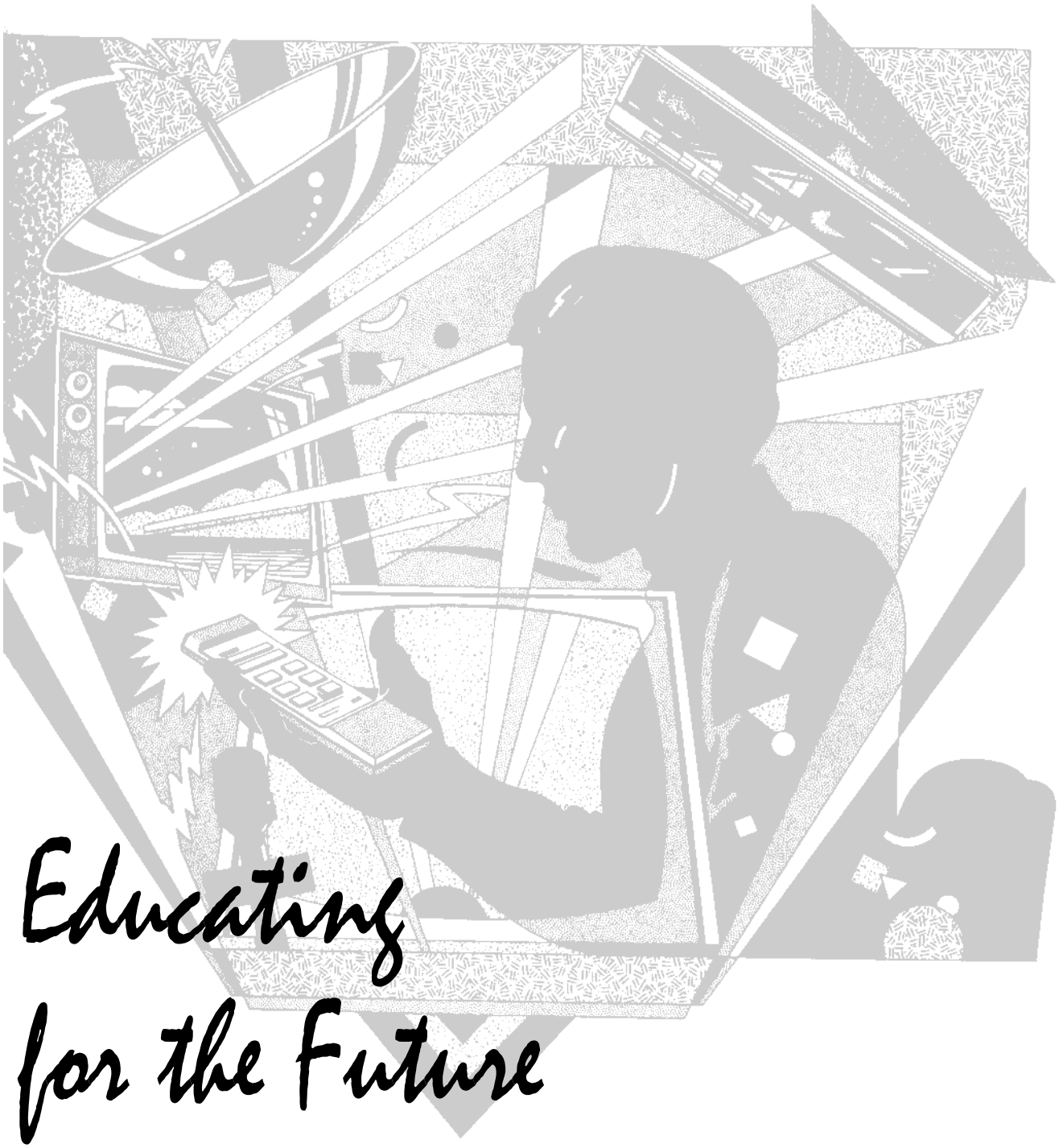

Educating for the Future

Report of the
Technology Study Committee

Application Transfer Study
Anoka-Hennepin Independent School District 11

Anoka-Hennepin
Independent
School District 11

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Report of the
Technology Study Committee

Application Transfer Study (ATS)
Presented to the Anoka-Hennepin District No. 11 School Board on January 11, 1993
Revised March, 1994

January 1993

Because technology is changing so rapidly, these recommendations for implementation and structure of technology use in Anoka-Hennepin School District 11 are current as of the printing of this document. The Technology Study Committee suggests that the recommendations be reviewed every six months.

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Forward

Anoka-Hennepin School District 11 has always prided itself on providing students with a sound, comprehensive education that enriches their lives and prepares them for their future, whether it be a job, family, the military, a technical college, community college, or university. In recent years, however, rapid changes in technology have caused educators to reassess the skills students will need to compete successfully.

The dramatic changes in technology have created dramatic changes in the workplace. While the number of jobs open to unskilled workers dwindles, the number of jobs available for people who possess excellent technical skills grows by leaps and bounds. The job opportunities today's kindergartners will find when they are ready to leave school will be vastly different from today. Thus the need for well prepared students is greater now than ever before.

In addition to a sound background in traditional academics, today's students must feel competent in using a range of technology in a variety of settings. Today, even entry level jobs require the use of computers, robotics, and other technology. In short, students must be as comfortable using a computer as they would using a pencil and paper.

Teachers are the key to developing technology literacy in our students. Therefore, they must have access to up-to-date technology and the appropriate training and technical support to take advantage of it. Technology then becomes a tool to assist teachers in many ways–from presenting lessons in new, dynamic ways, to assessing individual student needs and monitoring student progress. And, teachers must be able to prepare students by teaching the concepts and skills needed for them to understand and use technology effectively.

Technology is equally important to the administrative side of the school district. In these times of increasing demands on limited financial resources, it is essential that all staff have access to technology and the skills to use it to its best advantage. With this, staff at all levels can be more productive and efficient.

To meet these needs, Anoka-Hennepin School District 11 conducted an extensive study of the current use of technology within the district. The district formed a Technology Study Committee of teachers and administrators to work through the study process with assistance of technology study specialists from IBM. This process has used successfully by IBM to help other school districts examine technology needs and

develop plans. After assessing the district's technology needs, the Technology Study Committee made recommendations and developed a comprehensive plan to implement those recommendations.

This document provides documentation of the committee's work. It includes a summary of technology problems and solutions in three areas:

- instruction
- administration/communication
- staff development/technical support.

Acknowledgements

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4 History of Technology Use in Anoka-Hennepin

Instructional Technology

Anoka-Hennepin Schools have used technology in the classroom for over two decades. Classroom use began with terminals and timeshare access over modems in math classrooms. Today every school building in the district has a minimum of one classroom-sized microcomputer lab. Teachers and students are taking advantage of a wide variety of software packages to enhance and extend many curricular areas.

Our early use of remote access computing, facilitated first by TIES and later by MECC, allowed us to purchase access time on mainframe computers. This made it possible to teach programming at junior and senior high levels through the math curriculum. Programs were stored either on the mainframe computer, on graphite marked cards, or on "punched" paper tape. Terminals, card readers and phone access were expensive and in short supply, so there was little "hands-on" time for the students who had the opportunity to program as part of their math courses. A variety of business courses also were beginning to take advantage of this computer access.

By 1980 the first personal computers were introduced in the high schools. These Apple II computers (4K with no disk drives) laid the foundation for personal computing in our school district.

In 1982-83 the district hired a full-time instructional technology consultant to plan for the future of micro computing in the district with funding assistance from the Minnesota Department of Education. The result was a five year plan for instructional technology. At the same time, the district, again with state grant money, developed a plan to provide staff development and technical support. A mobile technology lab created from a converted transit bus brought training to schools throughout the district. This project, known as IN-TECH, also served several other school districts adjoining District 11.

A task force composed of teachers, administrators and parents determined that the district should strive for a ratio of one computer for every 20 students and one computer for every 10 teachers. By fall of 1984 computer labs of 36 machines were placed in each junior high school to support a 20 day computer literacy curriculum through the math department.

At this time the district received a Model Schools Grant from IBM. This provided computer labs in two elementary buildings, one junior high, and one senior high as well as a professional development center for staff training.

The following year, additional microcomputers were placed in both the math and business areas of the high schools to support half lab configurations.
Computers were added more slowly in the elementary buildings, primarily because curriculum did not require such equipment. Programming was a part of the fifth and sixth grade curriculum, but it was done much in the same fashion as timeshare use 10 years earlier–students marked cards, teachers ran the programs through a card reader attached to the Apple II and gave students the results. By fall of 1988 each elementary building had a minimum of 30 computers that most used to form a "lab" and keyboarding was implemented districtwide in the elementary curriculum.

Recognizing the need for technology support, the superintendent created two "special assignment" positions in 1987 to provide assistance to staff at the schools. These two positions eventually led to a full-time instructional technology coordinator and technology consultant who oversaw use of technology in school offices and classrooms. In addition, these positions were responsible for the "train the trainer" concept. Under this approach, each school had a designated computer coordinator or contact person who delivered on-site support. This person received additional training opportunities from the district staff.

When Oxbow Creek Elementary School opened its doors in 1987 it lived up to its billing as a "state of the art" technology school. Each classroom contained a computer/printer/phone system plus a 27" color RGB monitor that could project the computer signal. The school also included a fully-equipped 31 station computer lab, a five station mini-lab, a teacher project area with high quality printing, a video studio, editing suite and a building-wide video and computer network. This became the "unofficial" model for other buildings. Andover Elementary School opened as a "twin" school a year later. Our newest facility, Champlin Park High School, has followed this same model.

School offices have standardized equipment and software for student management. A Professional Staff Development Center was developed to provide a facility where staff can receive training on a wide variety of software and hardware.

The district took a major step forward in using technology for instruction when it implemented a Computer Managed Instruction system in 1988. The system allows teachers and parents to monitor progress of individual students. It also provides information used in monitoring the effectiveness of the district's curriculum and instruction.

Administrative Technology

Office personal computing began in earnest between 1983 and 85 when IBM PCs (256K) were placed in each school office. These were used to facilitate word processing tasks and provide a simple database of student information downloaded from TIES. The single source of both software and support came from the TIES Coordinator. During this time period Apple II+s were used along with card readers to record student attendance electronically at our secondary schools. Now each school takes attendance electronically. All of the secondary and ten of the elementary sites use networks to share commonly-used data including discipline, scheduling, health and more. In addition the district has a common pool of word processing, database, spreadsheet, desktop publishing, and telecommunications software to use on a common Macintosh platform.

At the Educational Service Center, fewer than 15 staff had personal computers on their desks through 1987. The number of computers and usable applications at the school sites and central offices grew rapidly between 1987 and 1991. Now virtually every staff in the central offices has a personal computer or easy access to one in the department. In the past two years, Food Service, Transportation, Warehouse/ Purchasing and Finance have invested heavily in computerized applications for their particular areas. The ESC and LC/DC sites are "bridged" into a single network with electronic mail and scheduling running in a combined mode.

Staff Development/Technical Support

Through the first years of our experience with technology, support and training were provided on a relatively unorganized basis. Initial training generally was provided with no provision for follow-up and growth. This was true both instructionally and administratively. During the 1986-87 school year, staff development funds were allocated to individual buildings which provided a technology training plan. This proved so successful that the practice continued through the 1988-89 school year. During this time, the district experienced the greatest number of staff becoming familiar with and using technology in a wide variety of professional tasks including increased student exposure and hands-on experiences. With the budget reductions of the past three years, this practice of sponsoring individual building or department plans has been curtailed to a very minimum amount. In addition, while the number of technology hardware components and software applications has increased dramatically in the past six years, the number of people who provide staff development or repair that equipment has increased only marginally.

8 Development of Study Objectives

Working under the direction of technology study specialists from IBM, a committee of Anoka-Hennepin staff brainstormed 46 technology related problems and issues (listed below). The group then defined six objectives for the study that encompassed those issues:

- Define the role, purpose and use of information and technology in Anoka-Hennepin.
- Identify and provide appropriate resources at the instructional level.
- Identify standards and responsibilities for maintaining an accurate, accessible and uniform database(s).
- Define curriculum and administrative accessibility needs and design an information and communications system architecture that supports both.
- Identify the level and need for training and develop a plan.
- Establish a decision making process for technology resources and purchases.

Problems/Issues

(This list is not prioritized)

1. Compatibility of data and networks
2. Lack of electronic interaction
3. Access to master schedule
4. No site ownership of central database
5. Site access to personnel information
6. Lack of uniform/integrated database sharing
7. Lack of district-wide network and or access to remote data
8. Integrity of information and security
9. Perceptions of where we are today
10. Lack of understanding of district expectations
11. Need for built-in evaluation process
12. Need for technology philosophy
13. Too many pet projects—fragmentation
14. Unknown decision-making process—isolated
15. Need for district-wide communications—information
16. Need “futures” think-tank to establish goals
17. Integration of administrative and curriculum (data/functions)
18. Productive use of all special education information
19. Information on and use of adaptive technology for special education
20. Storing records electronically, e.g. personnel

21. Lack of standards in decision-making process
22. Commitment and ownership/understanding of information
23. Storing and using information relevant to Outcome Based Education (OBE)
24. Lack of electronic storage and retrieval for student information
25. Current database needs to match external reporting requirements, i.e. state and federal
26. Lack of training on databases and their utilization
27. Turf and politics controls resource distribution
28 Document by job title what technology background is necessary
29. Keep data current and accurate
30. Data collection and updating is manual
31. Lack of appropriate resources at the instructional and administrative levels
32. Lack of data history, i.e. for individual composite histories
33. Lack of definition of CAI (Computer Aided/Assisted Instruction) and its uses in the classroom
34. Lack of direction for ILSs (Integrated Learning Systems) in the district
35. Time and money
36. Productivity goes down with initial system change
37. Conversion from old to new
38. No centralized decision-making for software, e.g. word processing
39. Lack of a plan for integration of voice and video
40. Lack of convenient/available technology for teachers
41. Lack of distance learning for students and teachers
42. Need to create an awareness of "belief system"
44. Need general keyboarding skills
45. How urgent and important is information to our organization?
46. Information priority–district is reactive, not proactive

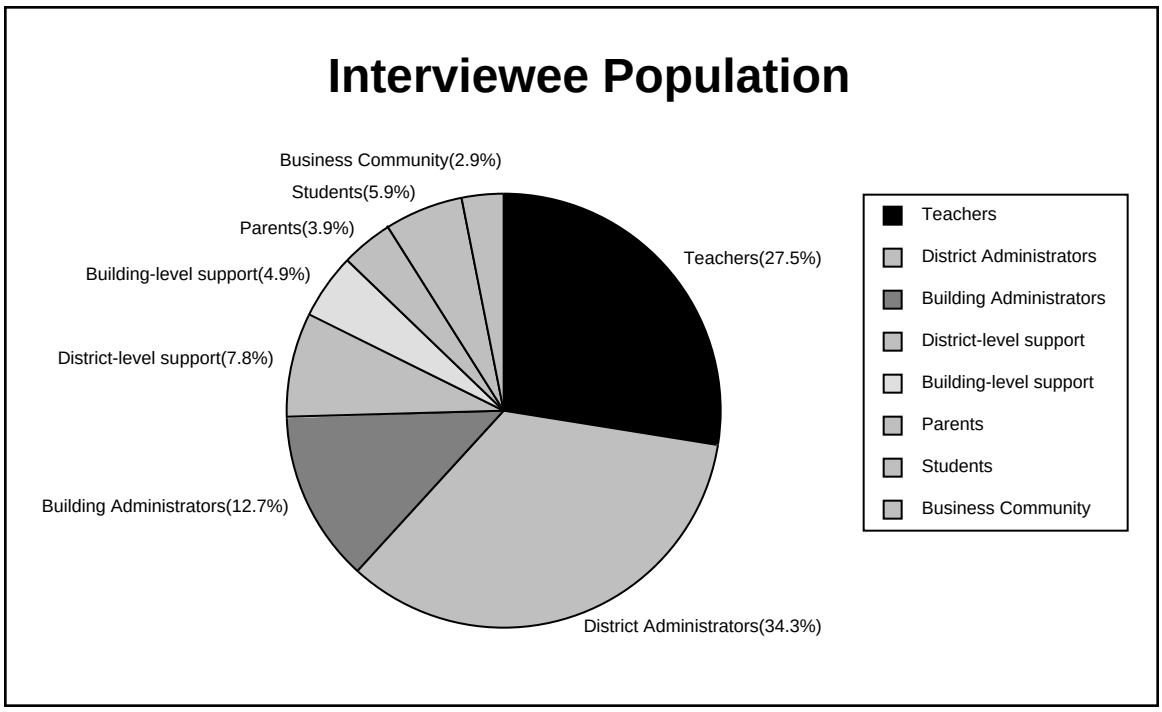
10 Overview of Survey and Interview Process

The Technology Study Committee developed a 200 item survey and a series of interview questions to use in collecting information related to the six study objectives. (See Appendix A for survey and results, Appendix B for interview questions, and Appendix C for survey participants.)

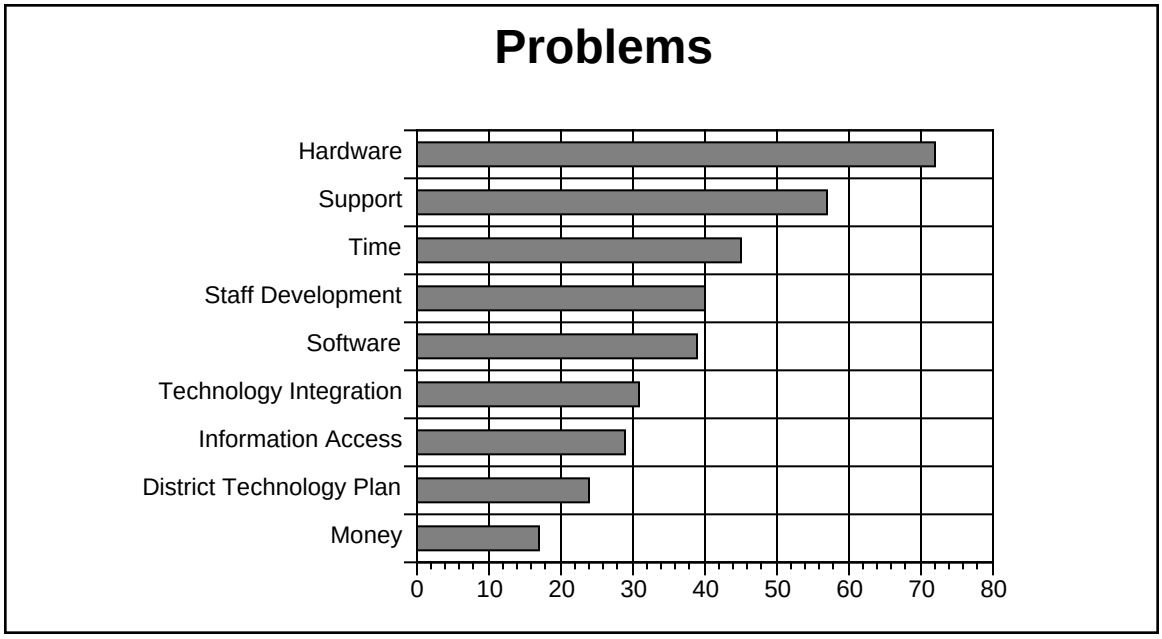
The committee then conducted a series of group interviews to solicit opinions from more than 125 teachers, students, parents, principals, paraprofessionals, central administrators, support staff, and business and community representatives.

Once the survey and interview data had been compiled, committee members analyzed the results to draw conclusions.

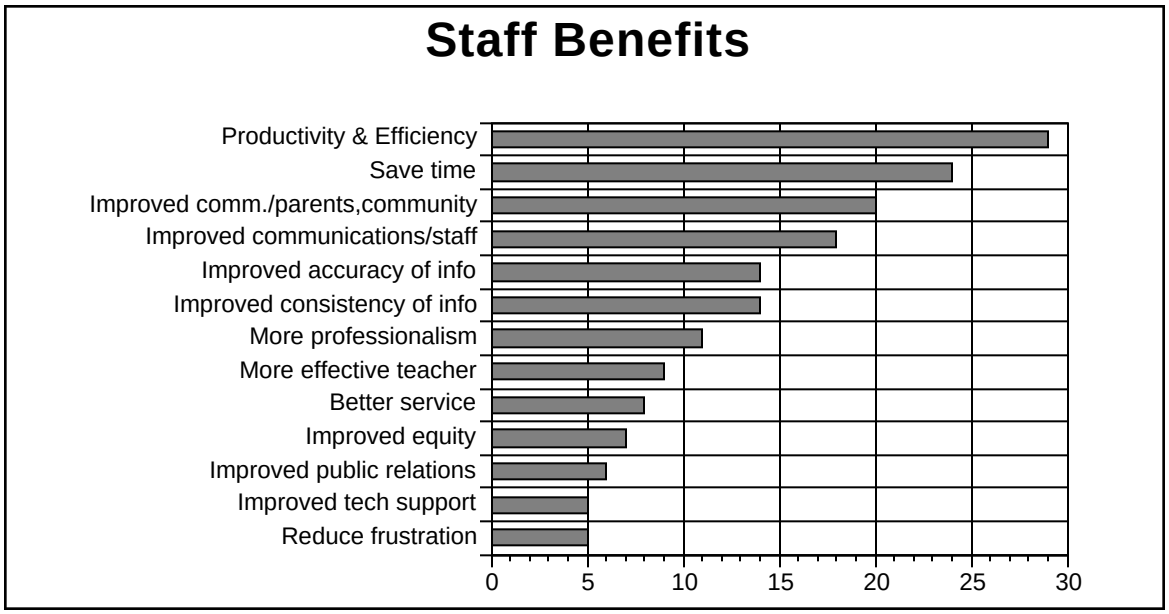
The following graphs summarize the data gathering process and results.



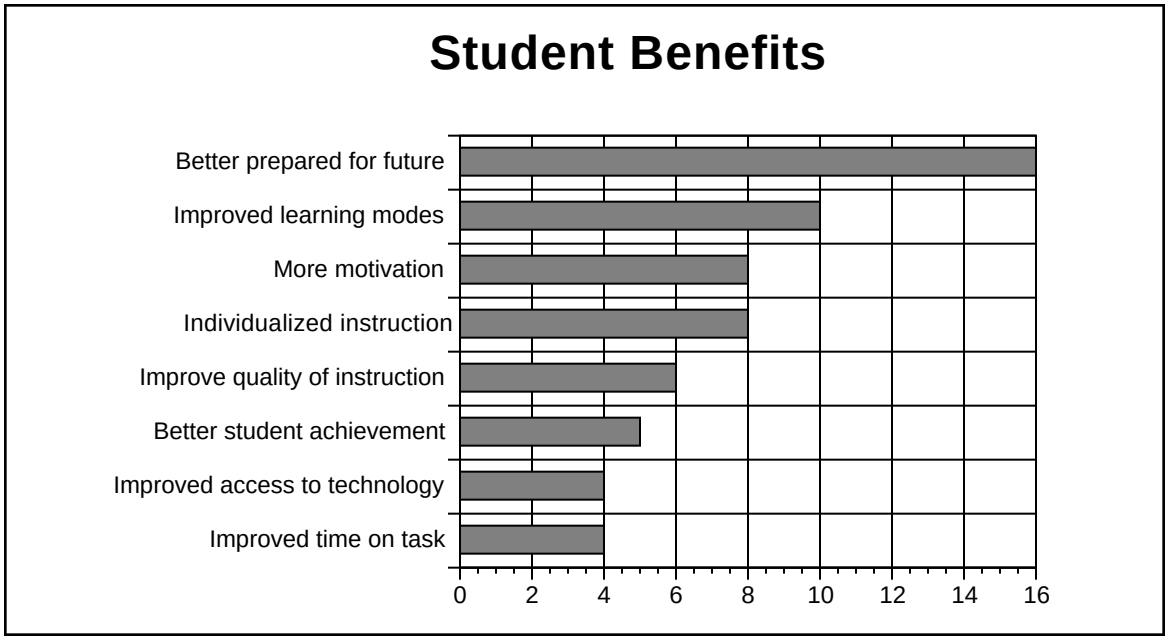
The Technology Study Committee interviewed 125 persons. This chart shows the composition of the interviewee population.



What problems do you have in making the best uses of technology in the performance of your job? This question was asked of 125 persons interviewed. The graph indicates the number of times a specific response was given by the interviewees.



If one or more of your recommendations were implemented, what would be the value and benefits for you, the district, the school, the students, and the community? This question was asked of 125 persons interviewed. The graph indicates the number of times a specific response was given by the interviewees.



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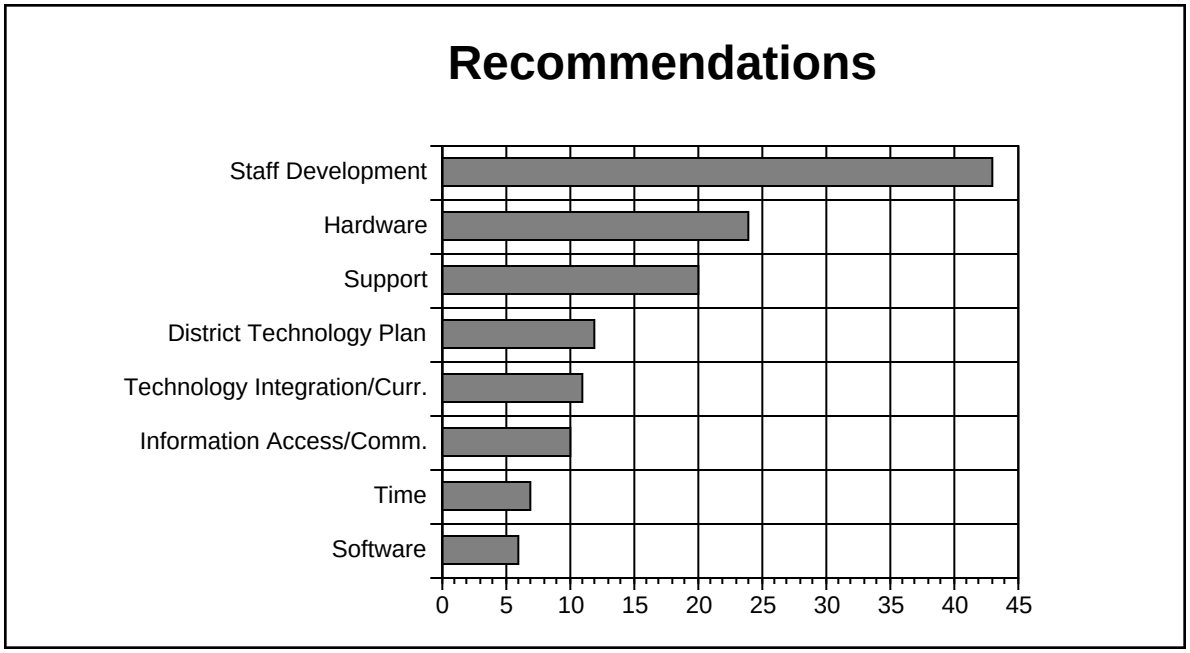


What ideas or suggestions would you have to improve your job skills through the use of technology? This question was asked of 125 persons interviewed. The graph indicates the number of times a specific response was given by the interviewees.

14 Redirected Time

During the interview process and follow-up some staff indicated they could redirect time with technology or technological access to critical information in the following ways:

Teachers:
- Spend more time in the classroom with students
- Have a more productive teaching day
- Time to prepare more quality instructional materials
- Be a better role model for the students
- Provide more timely status updates to students
- Assist students understanding of broad concepts, as well as detail

Counselors:
- Make student visits more productive
- Place students in the correct classes sooner
- Have more teamwork with secretaries and assistant principals
- Reduce paperwork

Principals:
- More visibility in the school
- Spending more time in the classroom
- Spending more time as instructional leader
- Spend more time observing and working with teachers
- Attend fewer meetings with improved communications
- Look more professional

Secretaries:
- Assist principals, teachers, students and parents
- Produce more quality work
- Handle additional work coming from the district and state
- Give better service to the principal
- Expand school to home communications
- Improve professionalism
- Reduce frustration
- Spend more time planning

General Guidelines for Technology Implementation

Given the wide array of technologies available to choose from, the task force used the following guidelines to direct technology selection and implementation recommendations:

1. Adequate site support needs to be provided.
2. Make use of existing technology whenever feasible.
3. Design with the future in mind.
4. Allow for input of affected users.
5. Technology investments should deliver tangible improvements in district operational efficiency and quality of service to its students and staff.
6. Select hardware and software systems that minimize initial and on-going support costs.
7. Data that is needed among administrative departments must be maintained on one central database.
8. Equity among all sites, but some additional resources should be allocated for hardware and software purchases in every school every year.
9. All future district curriculum studies should explore and incorporate any technological applications that would enhance that curricular area.
10. Hardware and software must be chosen to support district defined curriculum.
11. Standards will be established for acquisition of technology to ensure compatibility and alignment with long-term district goals.
12. Simpler is better.
13. Awareness and training procedures will be established that ensure the readiness of staff to use current and new technology.
14. A thorough assessment of sites will occur that establishes recommendations for:
    - Adapting facilities for technology in the areas of space, cabling, electricity, furniture, lighting, security, etc.
    - Use of existing hardware that will include age, number of workstations, network compatibility and potential, etc.
    - The quantity and quality of existing software available to support the implementation plan.
    - Awareness and training needs.
15. All or parts of the existing Staff Development program can be incorporated into the new model.
16. Equitable and timely staff development and support opportunities must be provided for all staff.

17. Staff development and support must be based on administrative and instructional needs.
18. All Staff Development must be based on sound pedagogical practices.
19. Introduction of new applications must be paired with adequate support.

Instruction

Problems

- Teachers do not have direct access to technology to help with routine communication and classroom management tasks.
- Teachers do not have technology available for instructional presentations in curricular areas.
- Individual students do not have technology available to meet their needs.
- Students and teachers do not have equipment and courseware available for work with video productions.
- Students and staff do not have technology available to access needed reference and research information.

Recommendation 1

Provide technology to the teacher for classroom instructional management functions such as attendance, grading, assessment and communications.

- Telephone in every classroom
- Networked teacher station in each classroom to secure relevant access to student data
- Software for classroom management such as gradebook, test generator, word processing, desktop publishing and attendance
- Software for inter-classroom communication with peers and administration
- On-site scanning based on classroom teacher needs
- Minimum dedicated on-site support:
  - One half FTE certified technology support person
  - One half-time technical support para for each building
  - One certified FTE technology support person who supports one networked lab and 15 teacher workstations and one technical support para per lab
- Certified Technology Support Personnel work directly with instructors to provide integration of technology into the curriculum

Recommendation 2

Provide technology to the teacher for instructional presentations.

- Electronic presentation tools (27" monitor, presentation software as well as large screen color projection from the computer) in all classrooms
- Access to additional multimedia preparation and delivery technology systems such

as CD-ROM, videodisc player, VCR, still/motion video cameras, scanners/digitizers, multimedia software, etc.

Recommendation 3

Continue to integrate additional technology in the classroom to meet group and individual student needs, and to maximize each student's learning potential.

- Network all existing computer labs.
- Labs should contain adequate hardware to accommodate no more than one student per workstation.
- Labs must contain one teacher workstation for demonstration purposes.
- Install a minimum of one networked student workstation for every five students in each classroom.
- Utilize technology to help meet instructional goals.
- Utilize technology to meet specific and /or unique individual student needs.
- Provide software to meet district curricular goals.
- Additional technology support is needed as hardware, curriculum integration, and skill level of staff and students increase.

Recommendation 4

Provide technology to the student and teacher for work with video tape and video productions, so that student learning can be enhanced in the curriculum areas.

- Every classroom cabled to the distribution center of the building system with access to multiple channels
- Portable 2-way access to video: one per elementary, three per secondary school
- Two-way interactive video (distance learning)
- Fixed video cameras
- Video controller
- Video/audio editing deck
- Playback and recorder VCR's
- Microphones
- Multi-media computer
- Video overlay capabilities
- Appropriate lighting
- Appropriate furniture
- Students will utilize video to meet instructional goals

Recommendation 5

Provide building wide reference and research information access for all students and staff.

- Networkable CD-ROM reference materials
- Modem connection to on-line data
- Electronic card catalog
- Electronic check-out system

Station Models

Classroom Configuration

- Telephone
- 27" Monitor with appropriate cabling to central distribution area
- Network connection capable of supporting 35 units
- Video access

Teacher Workstation

- Networkable notebook/desktop computer
- Local and network printing
- Group projection with color capabilities
- Modem
- Appropriate furniture

Teacher Resource Station (mobile) *One per every four classrooms*

- Multi-Media computer with composite video out
- CD-ROM
- Hand held scanner
- Sound and video digitizer
- Videodisc player
- Video overlay capabilities
- Multi-media cart to hold above equipment

Classroom Student Station

- Networkable notebook/desktop student computer
- Access to local printing (one printer for each four computers include the teacher's printer in this ratio)

- Appropriate furniture
- Access to on-line database information

Computer Lab *(one lab per every 500 students)*
- Networkable desktop student computers (30-35)
- Access to local/network printing
- Teacher station
  - Computer system
  - Group projection with color capabilities
  - Amplified audio speakers
- Appropriate furniture

Project Center
- Still video camera *(one for every four classrooms)*
- Color flatbed and hand held scanners
- Mobile labs *(six to 12 notebook computers that can be moved)*
- Camcorders *(three at elementary level, 16 at secondary level)*
- VCR's - *(one for every four classrooms)*
- Laser disk players *(one for every four classrooms)*
- Color monitor with connectivity to notebook computer

Video Studio
- Every classroom cabled to the head end of the building system with cable access to multiple channels within the building
- Portable two-way access to video one per elementary - three per secondary
- Fixed video cameras
- Video controller
- Video/audio editing deck
- Playback and recorder VCR's
- Microphones
- Multi-media computer
- Video overlay capabilities
- Appropriate lighting
- Appropriate furniture

Media Center
- Networkable CD-ROM reference materials
- Modem connection to on-line data
- Electronic card catalog
- Electronic check-out system

Software/Courseware
- Videodiscs
- Optical character recognition software
- Multi-media presentation software
- Word processing
- Data base
- Spreadsheet
- Desktop publishing/page layout
- Graphics/paint
- Telecommunications
- Gradebook/record keeping
- Test generator
- Management/attendance
- Building scheduling
- Network

22 Administration/Communication

Problems

- Inability to access necessary and accurate information in a timely manner
- Lack of a consistent and centralized data base
- Lack of an effective data communication system district wide and within individual sites
- Inadequate support of current administrative hardware
- Inadequate support of current administrative software
- Inconsistent and incompatible existing software and hardware
- Lack of documentation of the current administrative hardware and software

Recommendation 1

Establish a high-speed cost effective interconnection between all district sites that possess the following characteristics:

- Provides for the most cost effective transmission of data, voice and video signals
- Provides a gateway to interconnect with other organizations both public and private
- Provides a method for parents to communicate with their child's teacher or other district staff
- Provides for sites to have access to district wide information
- Provides for cost effective communication between district sites
- Provides for on line service and support of district site LANs

Recommendation 2

Establish a high speed interconnection within all district sites that possess the following characteristics:

- Provides for the most cost effective transmission of data, voice and video signals
- Provides for the sharing of information between all users within the site
- Allows for the effective use of high cost devices within the building i.e. (laser printer, scanners etc.)
- Provides for a lowest cost approach for acquiring software
- Allow for electronic communication between all users within the site
- Provides for a cost effective method of communication with all other district sites

Recommendation 3

Implement a central processing facility that will provide access to integrated data base of information to all district personnel via a district-wide high speed data network. Some applications to be supported on this facility are:

- Budgeting-forecasting
- Accounting
- Accounts payable
- Accounts receivable
- Cash management
- Purchasing
- Inventory/warehouse and building sites
- Fixed assets
- Building and grounds
- Transportation
- Payroll
- Employee benefits (sick leave, vacation, personal leave, miscellaneous)
- Employee contract negotiations
- Personnel applications:(e.g., leaves of absence, substitute teachers, continuing education, assignments, history, evaluation, demographics)
- Insurance: property/liability, employee groups, employees
- Food service
- Student/census information
- Assessment information/curriculum
- Data conversion
- Special education due process

Recommendation 4

Implement distributed site-based student record management system. Applications to be supported include:

- Demographics
- Attendance
- Scheduling
- Grading/assessment
- Individual Education Plans (IEP)/Individual Learning Plans (ILP)/Child Study
- Discipline

Recommendation 5

Provide access to the following standardized set of productivity software accessible by all district personnel from their individual workstations.

- Word processor
- Spreadsheet
- Desktop publisher
- Data base
- Electronic mail
- Meeting and facilities scheduler
- Calendar

Recommendation 6

Provide each site/department ready access to FAX technology.

Recommendation 7

Install additional telephone lines at each site so that staff/parents/community can easily and conveniently communicate.

Recommendation 8

Provide for the following administrative services/communications environments:

Elementary Office Site (principal, clerical, health service, buildings and grounds, food service)

- Networked computer desk
- Laser printer
- Local printer
- Telephone per desk
- Fax machine
- Copy machine
- File server with LAN and WAN

Middle School Office (principal, assistant principal, clerical support, health service, counselors, buildings and grounds, food service)
- Networked computer per desk
- Laser printer
- Local printer
- Telephone per desk
- Fax machine
- Copy Machine
- File server with LAN and WAN

Senior High School Office, Anoka-Hennepin Alternative Program (principal, assistant principal, clerical support, attendance clerk, counselors/dean, health service, building and grounds, food service)
- Networked computer per desk
- Laser printer per office area
- Local printer
- Telephone per desk
- Fax machine
- Copy machine
- File server with LAN and WAN

Learning Center/Distribution Center (special education, food service, buildings and grounds with technology repair, community education, purchasing/warehouse, staff development, technology/support, printing services, student services)
- Networked computer per desk
- Laser printer per office area
- Local printer
- Telephone per desk
- Fax machines
- Copy machines
- File server with LAN and WAN
- Building network

Educational Services Center (finance/planning, transportation, governmental relations/census, operations and facilities, personnel, employee relations/insurance, student assessment, word processing, associate superintendents, superintendent, information systems, custodial/vehicle storage building, Indian education, curriculum)

- Networked computer per desk
- Laser printer *(one per 10 workstations)*
- Local printer *(one per four workstations)*
- Telephone per desk
- Fax machine *(two)*
- Copy machine *(one per department)*
- File server with LAN and WAN

Staff Development/Technical Support

Problems

- Limited delivery systems for staff development–the number of courses and locations offered do not meet the demand for technology training
- Insufficient staff to provide adequate numbers of course offerings
- Current support staff are expected to deliver staff development and support across all levels from basic user support,low level system maintenance, and low level application specialization through advanced planning and system design, research and development as well as advanced application specializations.
- Insufficient time is allocated for staff development in the area of technology.
- Technology training is not provided when new hardware and software is delivered, when a new application is implemented, and/or when new curriculum is implemented.
- Technology training for staff lacks scope and sequence.
- Required technology competencies have not been developed and included in defined performance responsibilities.
- Increased staff frustration and diminished enthusiasm because of limited support and a limited staff development program in technology
- Lack of a clearly defined priority system for the delivery of support
- Insufficient staff to provide adequate and timely support to sites
- Current equipment is often under-utilized because of a lack of timely support.
- Lack of a long range plan creates difficulties for repair staff in determining their training needs.
- Continual infusion of a variety of equipment creates difficulty for repair staff in keeping up to date and maintaining adequate supplies.

Recommendation 1

A staff development program must be created and implemented whenever new hardware and software applications are introduced.

- A staff development plan must accompany any requests for new hardware and/or software applications. This staff development plan must be approved by the appropriate technology staff members. In addition, this plan needs to be updated on a regular basis to insure continued use and success.
- On site support staff hold initial responsibility for the staff development component which accompanies hardware and software purchases. This plan must follow approved guidelines as to timelines, resources needed, desired outcomes, etc.

Recommendation 2

The scheduling of staff development sessions is critical to achieve maximum participation. To insure this success, inservice opportunities must be offered at times that meet the needs of all staff.

- Staff development opportunities must be provided for district personnel when it is most beneficial to them. The following inservice times have been identified:
  - During the work day (62% of survey respondents).
  - During summer months (17% of survey respondents).
  - During regular staff development days (17% of survey respondents).
- The decision making body at each site must provide release time for technology staff development and appropriate follow-up.

Recommendation 3

Varied and ample opportunities need to be provided to meet the technology needs of district staff and programs.

- District-wide catalog listing all technology training including building level training; updated semi-annually.
- Updated technology offerings district wide and at the building level included in the Staff Focus.
- Staff development programs will be provided to staff as new technologies are integrated into curriculum areas.
- Staff development programs will be provided to staff as new technologies are integrated into administrative application areas.
- Establish learner outcomes for all employee groups in the area of technology literacy.
- Provide a scope/sequence plan that allows staff to move toward desired technology outcomes.
- Staff development will be provided on and off site according to the needs of the staff. (work site, 53% of survey respondents; Staff Development Center, 46% of survey respondents)

Recommendation 4

Provide an incentive plan that rewards employees for achieving the district's technology learner outcomes for training and appropriate follow-up.

- Release time
- Graduate credit
- Continuing Education Units
- Earn hardware and or software "tech points" for completing inservice in technology, i.e.,tech points could be used to purchase additional hardware, software, and/or training for a site

Recommendation 5

Establish a continuum of instruction that recognizes and defines appropriate levels and functions as they are related to staff development needs.

- Identify the level of staff development needed for each site and for each program. (See Appendix D, Sample Format for Identified Staff Development and Support)
- Assign the responsibility of that staff development to appropriate support staff.

Recommendation 6

Develop a staffing pattern that recognizes and defines appropriate levels and functions as they are related to technical support.

- Identify the level of support needed for each site and for each program.
- Assign the responsibility of that support to appropriate support staff.

Recommendation 7

A support plan must be approved and implemented whenever new hardware and software applications are introduced.

- A support plan must accompany any requests for new hardware and/or software applications and be approved by the appropriate technology staff members. This plan needs to be updated on a regular basis to insure continued use and success.
- On site support staff hold initial responsibility for the support component which accompanies hardware and software purchases. This plan must follow approved guidelines as to timelines, resources needed, desired outcomes, etc.

Recommendation 8

Provide adequate staffing for the delivery of technology support.
Provide timely on site technology support for staff.

- Directory of technology support services
- District-supported software list (updated semi-annually)
- District-supported hardware list (updated semi-annually)
- Procedures for obtaining hardware/software support;
- Composite list of all technology support services.
- Provide a District Solution Center (available during normal staff working hours, 7 a.m. to 5 p.m.)
- Technical hotline with immediate recommendation and immediate referrals–new staff position
- Hardware support–beyond the hotline;
  - maintenance
  - installation
- Software support–beyond the hotline;
  - Installation
  - Upgrades
  - Maintenance
- Media Services
- Staff development
  - Basic skills;
  - Application specific:
    - Instructional
    - Administrative
    - Productivity

Create a Technology Learning Center that includes:

- Technology labs–equipped to provide staff development on all supported platforms
- Research and development–instructional, administrative, productivity
- Administration, instruction and support would be provided by the solution center staff.

Develop a network of, and funding structure for, on site support staff.

- Current support levels must be maintained and new monies should be reallocated from the current staff development budget for this purpose.
- Initial site support will be determined by technology performance objectives.
- Additional site support will be determined by an annual review of technology performance objectives.
- The on site support should be funded by administration (20%), curriculum (40%), and staff development (40%).

32 Benefits of Implementation

Instruction

- Reduce time spent by teachers on non instructional tasks
- Enhance teacher-parent communication
- Improved student data consistency and accuracy
- Increase teacher morale
- Tangible evidence that the district is keeping pace with technology advances
- Timely assessment results for improved student motivation and achievement
- Improved instructional effectiveness which results in greater student achievement
- Greater motivation for learning
- Motivates enthusiastic teaching
- Provides teacher the tools to monitor and adjust instruction to meet student needs and learning styles
- Real-world modeling of how technology can enhance daily life
- Improved student academic achievement
- Provides teacher the tools to monitor and adjust instruction to meet student needs and learning styles
- Increase student morale/motivation
- Provide technological skills for present and future needs of students
- Access to wide variety of video information from various sources (access is available to all or to any configuration of classrooms at the same time)
- Ability to send video information (announcements, etc.) to all students and staff
- Students able to produce video reports for classroom academic requirements
- Life-long video production skills achieved by both students and staff
- Ease of information access
- Wider access to current information
- Accurate and time-saving media management

Administration/Communication

- A central computer system and support for district financial, personnel, operational and information systems will provide access to a centralized, integrated data base.
- Site-based computer systems will support student-related operational and information systems.
- Local area networks (LAN) throughout all sites will provide high speed interconnection and data and software sharing.

- A district-wide standardized set of productivity application software (e.g., word processing, spreadsheet, desktop publishing) accessible from any network workstation will make it easier and more efficient for staff to share information and documents, and to work together cooperatively.
- High speed telecommunication links will provide a WAN between all sites that will support electronic communication and access to centralized information system.
- Fax machines at each site will enhance intra and inter district communication of hardcopy information.
- An improved telephone system will provide convenient access for intra/inter district voice communications by staff and parents.

Staff Development/Support

- More effective employees
- Increased efficiency and productivity
- Improved staff morale
- Better service (students/staff/public)
- Equitable technology support opportunities for all employees
- Better utilization of technology investment

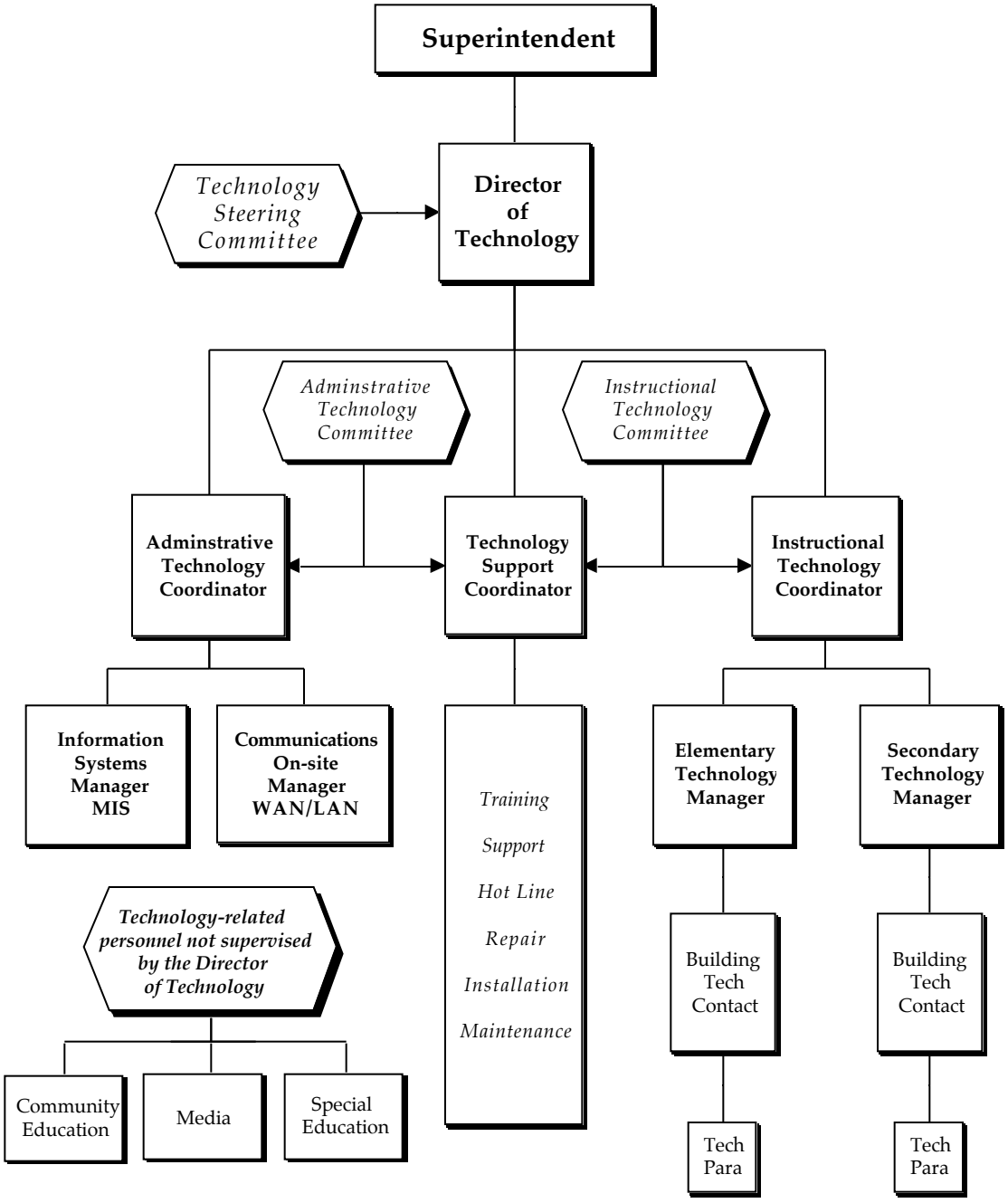
34 Organizational Structure for Technology

The following pages detail the organizational structure for technology in Anoka-Hennepin.

Technology decision making will be headed by the Director of Technology, with input from the Technology Steering Committee.

Coordinators for administrative technology, instructional technology and technology support will work directly under the Director of Technology, with input from the Administrative Technology Committee and the Instructional Technology Committee.

Technology Organizational Structure



Committee Structure

Technology Steering Committee
Purpose: As an advisory committee to the Technology Director, the Steering Committee is responsible for the periodic review of the technology planning process. It shall review and recommend policies and procedures which will ensure the effective use of technology for both administrative and instructional applications.

Members: To include members from the existing Technology Steering Committee as well as representatives from the Instructional Technology Committee and the Administrative Technology Committee. Membership also includes the Technology Support Manager, the Instructional Technology Manager, and the Administrative Technology Manager

Chairperson: Technology Director

Instructional Technology Committee
Purpose: Interfaces with the curriculum study process, the school improvement process, and staff development. One or two representatives serve on the Technology Steering Committee. Makes hardware and software recommendations and ensures adequate staff development and support.

Members: Representatives from all staff categories reflecting the diverse instructional settings in the district. (principals, teachers, para-professionals, etc. from all organizational levels and a variety of student populations). Central administrative groups such as subject matter consultants should also be represented. Membership also includes the Technology Director (ex officio), the Technology Support Manager, and the Administrative Technology Manager.

Chairperson: Instructional Technology Coordinator

Administrative Technology Committee
Purpose: Interfaces with a variety of user groups and/or representatives of all administrative departments (payroll, transportation, personnel, food service, employee relations, etc.). One or two representatives serve on the Technology Steering Committee. Makes hardware and software recommendations and ensures adequate staff development and support.

Members: Representatives from all staff categories reflecting the diverse administrative settings in the district. Principals, clerks, para-professionals, etc. from all organizational levels and administrative departments. All central administrative groups should be represented. Membership also includes the Technology Director (ex officio), the Technology Support Manager, and the Instructional Technology Manager.

Chairperson: Administrative Technology Coordinator

District level administrative/supervisory structure

- **Technology Director** *(see job description)*

- **Three Technology Coordinators** *(see job descriptions)*
  - Instructional Technology Coordinator
  - Administrative Technology Coordinator
  - Technology Support Coordinator

- **Technology Managers** (report to three technology coordinators) *job descriptions to be developed*

Building level delivery structure

- **Building Technology Coordinator:**
  Responsible for the implementation of a building technology plan. Coordinates the installation of hardware and software and provides training/support for the building.
  Serves as facilitator of the Building Technology Management Team.
  (Decisions need to be made as to licensure requirements and collective bargaining unit agreement considerations)

- **Technology Support Para** (one or more - nonlicensed)
  Provides on-site assistance, along with the Building Technology Coordinator, to staff and students in the classroom application of technology at the building level.

- **Building Technology Management Team**
  Plans for and oversees the building's technology needs. Chaired by the Building Technology Coordinator. Includes members from the Building Leadership Team.

Technology Director

Reports to: Superintendent of Schools

Supervises:
- Technology Support Coordinator
- Instructional Technology Coordinator
- Administrative Technology Coordinator

Contract: Administrative/supervisory: full-time, full-year (260 days)

Selection Process: Interview committee includes members from the present Technology Task Force

Primary Responsibilities:

1. Implements Technology Task Force recommendations in consultation with the Steering Committee.

2. Directs all instructional, administrative, staff development, and technical support activities related to technology.

3. Coordinates the technology functions across the district, e.g., community education, special education, and media.

4. Directs the allocation of existing resources and seeks additional support, both personnel and financial, to ensure the implementation of the Task Force recommendations regarding technology.

5. Monitors, evaluates, updates, and establishes within the context of the District Technology Plan.

6. Serves as member of the District Facilities Committee. Chairs District Technology Steering Committee and serves as ex officio member of Instructional Technology Committee and Administrative Technology Committee.

7. Performs other duties as assigned by the Superintendent.

Minimum Qualifications:

1. Demonstrated skill and understanding of the coordination of instructional, administrative and technical support needs of technology in a large school district.

2. Ability to establish, maintain and improve computer networks.

3. Working knowledge of and experience with a variety of hardware and software applications, including IBM (DOS) and Apple platforms.

4. The ability to work cooperatively and effectively with others.

5. Successful related experience in classroom teaching and/or administration.

6. Bachelor's degree and advanced training relevant to this position.

7. Demonstrated ability to perform position responsibilities.

Technology Support Coordinator

Reports To: Technology Director

Supervises: The training, support and hot-line services, the installation, maintenance, and repair of all hardware.

Contract: Administrative/supervisory: full-time, full-year (260 days)

Primary Responsibilities:

1. Provides staff development in technology at the district and building level for instructional, administrative, and support staff.

2. Maintains a current awareness and knowledge of emerging information, trends, and applications for technology.

3. Installs software/hardware updates and improvements, including networks and work stations.

4. Provides technical assistance to personnel, schools and sites.

5. Institutes preventative maintenance/repair/safety procedures for school sites, the ESC and the LC/DC.

6. Creates and coordinates referrals for the repair system.

7. Assists with the development of, participates in , and facilitates computer user groups.

8. Serves on the Technology Steering Committee, the Instructional Technology Committee, and the Administrative Technology Committee.

9. Performs other responsibilities as assigned by the Technology Director.

Minimum Qualifications:

1. Demonstrated skill and understanding of the coordination of technical support needs of technology in a large school district.

2. Working knowledge of and experience with a variety of hardware and software applications, including IBM (DOS) and Apple platforms.

3. Ability to maintain computer networks.

4. Ability to work cooperative and effectively with others.

5. Successful related experience.

6. Bachelor's degree and advanced training relevant to this position.

7. Demonstrated ability to perform position responsibilities.

Instructional Technology Coordinator

Reports to: Technology Director
Supervises:
- Technology Manager - Elementary
- Technology Manager - Secondary

Contract: Administrative/supervisory: full-time, full-year (260 days)

Primary Responsibilities:

1. Provides for the instructional application of technology in elementary, secondary, and special education programs.

2. Maintains a current awareness and knowledge of emerging information, trends, and applications for technology.

3. Provides for the installation of technology for teacher classroom management functions such as attendance, grading, assessment and communications.

4. Provides technology to the teacher for instructional presentations.

5. Continues to integrate additional technology in the classroom to meet group and individual student needs, and to maximize each student's learning potential.

6. Provides technology to the student and teacher for work with video tape and video productions, so that student learning can be enhanced in the curriculum areas.

7. Provides building wide reference and research information access for all students and staff.

8. Chairs the Instructional Technology Committee. Serves on the Technology Steering Committee and the Administrative Technology Committees.

9. Performs other responsibilities as assigned by the Technology Director.

Minimum Qualifications:

1. Demonstrated skill and understanding of the coordination of instructional needs of technology in a large school district.

2. Working knowledge of and experience with a variety of hardware and software applications, including IBM (DOS) and Apple platforms.

3. Ability to maintain computer networks.

4. Ability to work cooperative and effectively with others.

5. Successful related experience in classroom teaching.

6. Bachelor's degree and advanced training relevant to this position.

7. Demonstrated ability to perform position responsibilities.

Administrative Technology Coordinator

Reports to: Technology Director

Supervises:
- Information Systems Manager
- Communications/Network Manager

Contract: Administrative/supervisory: full-time, full-year (260 days)

Primary Responsibilities:

1. Provides for administrative application of technology for central services of the Educational Service Center (ESC), and the Anoka-Hennepin Learning Center/Distribution Complex (LC/DC), and for individual school buildings and community schools.

2. Maintains a current awareness and knowledge of emerging information, trends, and applications for technology.

3. Designs wide area and local area networks and works cooperatively with others regarding design issues related to installation.

4. Establishes a high-speed, cost effective interconnection between all district sites. Establishes a high-speed interconnection of all computers within buildings and/or departments.

5. Implements a central processing facility that will provide access to an integrated data base of information to all district personnel via a district-wide high-speed data network.

6. Implements a distributed site-based student record management system.

7. Develops and tests a “disaster recovery” plan.

8. Chairs the Administrative Technology Committee. Serves on the Technology Steering Committee and Instructional Technology Committee.

9. Performs other responsibilities as assigned by the Technology Director.

Minimum Qualifications:

1. Demonstrated skill and understanding of the coordination of administrative needs of technology in a large school district.

2. Working knowledge of and experience with a variety of hardware and software applications, including IBM (DOS) and Apple platforms.

3 Ability to maintain computer networks.

4. The ability to work cooperatively and effectively with others.

7. Successful related experience in classroom teaching and/or administration.

8. Bachelor's degree and advanced training relevant to this position.

9. Demonstrated ability to perform position responsibilities.

Decision Making Process for Acquiring Software and Hardware

Any hardware or software that has implications beyond the use of an individual must be reviewed before purchase through the District Technology Steering Committee process outlined here.

Planning for purchases of hardware/software can be initiated in the following fashion:

- by curriculum committees as they adopt new materials as part of their review process,
- by departments (both instructional and administrative) as they plan on new implementations,
- by building sites as they plan for new implementations,
- by any of the technology advisory committees (Technology Steering, Instructional and Administrative).

To purchase additional hardware:

- Each building and/or department is responsible for developing a site-based technology implementation plan. Any hardware purchases must first be presented and approved by a building-level technology committee. Approval by this committee will also involve detailing what additional support might be required by this purchase.

- The request for hardware purchase must be forwarded to the appropriate Technology Coordinator (Administrative or Instructional) for comment on both the technical appropriateness of the hardware plus the completeness of the support plan for implementation.

- If all minimum conditions are met, the building and/or department can proceed with the purchase.

- A list of minimum hardware requirements for purchase will be published and updated regularly by the Technology Support Coordinator with input from the Technology Steering Committee, as well as the Administrative and Instructional Technology Committees. Any purchases by individual departments or building sites should meet these requirements. Support, both instructional and repair, will be provided for only “approved” hardware pieces.

To purchase (or update) software:

- Software purchases must first be approved by the site-based technology committee. Approval by this committee also involves the writing of rationale as to why the software package is needed as well as updating the building/department staff development plan to include training on this software purchase. Updating existing software would fall under the same guidelines.

- The request for software purchase must be forwarded to the appropriate Technology Coordinator (Administrative or Instructional) for comment on both the technical appropriateness of the software plus the completeness of the support plan for implementation.

- If all minimum conditions are met, the building/department can proceed with the purchase.

- A list of supported software packages will be published and updated regularly by the Technology Support Coordinator with input from the Technology Steering Committee as well as the Administrative and Instructional Technology Committees. Each of these software packages will be supported through training and installation provided by the Technology Support area.

Decision Making Process for Integrating Technology into the Curriculum

The process for integrating technology into instruction will continue to follow the regular district curriculum review process.

Through this process, a Curriculum Study Committee of staff and citizens is appointed for each area of the curriculum. The committee reviews the existing curriculum and makes recommendations for changes and improvements. As part of its work, it studies new research and trends in the specific curriculum area.

Part of the charge given to Curriculum Study Committees is to address other topics of timely concern such as future trends, technology, inservice, and staff development. The Instructional Technology Coordinator, Administrative Technology Coordinator, and the Technology Support Coordinator would serve as ad hoc committee members.

Before selecting new textbooks and other materials, the committee reviews the options available and seeks input from staff and citizens. It chooses materials that best meet the needs of the district's students. In some cases, the district chooses to develop its own materials.

Final reports are prepared by each committee and submitted to the School Board and the Planning, Evaluating, and Reporting Committee for review.

Once new curriculum has been adopted, it is implemented in the classroom and monitored carefully. Adjustments are made if necessary.

Each area of the curriculum is reviewed on a six year rotating basis with several areas being studied each year. Each areas goes through a four part cycle:

- Study, one to two years
- Design new curriculum, one to two years
- Implement new curriculum, approximately one year
- Monitor new curriculum, approximately two years

Recommended Configurations for Technology Implementation

50

The following pages include recommended configurations for technology implementation in Anoka-Hennepin School District 11.

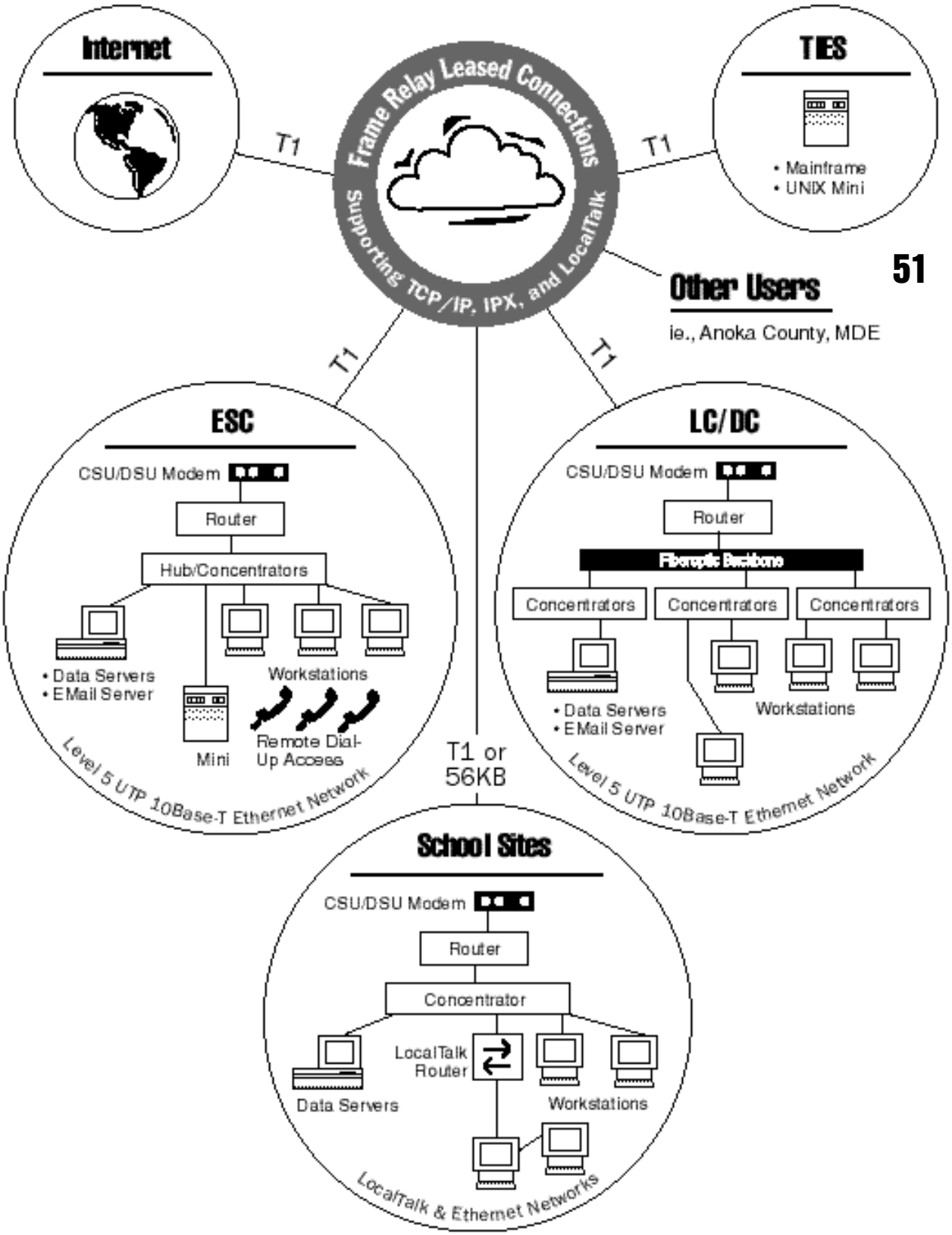
- **Anoka-Hennepin Schools wide area network**
  This diagram indicates that all educational facilities will be connected electronically, allowing more rapid information sharing. Page 51

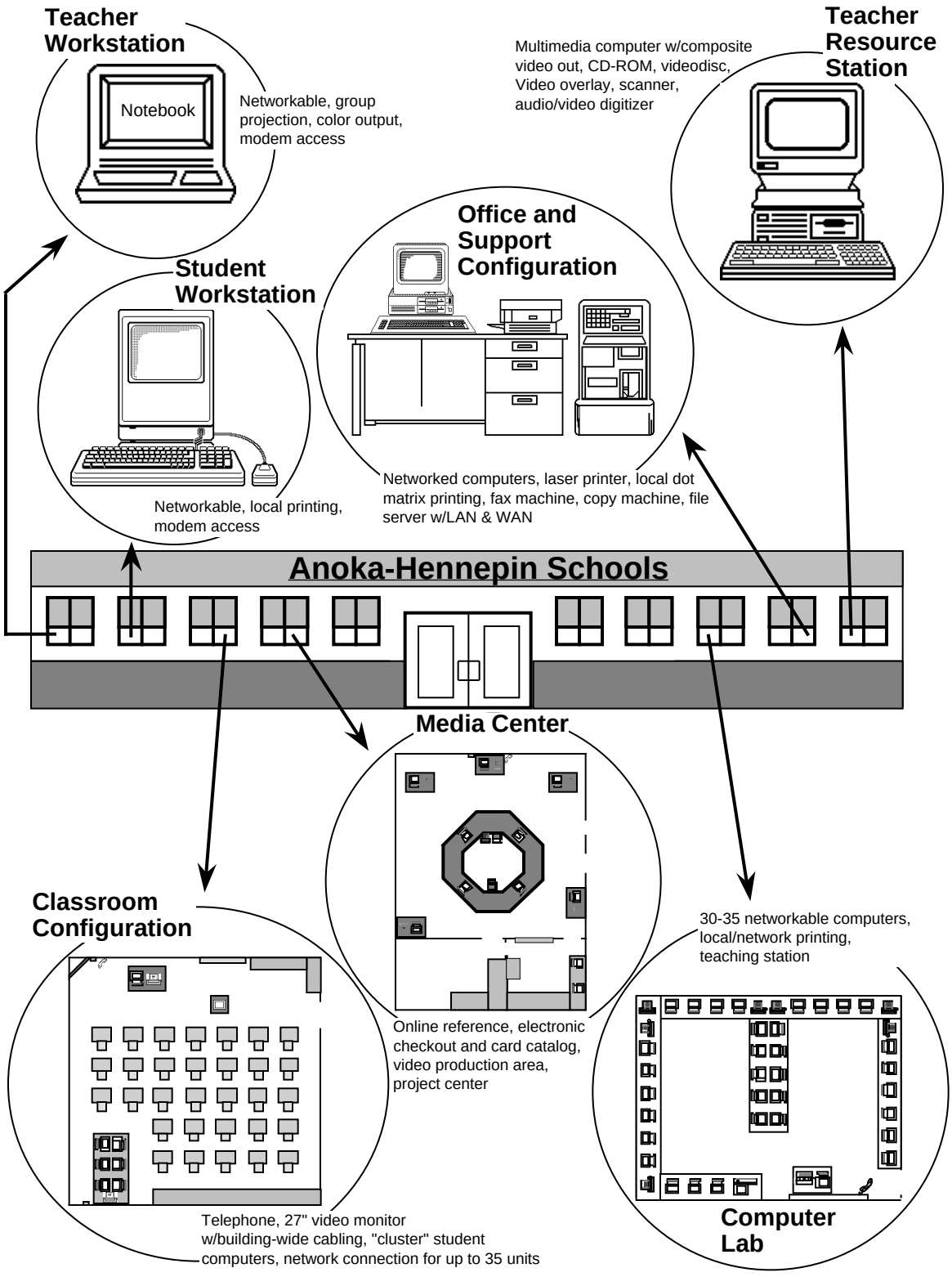
- **Individual school site**
  This diagram indicates the minimum technology configurations that will be available at each school. Page 52

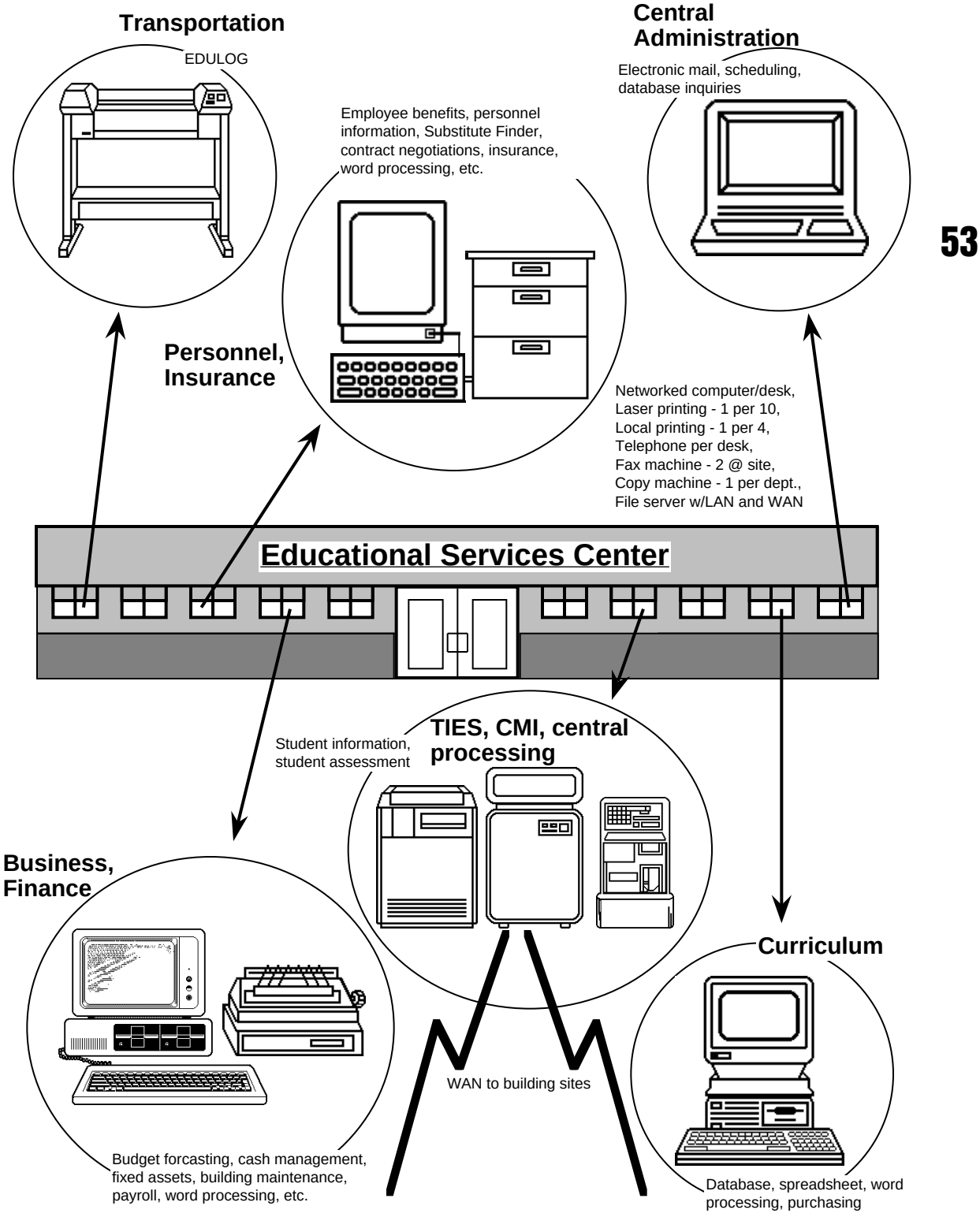
- **Educational Services Center**
  This diagram indicates the technology available at the Educational Services Center. The ESC will house or maintain the central processing unit which operates the districtwide network. Page 53

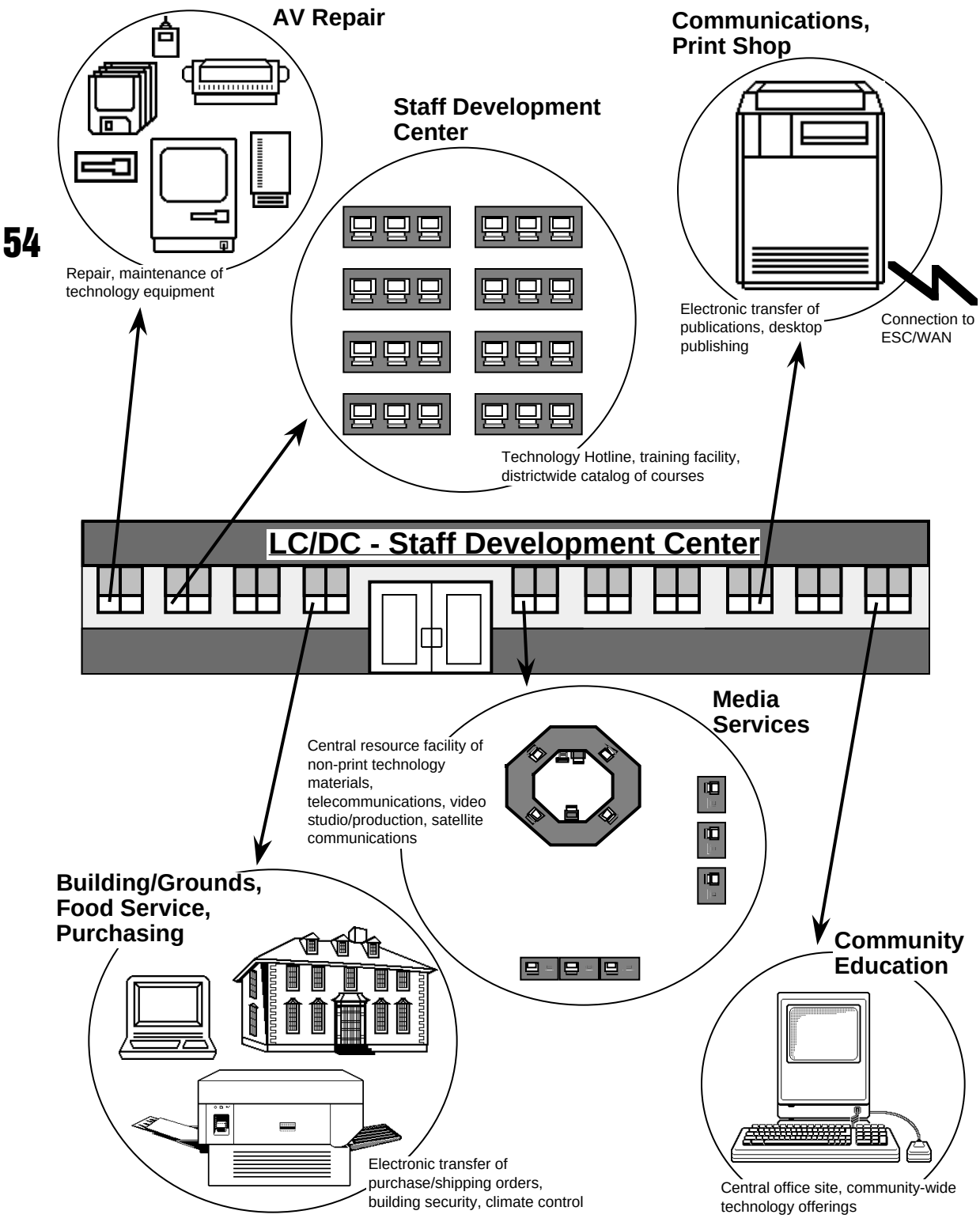
- **Learning Center/Distribution Complex**
  This diagram indicates the technology available at the Learning Center/Distribution Complex. Page 54

Anoka-Hennepin Schools Metropolitan Area Network




Teacher Workstation
Notebook
Networkable, group projection, color output, modem access
Multimedia computer w/composite video out, CD-ROM, videodisc, Video overlay, scanner, audio/video digitizer
Teacher Resource Station
Office and Support Configuration
Networked computers, laser printer, local dot matrix printing, fax machine, copy machine, file server w/LAN & WAN
Student Workstation
Networkable, local printing, modem access
Anoka-Hennepin Schools
Media Center
Online reference, electronic checkout and card catalog, video production area, project center
Classroom Configuration
Telephone, 27" video monitor w/building-wide cabling, "cluster" student computers, network connection for up to 35 units
30-35 networkable computers, local/network printing, teaching station
Computer Lab


Transportation
EDULOG
Central Administration
Electronic mail, scheduling, database inquiries
Employee benefits, personnel information, Substitute Finder, contract negotiations, insurance, word processing, etc.
Personnel, Insurance
Networked computer/desk,
Laser printing - 1 per 10,
Local printing - 1 per 4,
Telephone per desk,
Fax machine - 2 @ site,
Copy machine - 1 per dept.,
File server w/LAN and WAN
Educational Services Center
Student information, student assessment
TIES, CMI, central processing
Business, Finance
Curriculum
WAN to building sites
Budget forcasting, cash management, fixed assets, building maintenance, payroll, word processing, etc.
Database, spreadsheet, word processing, purchasing


AV Repair
Repair, maintenance of technology equipment
Staff Development Center
Technology Hotline, training facility, districtwide catalog of courses
Communications, Print Shop
Electronic transfer of publications, desktop publishing
Connection to ESC/WAN
LC/DC - Staff Development Center
Media Services
Central resource facility of non-print technology materials, telecommunications, video studio/production, satellite communications
Building/Grounds, Food Service, Purchasing
Electronic transfer of purchase/shipping orders, building security, climate control
Community Education
Central office site, community-wide technology offerings

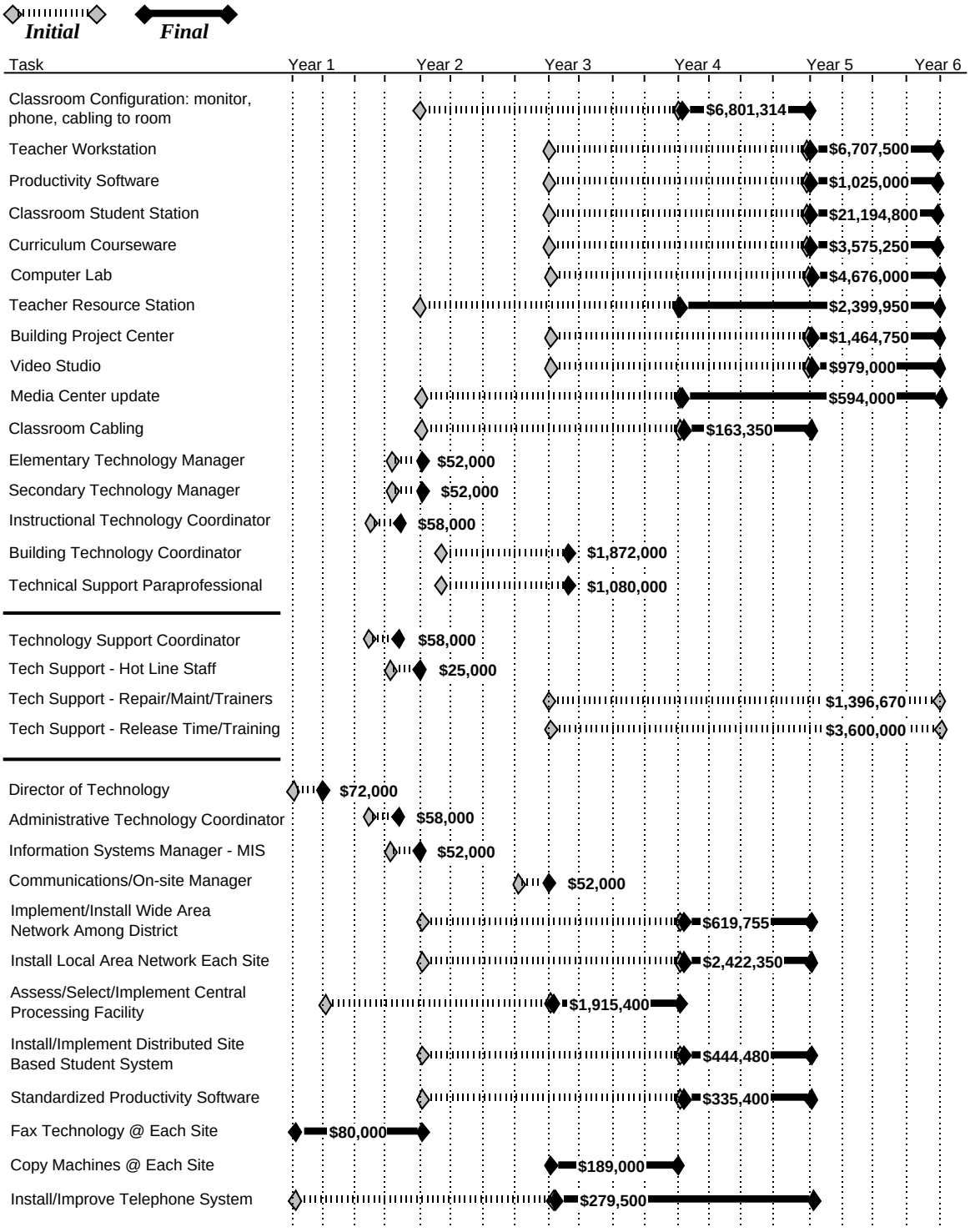
Recommended Timeline

A suggested timeline for implementing the recommendations in this report follows this page.

Implementation of the recommendations must begin with appointment of a Director of Technology. The director must be on duty to coordinate decision making for technology that will impact implementation of the committee's recommendations.

The following timeline can be modified to meet the district's needs and financial resources.

Technology Task Force Implementation Timeline



Funding

The funding for the proposed technology plan can best be described by breaking it down into its three components of Instruction, Administration/Communication and Staff Development/Technical Support.

Assumptions
When developing this model, the following assumptions were used:
1) Capital expenditure facility funds can be used to purchase equipment.
2) No new equipment or software will be purchased without providing the appropriate level of support.
3) Implementation costs are distributed over six years.

Instruction Component
The total cost of implementing the instruction component is $49,600,000 for capital expenditures and $13,400,000 for staffing from the general fund.

This component could be funded by:
1) Reallocating approximately $876,000 of the current facilities funds to a five year lease purchase program.
2) Issuing construction bonds for those costs directly related to building renovation.
3) Issuing 5-year equipment certificates for the purchase of the necessary hardware and software for the system.
4) Providing additional operating revenue to fund the additional costs in the form of an operating referendum of approximately $3,325,000 per year.

Administration/Communication component
The total cost for this component is $9,400,000. This consists of $3,100,000 from the general fund and a projected $6,300,000 from the capital expenditure fund.

These costs could be funded by:
1) Increasing the current spending level by $52,000 in the general fund and $80,000 in the capital fund.
2) Redirecting current capital expenditures for administrative and communication systems for a five year total of $2,700,000; redirecting current general fund expenditure of $250,000 for four years for a total of $1,000,000; reallocating approximately $700,000 of facility funds to a five year lease that would cover the cost of additional hardware.
3) Providing additional operating revenue when the plan is fully implemented to fund the ongoing operational costs of approximately $880,000 per year.

Staff Development/Technical Support Component
The total cost of this component is $12,400,000 and represents all general fund costs.

This component could be funded by:
1) Increasing the current level of funding by $80,000.
2) Redirecting current expenditures for technical support of $144,000 per year.
3) Providing additional operating revenue to fund the additional costs in the form of an operating referendum of approximately $5,200,000 per year.

The phase in of this component is directly related to the phase in of the instructional and administrative components.

Because the detailed renovation needs of each of the buildings are not known at this time, the component cannot be broken down between one time building costs funded by 20-year construction bonds and equipment costs funded by five-year equipment certificates.

It should be noted, however, that in order to keep the district's equipment current, the equipment certificates funded with the reallocation of current facilities fund would be an ongoing cost which would reoccur in five to seven year intervals.

A summary of these funding recommendations is shown in the table that follows:

Analysis of Funding Proposal - Computer Task Force 6 year plan

	Admin. & Comm.		Instructional		Tech. Support		Total 6 Year Cost	
Description	General Fund	Capital Fund	General Fund	Capital Fund	General Fund	Capital Fund	General Fund	Capital Fund
Funding Source								
Increase FY 93 budget	$52,000	$80,000			$80,000		$132,000	$80,000
Redirect current funding								
$250,000 per year for 4 years - data processing	$1,000,000						$1,000,000	
$500,000 per year TIE's fees - 4 years		$2,000,000						$2,000,000
$140,000 annual funding for cap. - 5 years		$700,000						$700,000
$144,000 instructional tech. - 5 years					$720,000		$720,000	
$400,000 annual allocation instr. tech. - 5 years				$1,600,000				$1,600,000
Reallocate future budgets - general fund	$328,000						$328,000	
Reallocate $1,800,000 cap. exp. funds - 5 years		$3,520,000		$2,880,000				$8,400,000
Future operating referendum levy or other								
other new revenue sources	$1,720,000		$13,400,000		$11,800,000		$28,720,000	
Future bond referendum levy				$45,120,000				$45,120,000
Total Funding Sources	**$3,100,000**	**$6,300,000**	**$13,400,000**	**$49,800,000**	**$12,400,000**	**$0**	**$28,900,000**	**$55,900,000**

Recommendations on Alternate Funding Sources

There is a perception that there is a growing base of financial resources and public support for an increased use of technology in education. However, the demand for such support is ever increasing and generally exceeds the available "local" resources.

To implement the recommendations in this study, it will be necessary to secure resources from a variety of public and private organizations.

Competitive governmental grants, state and federal, would provide significant support, especially for staff development. These grants are generally targeted to meet a district's most critical needs and are highly competitive. (i.e. several hundred applicants for five to 10 grants).

Private foundations (local, regional and national) have shown support recently for unique uses of technology toward "restructuring" education. Local corporations, businesses and a variety of community-based organizations have made contributions to support a specific school or program (e.g. adopting a school or program).

All of the above mentioned avenues of support for this plan should be examined thoroughly and pursued aggressively.

Appendices

A. Survey and Results

B. Interview Questions

C. Participant Lists

D. Sample Format for Identified Staff Development and Support

E. Cost Summaries

F. Glossary

G.

NAME All Groups **SCHOOL/DEPT./GRADE** 90 Respondents

To facilitate the analysis of your responses along with others, please use the attached GENERAL PURPOSE ANSWER SHEET to record your responses. Note the directions on side two relative to the need for a No. 2 pencil, etc.

On side one of the answer sheet, record your name by filling in the appropriate circles.

Ignore the birth date, sex, grade or education fields.

Use the **IDENTIFICATION NUMBER** area to identify the category which best describes your position. *Examples: A special education teacher would fill in circle A-3 . A district-level community education manager would fill in circle B-4.*

TEACHER, chose one of the categories and mark in column A.

N (number) = 30 (33%)

0. Elementary
1. Middle/Junior High School
2. Senior High School
3. Special Education
4. Student Services

ADMINISTRATOR, chose one of the categories and mark in column B.

N = 47 (52%)

0. Elementary Principal
1. Middle/Junior High School Principal/AP, etc.
2. Senior High School Principal/AP/etc.
3. Consultant or Coordinator
4. Supervisor/Manager
5. Director

BUILDING-LEVEL SITE SUPPORT PERSON, chose one of the categories and mark in column C.

N = 8 (9%)

0. Paraprofessional
1. Clerical
2. Custodial/Food Service
3. Community Education

DISTRICT-LEVEL SITE SUPPORT PERSON, chose one of the categories and mark in column D.

N = 5 (6%)

0. Clerical
1. Custodial/Buildings and Grounds/ Food Service
2. Community Education

Use columns E. and F. for your answers to the following questions.

E. Are you currently using a computer at your worksite?

0. Yes
1. No

F. IF YOUR ANSWER TO E. IS YES, What type of computer do you use most?

0. Apple IIe,c,gs
1. Macintosh
2. IBM
3. IBM Compatible
4. Terminal (e.g. TIES or CMI)

GENERAL QUESTIONS

INSTRUCTIONS: Please indicate how frequently you use each of the following types of technology to assist you in your job by placing your answer on the scan sheet in circle "A" or "B". Mark "C" if you do not use the item *and* do not see the need for it. Mark "D" if you do not currently use the item, but would if it were made available. Mark "E" if you have a need further assistance or staff development related to the item. Note, you may only make one choice from A-D for each item, but in addition to that choice, you may also choose "E". ***If you are unfamiliar with the particular item, please leave it blank.***

I use the following technologies in my job:	Frequently	Sometimes	No, and I don't Need it	No, but I would if Available	Staff Dev.. Needed
Wordprocessing					
1. Desktop (Personal)	63	12	5	7	18
2. Central (e.g. ESC, LC/DC)	11	35	22	10	7
Electronic					
3. Bulletin Board	7	21	14	33	23
4. Calendar/Scheduling	10	13	16	34	21
5. Encyclopedia	0	6	27	39	18
6. Mail	23	20	14	22	14
7. Fax machines	20	29	12	22	6
8. Modem/Telephone	16	18	10	34	17
Network Access (computer and/or video)					
9. Within your building	32	12	6	34	16
10. Between your buildings	9	16	8	49	16
Printing Devices					
11. Dot Matrix	31	19	27	2	5
12. Inkjet/Bubblejet	2	4	46	9	10
13. Laser	59	14	3	10	3
14. Plotter	1	6	33	21	17
Projection devices					
15. Panel/Overhead projector (LCD).	13	25	24	20	12
16. Large Screen Monitor (Computer/Video)	9	22	24	24	16
Television					
17. Cable	0	22	334	23	7
18. Closed Caption	1	7	51	10	9
19. Closed Circuit	0	7	40	25	10
Video					
20. Camcorders	7	36	30	11	6
21. Camera (still image)	10	36	31	7	3
22. VCR Recorder	20	36	22	6	3
23. Editing Equipment	1	11	43	18	16

	Frequently	Sometimes	No, and I don't Need it	No, but I would if Available	Staff Dev.. Needed
Input Devices					
24. Touch screen	0	4	31	35	12
25. Graphics tablet	1	5	28	22	18
26. Mouse	67	11	5	3	2
27. Scanners (data, graphics, text)	5	31	12	22	24
28. Speech recognition	1	4	35	24	19
Output Devices					
29. Speech Synthesis	0	7	43	13	9
30. Braille output	0	1	59	5	6
31. Augmentative/Alternative Communication Devices	1	1	46	5	10
Software					
32. Desktop Publishing	36	19	7	15	20
33. Database	33	23	4	13	24
34. Spreadsheet	24	26	11	13	24
35. Simulation	3	12	26	14	23
36. Career Planning	0	3	51	10	11
37. Tutorials	9	30	24	10	13
38. Graphics	18	37	9	13	21
39. Paint/Illustration programs	13	27	18	11	20
40. Keyboarding	27	17	30	8	9
41. Authoring	10	13	27	12	20
42. Programming	4	20	43	5	14
43. Multi-media	4	18	25	15	26
44. Music applications	3	5	58	5	13
45. Telephone	78	2	0	5	6
46. Teleconferencing	4	37	16	22	13
47. Voice Mail	60	14	5	9	1
48. Bar Code Reader	4	6	46	21	12
49. Calculator (Graphing, Multi-function)	16	23	22	16	9
50. Compact Disc Player	6	10	41	21	0
51. CD Rom	4	9	26	22	17
52. Copy Machines (low volume)	67	14	3	2	2
53. Copy Machines (high volume)	39	25	8	6	2
54. Digitizer	2	8	31	14	10
55. Laptop computer	4	7	17	53	12
56. Videodisks	0	11	27	29	14
57. MIDI-Musical Instrument Data Interface	2	1	52	4	4
58. Microfiche/Microfilm	1	26	36	11	4
59. Pagers	7	9	37	22	4
60. Portable P.A./Music/Sound System	7	18	36	16	2
61. Robotics	0	1	55	10	6
62. Color Printing	4	14	10	49	12
63. Satellite Down-link, receiving only	0	5	30	23	13
64. Satellite Up-link, two-way communications	0	0	34	19	15

Comments:

STAFF DEVELOPMENT

INSTRUCTIONS: Please mark the letter on the scan sheet that **best** reflects staff development activities you feel are necessary to do your job and to address the technology advances you perceive will be in place in the next two to five years.

65. Do you see a need for a District Technology location that would allow staff to preview and review hardware/software?
    A. Yes(77)
    B. No(12)

66. Where would you prefer technology training to occur? (Choose only one.)
    A. At your worksite(48)
    B. Staff Development Center(41)
    C. Vendor's Site(0)
    D. TIES(1)
    E. Telephone consultation(0)

67. When would you prefer technology training to occur? (Choose only one.)
    A. During the School Day(52)
    B. Before/After School(9)
    C. Weekend(0)
    D. Summer(14)
    E. Staff Development Days(14)

68. How would you prefer technology training to occur? (Choose only one.)
    A. Formal class(40)
    B. Training Manual/Tutorial(3)
    C. Training Diskettes/Workbook(0)
    D. Video Based Tutorial(6)
    E. Someone knowledgeable at my site(45)

69. What would be the most attractive incentive for your staff development?
    A. Release Time(34)
    B. Compensatory Time(15)
    C. Substitute Available(10)
    D. Graduate Credit(10)
    E. Continuing Education Units (CEU's)-12

70. Who do you most often call when you need help with software, equipment or maintenance?
    A. Site Technology Person(22)
    B. District Technology Consultants(38)
    C. Media Generalists(3)
    D. Colleague/Peer(2)

Comments:

DECISION-MAKING PROCESSES FOR TECHNOLOGY

INSTRUCTIONS: Please mark the letter on the scan sheet that corresponds to the code listed below to indicate who must be involved in decisions concerning technology. You must choose only one from A-E.

A. Individuals at a Building Site
B. A Committee at a Building Site
C. Curriculum Study Committees
D. A Department at the District Level
E. A District Technology Management Team

	A.	B.	C.	D.	E.
71. Equipment/hardware purchases	15	30	1	7	34
72. Software purchases	25	30	9	10	13
73. Staffing decisions	15	25	2	23	19
74. Integration of Technology into the Curriculum	5	5	51	10	12
75. Guidelines for the selection and acquisition of Technology	3	13	4	16	50
76. Guidelines for the equitable distribution of Technology	0	6	1	15	62

PRIORITY OF EXPENDITURES

If you had funds to spend on technology to support and enhance the instructional program and administrative functions, rank each item from 1(Low) to 5(High) which reflects your priorities?

	Low				High
Hardware					
77. For Students	1-1	2-4	3-11	4-22	5-48
78. For Staff (certified, noncertified)	1-2	2-2	3-16	4-17	5-56
Software					
79. Instruction	1-2	2-3	3-12	4-26	5-49
80. Administration	1-3	2-6	3-22	4-21	5-33
81. Staff Development	1-1	2-6	3-27	4-24	5-32
82. Opportunities to review new technologies (Workshop attendance, Conventions, District tech conference, etc.)	1-1	2-12	3-30	4-21	5-25
83. Communications systems (i.e. Electronic mail, Electronic bulletin boards, Voice mail, Modems, Fax, etc.)	1-6	2-8	3-20	4-31	5-24
	Less		**Same**		**More**
84. In relationship to all district expenditures, what amount should be spent on Technology?	1-3	2-1	3-27	4-34	5-24

Comments:

COMMUNICATION

(Respond only to items which directly apply to your position.)

INSTRUCTIONS: Please mark the letter on the scan sheet that corresponds to the code listed below to indicate what needs you have or anticipate needing in the areas of communication. **Give only one answer per item. IF YOU HAVE NO KNOWLEDGE OF THE ITEM, LEAVE THE RESPONSE BLANK.**

A. Current system is available, used and acceptable
B. Current technology is available and used, needs improvement
C. Current technology is needed but not available
D. Technology is not needed
E. Staff Development needed

Should all school and District sites be electronically networked for the following applications?

	A.	B.	C.	D.	E.
85. Budget Information	4	12	28	7	8
86. Calendar	8	15	16	9	11
87. Electronic mail	21	21	17	3	9
88. Facility scheduling	6	11	28	6	7
89. Personnel	7	14	21	6	5
90. Purchasing	6	18	17	2	6
91. Student attendance	10	26	4	1	6
92. Student information	6	26	11	1	8
93. Warehouse orders	12	26	12	0	4
94. Work orders	5	6	17	5	4
95. Student Assessment	15	22	10	2	5

My ability to communicate with the following entities utilizing technology is:

	A.	B.	C.	D.	E.
96. Other sites within the District	6	31	27	1	9
97. Other sites outside the District	4	17	32	6	5

Comments:

INSTRUCTIONAL SUPPORT

(Teachers Only)

INSTRUCTIONS: Please indicate how frequently you use each of the following types of technology to assist you in your job by placing your answer on the scan sheet in circle "A" or "B". Mark "C" if you do not use the item *and* do not see the need for it. Mark "D" if you do not currently use the item, but would if it were made available. Mark "E" if you have a need further assistance or staff development related to the item. Note, you may only make one choice from A-D for each item, but in addition to that choice, you may also choose "E". ***If you are unfamiliar with the particular item, please leave it blank.***

	Frequently	Sometimes	No, and I don't Need it	No, but I would if Available	Staff Dev.. Needed
98. Do you use a scanner for test scoring?	11	15	17	5	2
99. Do you use a computer for monitoring student progress? (grading, behavior mgmt, wpm, etc.)	14	14	13	6	7
100. Do you use a computer for equipment inventory?	8	5	18	9	4
101. Do you use a computer for textbook inventory and/or control?	4	3	21	9	2
102. Do you prepare student exercises and tests on a computer?	19	8	11	2	2
103. Do you write progress reports, parent letters, and other home/school correspondence with a computer?	27	6	4	1	3
104. Do you prepare lesson plans with a computer?	8	10	14	7	2
105. Do you order supplies on a computer?	4	3	19	17	1
106. Do you manage your instructional activities budget with a computer?	5	2	23	15	2
107. Do you generate IEP's with a computer?	3	5	23	7	2
108. Do you have a centralized collection of multi-media materials at your school?	18	4	6	6	2
109. Do you have the technology hardware/software necessary for presentation and management available in your classroom?	6	2	6	21	7
110. Do students in your classroom use technology for remediation?	5	18	4	6	2
111. Do students in your classroom use technology for enrichment?	7	20	3	3	1

112. What kind of video equipment do you use most in your teaching? (Choose only one.)

A. VCR-25
B. Camcorder/Still Video Camera-3
C. Still Video Camera-0
D. Editing Equipment-0
E. Videodisk player-2

113. Where would you most like to see student computers in the school? (Choose only one.)

A. In labs-16
B. In my classroom-18
C. In media centers-1
D. Portable stations-0

114. If your answer was "B" on the previous question, how many computers would you prefer in the classroom?
   A. 1 for the classroom-0
   B. 2-4 for the classroom-5
   C. 1 for every 3 students-6
   D. 1 for every 2 students-5
   E. 1 per student-2

115. In a lab?
   A. 1 for every 3 students-2
   B. 1 for every 2 students-0
   C. 1 per student-28

OFFICE TECHNOLOGY/AUTOMATION

(Administrative Staff Only)

INSTRUCTIONS: What information do you currently use or need, or would like to use in performing your job? Choose only one of the following responses:

A. Available, used, acceptable
B. Available, but needs improvement (Please comment on the need for training, hardware, software, etc.)
C. Not available, but needed
D. Not needed
E. Not familiar

		A.	B.	C.	D.	E.
STUDENT INFORMATION						
116.	Student demographics	7	22	12	10	5
117.	Cumulative records	3	11	13	17	11
118.	Health information	5	9	13	18	7
119.	Student attendance information	9	19	7	143	7
120.	Withdrawal/Drop out reports	6	13	10	16	10
121.	Student progress reporting	6	16	9	16	7
122.	Credits earned	1	8	6	24	11
123.	Student characteristics and test scores	2	9	14	17	9
124.	Student competencies/Proposed Graduation Rule	0	2	12	23	14
125.	Master schedule building	4	10	8	20	14
126.	Student course registration	1	11	9	24	12
127.	Student course scheduling	3	6	8	24	10
128.	Class lists w/additional student information	7	16	10	12	9
129.	Student fines	1	3	9	25	16
130.	Locker assignments	3	2	7	29	13
131.	Disciplinary records	2	12	10	19	9
132.	Student activity information	2	6	9	24	11
133.	Special education information	2	13	12	15	12
134.	Absence calling	6	7	11	20	10
PERSONNEL						
135.	Employee name (current/former)	23	10	11	8	6
136.	Home address/phone	19	10	13	6	6

A. Available, used, acceptable
B. Available, but needs improvement
(Please comment on the need for training, hardware, software, etc.)
C. Not available, but needed
D. Not needed
E. Not familiar

		A.	B.	C.	D.	E.
137.	Biographical data	4	8	11	19	8
138.	Protected class status	3	5	7	22	13
139.	Applicant Information	4	10	15	12	11
140.	Employee qualifications/credentials	4	12	14	13	11
141.	Official correspondence	13	9	10	9	11
142.	Licensure/relicensure status	5	11	9	16	10
143.	Professional development	6	6	14	14	12
144.	Performance review/evaluation	6	15	10	12	9
145.	Employment status	12	9	10	13	8
146.	Probationary status	9	10	10	15	8
147.	Assignment	8	14	10	10	10
148.	Pay rate/hours/days	6	13	11	11	10
149.	Individual contract benefit information	8	7	9	17	10
150.	Seniority	9	12	13	11	8
151.	AHISD employment history	3	11	11	11	15
152.	Calendar (duty year/holiday)	9	9	14	9	9
153.	Leave of absence type/dates	5	12	12	10	10
154.	Attendance	3	11	15	12	8
155.	Substitutes	3	10	14	13	10
156.	Organizational chart of positions	5	8	14	9	15
157.	Table of authorized positions	1	7	12	10	19
158.	Vacancy/posting information	11	11	19	10	8
EMPLOYEE RELATIONS/INSURANCE						
159.	Contracts and Policies	13	7	12	10	11
160.	Employee Insurance Information	11	9	10	10	9
161.	Bargaining Groups Benefit Information	6	12	11	11	11
162.	Salary Schedules	13	6	12	9	9
163.	Bargaining Units/Policy Groups	11	6	11	11	11
FINANCE/BUSINESS						
Budget						
164.	District budget (school site)	7	17	11	4	11
165.	Budget development	5	20	10	8	8
166.	Budget detail (revenues/expendit.)	6	17	10	9	8
Transportation						
167.	Bus routes/numbers	3	6	8	17	13
168.	Bus schedules	5	8	8	21	13
169.	Route planning	2	8	2	22	16
170.	Contractor payment	1	2	2	25	16

A. Available, used, acceptable
B. Available, but needs improvement
(Please comment on the need for training, hardware, software, etc.)
C. Not available, but needed
D. Not needed
E. Not familiar

		A.	B.	C.	D.	E.
Purchasing/Warehouse						
171.	Purchase orders/requisitions	9	21	10	4	4
172.	Warehouse catalogs	13	16	7	4	8
173.	Bid preparation/management	5	2	6	12	22
174.	Inventory control	3	9	6	10	19
175.	Vendor information	8	6	9	7	16
Accounting						
176.	Accounting reports (cash journals, check registers, etc.)	3	7	6	11	20
177.	Accounts payable information	5	8	6	9	19
178.	Accounts receivable information	5	9	6	14	19
179.	Fixed asset inventory control	4	5	8	11	23
Facilities						
180.	Facility scheduling	5	11	15	7	9
181.	Maintenance reports (work orders)	2	5	6	15	20
182.	General maintenance scheduling	3	2	6	18	19
183.	New construction tracking	3	0	2	18	26
184.	Energy management system	4	1	4	15	24
185.	Inventory control	5	4	8	12	20
District Planning						
186.	Attendance boundary development	5	9	5	16	12
187.	Facility planning	2	5	8	11	21
Food Services						
188.	Menu and ticket schedules	5	3	7	20	22
189.	Cash accounting	1	5	4	21	24
190.	Inventory control	1	3	3	16	24
191.	Free/reduced lunches	1	9	7	14	17
192.	Employee scheduling	0	1	7	18	22
193.	Recipe information	0	2	4	19	23
194.	Lunch counts	2	4	7	16	19
Payroll						
195.	Salary computation information	5	10	9	10	14
196.	Employee leave accrual/use	5	18	10	6	9
197.	Vacation accrual/use	5	17	11	7	8
198.	Payment history	8	13	9	12	15
199.	Employee deduction information	8	8	8	16	12
200.	**Customized report preparation for any of the above administrative areas**	**1**	**14**	**20**	**4**	**8**

Comments:

Interview Questions

These are questions which you will be asked by members of the Task Force. While you may want to think about your answers before the interview process, we do not expect you to have prepared a written response.

Students

1. How are computers and other technology (videos, camcorders, video disks, tape recorders, etc.) used in your classroom and school?
2. What kind of technology would you like to have, in your school, to help you learn?
3. From all the answers to question 2, which one would you name as the most important?
4. Is there an idea you've heard that you'd like to see tried in your school and how would this technology help you learn?
5. Using a "crystal ball," look in the future. What do you think the school and the classroom will be like as more computers and technology are used.?
6. Is there anything else that you would like to tell us as we plan for future use of technology in our school district?

Business, Community and Parents

1. What do you think are the major issues related to technology in our schools and/or district?
2. What suggestions do you have for using technology to address these issues?
3. Of the suggestions that have been identified in response to question 2, which one do you think is most important and should be top priority?
4. If the recommendations were implemented, what benefits would be realized?
5. As you take an optimistic look into the future, how do you see technology enhancing the educational programs within the schools and the district?
6. What other comments or observations would you like to add?

District Staff

1. What problems do you have in making the best uses of technology in the performance of your job?
2. What ideas or suggestions would you have to improve your job skills through the use of technology?
3. From the suggestions or recommendations you made, would you tell us which one of them would have the highest priority?
4. If one or more of your recommendations were implemented, what would be the value and benefits for you, the District, the school, the students, and the community?
5. Using an "optimistic crystal ball" to look into the future, how do you see technology impacting the learning process and the operations of schools, departments, and the District as a whole?
6. Do you have any other concerns or comments which have not been addressed in the survey or this interview?

ANOKA-HENNEPIN TECHNOLOGY INTERVIEWEES

Elementary Principals
Don Rautio, Adams
Ken Berg, Evergreen Park
Charles Burnside, Mississippi
Bonnie Martinson, Morris Bye
Jean Kincanon, Washington
Marlys Tietz, Hamilton
Stan Peichel, Eisenhower

Elementary Teachers
Marge VonBerg, Champlin
Linda Bain, Dayton
Lois Ballinger, PEKC
Mavis Paluck, Oxbow Creek
Carol Paul, LOJ
Pat Johnson, Hoover
Sue Nordby, Johnsville
Gladys Hawke, University Ave.
Gordon Sironen, Riverview
Carol Waletski, Monroe
Sue Garnett, Wilson
Sherrie Marcy, Andover

Paraprofessionals
Suzanne Fussy, CRSH
Nancy Gerritz, RJH
Geraldine Uhde, Andover
Carolyn Thompson, Franklin
Linnea Eisinger, FMJH
Janet Conway, Washington

Business/Community
Larry Ragland, Augsburg College
Terry O'Connell—Quad Cities TV
Lyle Haney, CR City Hall

Secondary Principals
David Bonthuis, CPSH
Bruce Bastian, NJH
Nancy Amenrud, BSH
Ron Olsbo, RJH
Dennis Psick, CRJH
Ron Scott, ASH

Business Services
Denise Mergens, Business Services, ESC
Chuck Holden, Transportation, ESC
Lori Knee, Food Service, LC/DC
Jim Michaelson, Food Service, LC/DC
Char Otteson, Payroll, ESC
Louise Thomas, Purchasing, LC/DC

Administrators
Louis Klingelhouts, Buildings/Grounds, LC/DC
Cathryn Olson, Human Resources, ESC
Mary Olson,Public Information, ESC
Iris McGinnis, Assessment, ESC
Dennis Carlson, Community Education, LC/DC
Tom Albrecht, Technology, LC/DC
Phyllis Wolak, Special Education, LC/DC
Earl Keyser, Information Systems, ESC
Kathi Jorissen,Staff Development, ESC
Bob Teeling, Special Education, LC/DC

Students
Veronica Jurisch, ASH
Brian Broesder, RJH
Dawn Nyhus, CRJH
Darin Mahlke, NJH
Chris Perske, Crooked Lake
Kristine White, Washington

Community Education
Diana Menster-Sullivan
Dennis Arthur
Steve Kerr
Bernell Fedje
Kim LeTourneau
Pat Plant

Student Support
Janet Davenport, ESC
Judy Sutter, LC/DC
Nancy Syverts, ESC
Mary Ann Blechinger, LC/DC
Tim Sheie, LC/DC

Consultants
Rod Vacek, Science
Karen Long, Business Education
Ruth Brown, Reading
Dale Zellmer, Social Studies
Poncho Bennett, Media Services
Rance Howe, English
Mike Lindstrom, Industrial Technology
Leslie Caye, Foreign Language
Jerry Staples, Indian Education
Roger Larson, Mathematics

Site Support
Karen Mallery, Secretary, ESC
Bonnie Althouse, Secretary, Riverview
Marilyn Mellenthin, Secretary, ESC
Marilyn Duffey, Secretary, Food Service
Ken Yocum, Buildings/Grounds, LC/DC
Russ Banta, Technology Repair, LC/DC
Jim Smith, Custodian, Sand Creek

Junior High Teachers
Ron Cockerham, RJH
Scott Clark, NJH
Scott Dougherty, NJH
Chuck Burnham, JJH
Joe DeMuth, JJH
Paulette Flemming, Jr. HS

Senior High Teachers
Ronda Magill, ALC
Carol Doschadis, CPHS
Greg Thornton, JJH
Cathy Wagner, BSH
Doug Bakkum, BSH
Rob Anderson, ASH

Special Education
Sue Sturzl, ASH
Linda Denbleyker, LC/DC
Brenda Mulry, Hoover
Guy Bartolain, CRSH

Parents
Lynnea Lindgren, Jefferson
Terry Lane, Ramsey
Debbie Anderson, Madison
Patty Thorson

Sample Format for Identified Staff Development and Support

	Tech Support	Teachers	Teacher Administrative	Site Administrative	District Clerical	Site clerical Paraprofessional	
1. Technology Plan Implementation awareness (1 hour)	✓	✓	✓	✓	✓	✓	✓
2. Introduction to indivdual computer workstation (2 hours)	✓	✓	✓	✓	✓	✓	✓
3. Maintenance of workstation plus network introduction (2 hours)	✓	✓	✓	✓	✓	✓	✓
4. Introduction to word processing and electronic mail (3 hours)	✓	✓	✓	✓	✓	✓	✓
5. Introduction to database reporting (3 hours)	✓	✓	✓	✓	✓	✓	
6. Introduction to spreadsheet design and reporting (3 hours)	✓	✓	✓	✓	✓	✓	
7. Introduction to Student Information System (3 hours)	✓	✓	✓	✓	✓	✓	✓
8. Introduction to Business Information System (2 hours)			✓	✓	✓	✓	
9. Introduction to Employee Payroll Management (2 hours)	✓		✓	✓	✓	✓	
10. Introduction to Media Center Management (2 hours)	✓	✓		✓		✓	✓
11. Introduction to Classroom Management (2hours)	✓	✓		✓		✓	✓
12. Introduction to Desktop Publishing (3 hours)	✓	✓	✓	✓	✓	✓	✓
13. Introduction to Multimedia (3 hours)	✓	✓	✓	✓	✓	✓	✓
14. Introduction to Utilities/upgrading procedures (2 hours)	✓	✓	✓	✓	✓	✓	✓
15. Introduction to LAN maintenance for site support staff (6 hours)	✓						✓
16. Introduction to telecommunications (2 hours)	✓	✓		✓		✓	✓
17. Introduction to phone/voice mail system (2 hours)	✓	✓	✓	✓	✓	✓	✓

Sample Format for Identified Staff Development and Support

	Tech Support	Teacher	District Administrative	Site Administrative	District Clerical	Site clerical	Paraprofessional
18. Intermediate word processing (3 hours)	✓	✓	✓	✓	✓	✓	✓
19. Position specific word processing (3 hours)	✓	✓	✓	✓	✓	✓	✓
20. Intermediate database reporting (3 hours)	✓	✓	✓	✓	✓	✓	
21. Position specific database reporting (3 hours)	✓	✓	✓	✓	✓	✓	✓
22. Intermediate spreadsheet design and reporting (3 hours)	✓				✓	✓	
23. Financial management system (5 hours)	✓		✓	✓	✓	✓	
24. Employee/Payroll management system (5 hours)	✓				✓	✓	
25. Food Service management system (5 hours)					✓	✓	
26. Transportation management system (5 hours)	✓				✓	✓	
27. Insurance management system (5 hours)	✓				✓		
28. Student management system (5 hours)	✓	✓	✓	✓	✓	✓	✓
29. Student scheduling system (5 hours)	✓			✓		✓	
30. Student attendance system (5 hours)	✓	✓		✓		✓	✓
31. Student grading systems (5 hours)	✓	✓					✓
32. Intermediate multimedia (3 hours)	✓	✓					
33. Intermediate desktop publishing (3 hours)	✓	✓			✓	✓	✓
34. Position specific training (6 - 18 hours)	✓	✓	✓	✓	✓	✓	✓

Cost Summary

$55,866,799 HARDWARE, SOFTWARE, WAN, LAN
$4,612,486 NEW POSITIONS, ADDITIONAL STAFF(APPROX 155):SUPPORT, SERVICE, ADMINISTRATIVE
$3,600,000 TRAINING (5 DAYS/YEAR FOR STAFF), RELEASE TIME, ADD DUTY DAYS, SUBS

		YEAR ONE		YEAR TWO	
INSTRUCTIONAL & CLASSROOM IMPLEMENTATION PLAN					
$6,801,314	CLASSROOM CONFIGURATION: MONITOR, LAN-CABLING, TELEPHONE	0.00%	$0	33.33%	$2,267,102
$6,707,500	TEACHER WORKSTATION: COMPUTER, PRINTER, MODEM	0.00%	$0	0.00%	$0
$1,025,000	PRODUCTIVITY SOFTWARE	0.00%	$0	0.00%	$0
$21,194,800	CLASSROOM STUDENT STATION: COMPUTER, PRINTER	0.00%	$0	0.00%	$0
$3,575,250	CURRICULUM COURSEWARE	0.00%	$0	0.00%	$0
$4,676,000	COMPUTER LAB: MONITOR, COMPUTER, PRINTER	0.00%	$0	0.00%	$0
$2,399,950	TEACHER RESOURCE STATION: MM COMPUTER,CD-ROM, SCANNER, DIGITIZER, VDP, VOC, CART	0.00%	$0	25.00%	$599,988
$1,464,750	PROJECT CENTER: VIDEO CAMERA, FLATBED, SCANNERS, COMP, CAMCORDER, VCR, MONITOR	0.00%	$0	0.00%	$0
$979,000	VIDEO STUDIO: VIDEO CAMERAS, CONTROLLER EDITING, MMCOMP, VCR, MIKES, FURN, LIGHT, SW	0.00%	$0	0.00%	$0
$594,000	MEDIA CENTER: CD-ROM, MODEM CARD CATALOG, ELECT CHECK OUT SYSTEM, SW	0.00%	$0	25.00%	$148,500
$163,350	CLASSROOM CABLING FOR STUDENT WORKSTATIONS	0.00%	$0	0.00%	$0
$104,000	INSTRUCTIONAL MANAGERS: (2 @ $52,000)	0.00%	$0	100.00%	$108,160
$58,000	INSTRUCTIONAL COORDINATOR: (1 @ $58000)	16.67%	$9,666	100.00%	$60,320
$1,872,000	INSTR BLDG TECH COORDINATOR: (39 @ $48,000)	0.00%	$0	50.00%	$936,000
$585,000	INSTR BLDG TECH SUPPORT PARA (1/BLDG):(39@$15,000)	0.00%	$0	50.00%	$292,500
$495,000	INSTR BLDG TECH SUPPORT PARA(1:500-39):(33@$15,000)	0.00%	$0	0.00%	$0
($162,034)	LESS CURRENT ADMINISTRATIVE SALARIES PAID		$0	SEE TRANSITION OUTLINE	($168,515)
TECHNICAL SUPPORT & STAFF DEVELOPMENT IMPLEMENTATION PLAN					
$58,000	TECHNOLOGY SUPPORT COORDINATOR: (1 @ $58,000)	16.66%	$9,663	100.00%	$60,320
$25,000	TECH SUPPORT: 1 HOT LINE-RC PERSON	0.00%	$0	100.00%	$25,000
$1,396,670	TECH SUPPORT: REPAIR+MAINT+SERVICE+INSTALL ADDITONAL STAFF (APPROX 35) EST @ 2.5%*HW+SW	0.00%	$0	0.00%	$0
$3,600,000	TECH SUPPORT TRAINING 5 DYS/YR: RELEASE TIME, SUBS, ADD DUTY DAYS-SUMMER, SUBS, (NOT ADD STAFF)	0.00%	$0	0.00%	$0
ADMINISTRATION & COMMUNICATION IMPLEMENTATION PLAN					
$72,000	DIRECTOR OF TECHNOLOGY: (1 @ $72,000)	75.00%	$54,000	100.00%	$74,880
$58,000	ADMINISTRATIVE COORDINATOR: (1 @ $58,000)	16.66%	$9,663	100.00%	$60,320
$104,000	ADMINISTRATIVE MANAGERS: (2 @ $52,000)	0.00%	$0	50.00%	$52,000
($53,150)	LESS CURRENT ADMINISTRATIVE SALARIES PAID		$0	SEE TRANSITION OUTLINE	($55,276)
$619,755	IMPLEMENT/INSTALL WIDE AREA NETWORK AMONG DISTRICT SITES WHICH INCLUDES STAFF SUPPORT & TRAINING WITH HW & SW	0%	$0	33%DESIGN/BID/INSTALL/TRA	$206,564
$2,422,350	INSTALL LOCAL AREA NETWORK(BACKBONE) EACH SITE BRIDGED W/WAN WHICH INCLUDES STAFF SUPPORT &TRAINING W/HW & SW	0%	$0	33%DESIGN/BID/INSTALL	$807,369
$1,915,400	ASSESS/SELECT/IMPLEMENT CENTRAL PROCESSING FACILITY TO SUPPORT CENTRAL ADMIN APPLICATIONS & CORE REQUIREMENTS AND CONNECT TO WIDE AREA NETWORK	ASSESS CURRENT SYSTEM/ NEEDS FOR HW & SW 2% OF TOTAL COST	$38,308	DESIGN/BID/PURCHASE CENTRAL HW & SW 8% OF TOTAL COST	$153,232
$444,480	INSTALL/IMPLEMENT DISTRIBUTED SITE BASED STUDENT SYSTEM INCLUDES TRAINING ON SW & MF SW	0%	$0	0% 0%	$0
$335,400	PROVIDE STANDARDIZED SET OF PRODUCTIVITY SOFTWARE	0%	$0	33%INST/IMP SW	$111,789
$80,000	PROVIDE FAX TECHNOLOGY	100% INSTALL	$80,000		
$189,000	PROVIDE COPY MACHINES @ EACH SITE	0%	$0	0%	$0
$279,500	INSTALL/IMPROVE TELEPHONE SYSTEM	ASSESS CURRENT SYS/NEEDS 5% OF TOTAL COST	$13,975	DESIGN/BID NEW SYSTEM 25% OF TOTAL COST	$69,875

Cost Summary

YEAR THREE		YEAR FOUR		YEAR FIVE		YEAR SIX	
33.33%	$2,267,102	33.33%	$2,267,102	0.00%	$0	0.00%	$0
33.33%	$2,235,831	33.33%	$2,235,831	33.33%	$2,235,831	0.00%	$0
33.33%	$341,666	33.33%	$341,666	33.33%	$341,666	0.00%	$0
33.33%	$7,064,926	33.33%	$7,064,926	33.33%	$7,064,926	0.00%	$0
33.33%	$1,191,749	33.33%	$1,191,749	33.33%	$1,191,749	0.00%	$0
33.33%	$1,558,665	33.33%	$1,558,665	33.33%	$1,558,665	0.00%	$0
25.00%	$599,988	25.00%	$599,988	25.00%	$599,988	0.00%	$0
25.00%	$366,188	25.00%	$366,188	25.00%	$366,188	25.00%	$366,188
33.33%	$326,333	33.33%	$326,333	33.33%	$326,333	0.00%	$0
25.00%	$148,500	25.00%	$148,500	25.00%	$148,500	0.00%	$0
33.33%	$54,450	33.33%	$54,450	33.33%	$54,450	0.00%	$0
100.00%	$112,486	100.00%	$116,986	100.00%	$121,665	100.00%	$126,532
100.00%	$62,733	100.00%	$65,242	100.00%	$67,852	100.00%	$70,566
75.00%	$1,460,160	100.00%	$1,946,880	100.00%	$2,024,755	100.00%	$2,105,745
75.00%	$456,300	100.00%	$608,400	100.00%	$632,736	100.00%	$658,045
33.33%	$171,583	66.66%	$343,166	100.00%	$514,800	100.00%	$535,392
	$0		$0		$0		$0
100.00%	$62,733	100.00%	$65,242	100.00%	$67,852	100.00%	$70,566
100.00%	$26,000	100.00%	$27,040	100.00%	$28,122	100.00%	$29,246
25.00%	$363,134	50.00%	$726,268	75.00%	$1,089,403	100.00%	$1,452,537
1/4	$675,000	1/2	$1,500,000	3/4	$2,475,000	ALL ON	$3,600,000
100.00%	$77,875	100.00%	$80,990	100.00%	$84,230	100.00%	$87,599
100.00%	$62,733	100.00%	$65,242	100.00%	$67,852	100.00%	$70,566
100.00%	$108,160	100.00%	$112,486	100.00%	$116,986	100.00%	$121,665
	$0		$0		$0		$0
33%INSTALL/TRAIN	$204,519	33%INSTALL/TRAIN	$204,519				
YR 2 ++	$102,080		$106,163		$110,410		$114,826
33%INSTALL/TRAIN	$807,369	33%INSTALL/TRAIN	$807,369				
INSTALL & TRAIN							
90% OF TOTAL COST	$1,723,860						
		YR 2 ++	$426,140		$443,186		$460,913
33%SITE INSTALL W/HW		33%SITE INSTALL W/HW		33%SITE INSTALL W/HW			
33%IMPL STUDENT SW	$148,145	33%IMPL STUDENT SW	$148,145	33%IMPL STUDENT SW	$148,145		
		YR 2 ++	$31,200		$32,448		$33,746
33%INST/IMP SW	$111,789	33%INST/IMP SW	$111,789				
100%INSTALL	$189,000	0%	$0				
INSTALL/TRAIN 50% SITES		INSTALL/TRAIN 50% SITES					
35% OF TOTAL COST	$97,825	35% OF TOTAL COST	$97,825				

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Glossary

bridge:
connects two networks of the same type together.

camcorder:
a self-contained videotape recording device. Signals can be recorded live through the attached lens or via a standard video or antenna signal.

CD ROM (Compact Disk Read Only Memory):
a computer storage disk in the same physical form as a CD audio disc. CD ROMs can hold approximately 550 megabytes of digital data.

CMI (Computer Managed Instruction):
student achievement results as measured against sets of district objectives and outcomes.

communications:
the transfer of information from one computer to another. Data commincations refers to data and text communications. Telecommunications refers to all forms of communications, including voice and data.

CPU (central processing unit):
the computing part of the computer. It is made up of the control unit and arithmetic/logic unit. The control unit extracts the instructions out of memory and executes them. The arithmetic/logic unit performs the arithmetic calculations and comparisons.

database:
any collection of data that is electronically stored.

digitizer:
a hardware device that converts an image or signal into digital code for imput into the computer. This could be tracing an image on a digitizing tablet or converting camera images into into the computer.

distance learning:
classes held in one location and sent via cable lines or satellite to one or more remote locations for interactive lessons.

DOS (Disk Operating System):
may refer to any computer operating system from microcomputer to mainframe. For personal computers it usually refers to the operating system used by IBM compatible PCs, known as DOS, PC-DOS or MS-DOS.

dot matrix printing:
a device that uses patterns of tiny dots to form characters and graphic images. The printer uses tiny hammers to strike a needle mechanism against the paper at precise moments as the print head moves across the page. These printers use standard ribbon technology and are limited in their resolution.

EDULOG:
TIES-sponsored, electronic transportation system.

electronic:
the use of electricity in intelligence-bearing devices such as telephones, radios, televisions, instrumentation, analog and digital computers and telecommunications.

electronic mail:
transmission of letters, messages and memos over a communications network.

equipment certificates:
short term notes issued at the discretion of the school board to fund the purchase of equipment. These notes are paid for by a transfer of the Equipment Levy in the Capital Expenditure Fund (5) to the Debt Service Fund (7). The maximum amount that may be issued is limited to the total Equipment Levy in the Capital Expenditure Fund.

ESC (Educational Services Center):
location of the primary district offices including the Superintendent, Personnel, Curriculum, Transportation, Business/Finance and TIES offices.

FAX (FACSimile):
the communication of a printed page between remote locations using standard telephone lines. Fax machines can be standalone units or combined as part of a computer modem's functions.

file sharing:
use of data by more than one computer.

gateway:
a computer that connects two different communications networks together. The gateway will perform the protocol conversions necessary to go from one network to the other.

IEP (Individual Education Plan):

ILP (Individual Learning Plan):

LAN (local area network):
a communications network that serves several users within a confined geographic area (e.g. a computer lab, office, or building). Although the term may refer to any communication network within a building or plant, it typically refers to the interconnection of personal computers. These computers not only can intercommunicate but also can share resources such as disk storage and printers.

laserdisc:
a plastic platter resembling a phonograph record that uses low-intensity laser beams to store visual materials that will appear on a display screen. This storage device can hold approximately 60 minutes of audio/video information in digital form. Any of the more than 54,000 frames can be accessed individually.

laser printer:
a nonimpact printing device that places images on a rotating drum using a laser beam. The drum picks up a toner powder on the laser exposed areas. These areas on the drum are pressed and fused into the paper forming the characters (uses the electrophotographic method used in copy machines to print a page at a time).

LC/DC (Learning Center/Distribution Complex)
location of a number of district offices including Technology, Media Services, Special Education, Purchasing/Warehouse, Food Services, Building/Grounds, Enich Kindergarten Center, Printing/Communications and Community Education.

local printing:
printing to a device that is connected directly to the user's computer.

modem (MOdulator-DEModulator):
a device that adapts a terminal or computer to a telecommunications network. Modems turn digital signals from the computer into frequencies (modulate) within the audio range of the telephone system and convert the frequencies back into digital signals (demodulate) on the receiving side.

network:
an electronic hardware and software communication pathway linking multiple computers and accessories; any device can exchange information with any other device on the network.

notebook computer:
a portable computer that weighs under 7 pounds and fits easily in a standard briefcase.

online reference:
materials that are accessed by electronic means (modem, CD ROM, etc.)

router:
a device that selects the most effective travel path in a network and routes information accordingly. Routers are used in complex networks where there are many pathways between users in the network.

scanner:
a hardware device that reads text, graphic images and bar codes and converts the data into digital codes such as ASCII text or raster graphics.

server:
a computer in a local area network that stores the programs and data files shared by the users connected to the network. A file server acts like a remote disk drive to the users in the network.

spreadsheet:
a computer program that turns a computer terminal into a huge ledger sheet. The program allows large columns and rows of numbers to change according to parameters determined by the user. A whole range of numbers can be changed when a single entry is varied, allowing complex projections and numerical forecasts to be performed without tedious manual calculations.

still video:
electronic photographs stored on a magnetic diskette. No developing is needed, these pictures can be displayed through any standard monitor or VCR directly.

technology:
encompasses the generation and distribution of information via voice, data, or video communications.

TIES (Technology and Instructional Educational Systems):
a consortium of 47 school districts brought together for the primary purpose of state reporting and financial management.

WAN (wide area network):
a communications network that interconnects geographical boundaries such as buildings and districts.

word processing:
the management of text documents and replaces all the operations normally associated with a typewriter. The advantage over typing is that documents are permanently stored in the computer and can be called back for editing.