, Plano ISD constructed a new Staff Development Facility in 2001. The new facility hosts three computer labs for staff training, has 25 wireless laptops for mobile training, 20 wireless Palm devices for group response uses and features a flexible area that will seat up to 700 people for large group presentations.

Online courses, extensive support documentation available online, train the trainer programs and streaming video libraries highlighting best teaching practices are all available in our efforts to provide teachers and other staff members with opportunities to learn new strategies in the use of technology resources. Fortunately, the close integration of our curriculum and technology resources results in staff gaining more experience with technology use through each curriculum training session in addition to optional technology professional development.

*I've worked in Plano ISD almost 20 years and I have grown with the technology and can't imagine being able to deliver our present curriculum without it. I feel fortunate to teach in a district that has the vision to keep up with advancements in technology and our students reap the benefits. – teacher survey comment*

