Mansfield Public Schools

5 Year Strategic Technology Plan

December, 2007

Committee Membership (May, 2007)

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Executive Summary

Mansfield Public Schools is pleased to present its five-year strategic plan for educational technology. A representative committee of administrators and teachers, collectively known as the District Technology Committee, has come together to create this plan.

Our plan starts with a basic vision for educational technology's value within our District.

...we believe that technology is a tool for learning that expands our instructional repertoire and is the vehicle that maximizes the capacity of all teachers and learners. It is the vision of Mansfield Public Schools that students be engaged in a stimulating academic environment and a challenging curriculum that is student-centered and focused on inquiry-based learning.

This vision is supported by a series of long-range goals. These goals are related to Curriculum, Professional Development, and Infrastructure. While this differentiation is necessary for clarity and the further development of action plans and roles and responsibilities, it should be noted that all of these goals are intricately interrelated. It is not possible to discuss the ways in which technology will support the curriculum without specifying how teachers will receive training in how to use technology tools. Likewise, the development of a technology infrastructure – hardware, software, networks, and technical support – is necessary to *any* technology integration effort.

Finally, our plan presents a clear process for assessing our progress toward meeting our plan's goals. We believe that this process ensures a level of accountability that is necessary if we are to realize technology's great promise for our teachers and students.

Introduction

In May, 2007 Mansfield Public Schools undertook the process of developing an updated strategic plan for educational technology. The point of this effort was to review progress and to evaluate the needs for improved instructional technology resources at the classroom level in schools throughout the system.

The following technology plan focuses on how Mansfield can best manage its technology in terms of its ongoing use as well as expansion. Furthermore, as technology grows more sophisticated (and expensive), there are concerns about where the "limits" are for Mansfield's technology expenditures and the time and effort we will expect teachers to expend in learning how to employ these tools productively. The ultimate concern is as it has to be; that is, how should Mansfield Public Schools best employ technology in the service of student achievement?

Guiding Principles

In our technology planning work, and throughout this plan, the Technology Planning Committee is working from the following guiding principles:

- Technology is a catalyst for reformed education, but is not an end in itself.
- Improved student outcomes is the ultimate goal for all of our work.
- Curriculum drives instruction and the tools, such as technology, used in instruction.
- Technology that is not adequately supported is of no benefit at all.
- All Mansfield students and teachers, in all grades and subject areas, can make appropriate use of technology tools.
- Policies and guidelines regarding technology use should be inclusive versus exclusive.

Vision

Mansfield Public Schools' Technology Planning has developed the following vision statement to guide its work in creating a five-year strategic plan for technology implementation:

> *As described in the overall mission of the Mansfield Public Schools, the purpose of education is to prepare students to be productive and caring adults. Within this context, we believe that technology is a tool for learning that expands our instructional repertoire and is the vehicle that maximizes the capacity of all teachers and learners. It is the vision of Mansfield Public Schools that students be engaged in a stimulating academic environment and a challenging curriculum that is student-centered and focused on inquiry-based learning.*
>
> *Specifically, we envision that technology is available and effectively supported for all students and staff:*
>
> - *To provide global access to information*
> - *To meet the curricular needs of all learners*
> - *To provide access to the general curriculum*
> - *To refine critical thinking skills and foster creativity*
> - *To provide a medium for expression and communication*
> - *To collect, assess, and share performance information*
> - *To improve the effectiveness of administrative tasks*
> - *To provide skills and proficiencies necessary for the workforce*

It is our intention that this vision will remain constant over the course of our plan and that it will guide the day-to-day and year-to-year implementation of technology across Mansfield Public Schools.

Update on Current Status

Elementary Schools

At the Roland Green Pre-School, there are approximately 8 computers that are used by teaching staff to run various software programs to support the special needs of their students. The majority of the computers are Pentium 3 and are all connect to the network and Internet. Students at Roland Green rarely use the computers.

At the Robinson Elementary School, there are approximately 85 Pentium 4 computers and 46 Pentium 3 computers that are connected to the Internet and Network. In addition, there is a computer lab with 30 Pentium 4 machines. Teachers bring their students to the computer lab on a bi-weekly basis for 40-minute periods to use various software programs to support the Massachusetts Technology Frameworks. A small number of teachers have classroom inkjet printers, but most teachers share network printers located throughout the building.

At the Jordan/Jackson Elementary School, there are approximately 128 Pentium 4 computers and 48 Pentium 3 computers that are connected to the Internet and Network. In addition, there is a computer lab with 27 Pentium 4 machines and 7 small "pods" of Pentium 4 computers located outside of classrooms. A small number of teachers have classroom inkjet printers, but most teachers share network printers located throughout the building.

Both of the elementary schools have portable "smart carts" consisting of a Pentium 4 laptop, inkjet printer, LCD projector and a Smartboard. Teachers use these smart carts in their classrooms to deliver technology based lesson plans to their entire class. Each school has 4 digital cameras and 60 AlphaSmarts that are used in the classroom as well.

Computer use at the elementary school focuses on age appropriate software programs that address the Massachusetts Technology Frameworks. Programs such as Easy Tech, Type to Learn Jr., Type to Learn 3, Zoombini's Logical Journey, Hot Dog Stand, Kidspiration, Math Blaster, Math Muncher, Lexia and Easy Book Deluxe are all used to address the state standards. In addition, the Microsoft Office suite and the Internet are used as well.

Qualters Middle School

At the Qualters Middle School, there are approximately 165 Pentium 3 or 4 student computers that are connected to the network and Internet. There are 6 computer labs, including 3 mobile computer carts. The mobile computer carts contain between 14 and 20 laptop computers with a wireless connection to the network and Internet. Additionally there are 12 Smartboards and LCD projectors that are shared by teams at the middle school to integrate technology into the curriculum. A small number of teachers have classroom inkjet printers, but most teachers share network printers located throughout the building.

Computer use at the middle school varies by subject matter. As part of the specialist curriculum, students are exposed to programs such as word processing, excel spreadsheets, PowerPoint and access. In other subject areas, these same programs are used in conjunction with the content specific programs and the Internet for research projects.

Mansfield High School

At Mansfield High School there are approximately 319 Pentium 3 and 4 student computers that are connected to the network and Internet. Classroom computers are primarily Pentium 3 machines and lab computers are primarily Pentium 4 machines. There are 15 computer labs at the high school supporting various departments as follows:

Business Department – 3 labs
Math Department – 3 labs
Science Department – 2 labs
English Department – 1 lab
Guidance, Library, Support Services – 6 labs

A small number of teachers have classroom inkjet printers, but most teachers share network printers located throughout the building.

Computer use at Mansfield High School varies widely. Primary uses are as follows:

Word Processing	Excel Spreadsheet
PowerPoint Presentation	Internet Research
Visual Basic	Art in Technology
GIS	Plato
Geometers Sketchpad	MCAS Preparation
Career / Future Planning	Web Page Design
Automated Accounting	JAVA

There are 3 "smart carts" consisting of a Pentium 4 laptop, inkjet printer, LCD projector and a Smartboard.

Behind the Scenes Infrastructure Improvements

Many of the technology improvements made at the Mansfield Public Schools are not always visible to students, teachers or staff members. The behind the scene improvements are important to note here as they have a dramatic affect on access to technology. Improvements include:

- Various hubs have been replaced around the network with switches in order to streamline the traffic
- A second T1 was added to service more users on the Internet adding bandwidth

- An Inet upgrade to fiber optics was performed by the town of Mansfield to create a quicker connection between our buildings
- A dedicated server was added to the high school for the students only giving them more server space and quicker access to their work
- K-5 software implementation of Zoombini's, Type to Learn 3, Type to Learn Jr, Kidspiration, and EasyTech
- Added at least 100 drops around the district to give access to teachers and student labs
- Added at least a dozen network printers around the district to add quality as well as to diminish price for stand alone printers' ink cartridges and technical support
- IP scheme was changed to service more users on the Internet

Professional Development

Primary Grades (K-5)

In the area of professional development much of the emphasis has been placed on getting staff members comfortable using technology. It is our feeling that teachers need to become more comfortable and confident in using technology before they will consider integrating technology into their teaching. Our action plan consisted of 2 years of basic technology skills training to staff members followed by the integration of the MA Technology Frameworks into the curriculum in year 3.

In 2003-2004 and 2004-2005, staff members were provided the opportunity to choose from fourteen technology based professional development offerings. The offerings included:

Computer Basics	Network Basics
How to use Email	Microsoft Word (Basic or Advanced)
Microsoft Excel (Basic or Advanced)	Microsoft PowerPoint (Basic/Advanced)
Microsoft Access (Basic or Advanced)	How to use the Internet
Effective Internet Search Strategies	How to Use a Digital Camera
How to Use the Smartboard	Using the Smartboard to Enhance Learning
How to Use an Alphasmart	PC Troubleshooting Tips

The focus for 2003 and 2004 was to get teachers in the primary grades comfortable using technology.

In the fall of 2005, the professional development focus shifted to address the grade level technology standards. The staff was trained on two software packages that align with the technology standards.

> ***Easy Tech*** by learning.com is a standards based technology curriculum that helps students acquire and apply technology skills necessary to solve curriculum and real world problems. Students are guided through self-paced lessons that introduce technology concepts and relate them to real world situations. Follow-up activities in class are aimed at reinforcing the concepts learned through these lessons and help students realize real-world applications.

Type to Learn Jr. **and** ***Type to Learn 3*** are keyboarding programs that provide students with sequential, skill building instruction to become confident with the keyboard.

These programs are installed in the computer labs at both elementary schools as well as on classroom computers. At the Robinson Elementary school, students are brought to the lab on a bi-weekly basis for 40 minutes to use these programs. At the Jordan/Jackson School students have a regular bi-weekly computer schedule.

The future focus for professional development at the primary grades will be the integration of technology into core curriculum units. Using the Internet, the Smartboard and other software packages, we will explore ways that teachers can enhance their current curriculum with technology.

Secondary Grades (6-12)

In 2003 and 2004 all staff members were given the opportunity to attend professional development training on using the Smartboard. Training took place in the library of each school during teacher prep time. Additional training classes were held on professional development days.

Department and subject specific training and technology integration is coordinated between technology curriculum specialist, network hardware specialist, administrators and department heads to implement appropriate hardware and software. At the high school, PLATO is used in the math department and GIS software is being implemented in the Science department. Smartboards have been incorporated into the Art department at the high school to support the Art in Technology courses.

Based on the feedback we have received from staff, we believe that the foundational skills have been developed that will allow our staff to embrace technology and utilize it to enhance student learning.

Progress on Goals

When the five-year technology plan was developed in 2001, a set of recommendations was established for the Mansfield Public Schools. The following outlines the recommendation and the progress made toward that recommendation:

Goal 1 – Establish hardware, software, and network specifications and then create a technology infrastructure purchase and upgrade plan for meeting those specifications.

All classrooms throughout the Mansfield Public Schools have a working computer that is connected to the network and Internet. The majority of the computers meet our minimum specification of a Pentium 3 with few exceptions.

Changes to network infrastructure have been made that improve access to our network and Internet.

The budget request for FY'09 includes a line item for technology hardware improvements and to establish a 3-year computer replacement cycle. Additionally, we have received funding from a parent

group to equip 13 of our classrooms with "smart carts" consisting of a Pentium 4 computer, LCD projector and a Smartboard.

Goal 2 – Establish computer labs in the elementary school and/or equip each classroom with several functioning, networked, computers.

Both of our elementary schools have a computer lab with 27-30 Pentium 4 computers that connect to the network and Internet. In addition, age appropriate software has been installed in the labs to create a dynamic learning environment. A schedule has been established at each school that provides a designated computer time for students to go to the lab and work on a technology based lesson plan.

Rather than equipping each classroom with more computers, we are looking to implement "smart carts" consisting of a Pentium 4 computer, LCD projector and a Smartboard that can be used to engage the entire classroom in a technology based lesson plan.

Create clear expectations as to how teachers – differentiated by grade and subject – should use technology to support student learning.

The Technology Vertical Team has been responsible for evaluating the Massachusetts recommended technology standards for grades K-12. The team members, consisting of staff from each of the schools, reviewed the technology standards to determine the appropriate grade level for inclusion. Curriculum guides were developed to communicate the technology skills being addressed at each grade level to teachers and parents.

To support the implementation of these standards, software programs were purchased for both elementary schools. They include:

> ***Easy Tech*** by learning.com is a standards based technology curriculum that helps students acquire and apply technology skills necessary to solve curriculum and real world problems. Students are guided through self-paced lessons that introduce technology concepts and relate them to real world situations. Follow-up activities in class are aimed at reinforcing the concepts learned through these lessons and help students realize real-world applications.
>
> ***Type to Learn Jr.*** **and** ***Type to Learn 3*** are keyboarding programs that provide students with sequential, skill building instruction to become confident with the keyboard.

The future focus for professional development at the primary grades will be the integration of technology into core curriculum units. Using the Internet, the Smartboard and other software packages, we will explore ways that teachers can enhance their current curriculum with technology.

Provide sufficient technical and instructional support to teachers in their use of educational technologies.

The technology support staff consists of 3 people.

Our Technology Coordinator is responsible for overseeing the technology needs of the district, completing state reporting, managing the student information system, providing technology support and integration.

Our Technology Network Specialist is responsible for managing and administering the network infrastructure. This job includes maintenance of servers, network operating systems, firewalls, routers and other physical infrastructure components.

Our Technology Technician is responsible for basic operational support for our users. This job includes troubleshooting problems, setting up hardware and software and providing help desk support.

How Students and Staff Use Technology

As a follow-up to the Technology Plan deveoped in 2001, Staff members were surveyed in May, 2007 regarding the effectiveness of instructional technology and its implementation across the district.

90% of Teachers report that technology increases student motivation
80% of Teachers report that students use technology as a tool for self-directed learning

	Elementary	Middle	High
Technology increases student motivation	88%	88%	90%
Students use technology to develop mastery of basic skills	49%	43%	54%
Students use technology to become more critical thinkers	25%	37%	54%
Students use technology to access integrate and analyze information relative to interdisciplinary problems	18%	46%	68%
Students use technology as a tool for self-directed learning	68%	63%	80%
Students use technology to solve relevant real-life problems	11%	30%	46%
Students use technology to discover concepts and prove relationships	18%	32%	46%
Students use technology tools in ways that parallel and model the way that technology is used in the world of work	18%	41%	68%
Students use a high degree of personal judgement when choosing and applying technology tools in their learning activities.	9%	26%	36%

64% of Teachers report that technology is used to provide access to the general curriculum
72% of teachers report that technology is used to collect assess and share performance information

	Elementary	Middle	High
Technology is used to provide students with global access to information	56%	91%	86%
Technology is used to meet the curriculum-based needs of all learners	56%	61%	74%
Technology is used to provide access to the general curriculum	49%	64%	62%
Technology is used to refine critical thinking skills and foster creativity	42%	71%	82%
Technology is used to provide a medium for expression and communication	54%	83%	80%
Technology is used to collect assess and share performance information	70%	69%	72%
Technology is used to improve the effectiveness of administrative tasks	72%	82%	90%
Technology is used to provide skills and proficiencies necessary for the workplace	66%	83%	82%

Regarding the use of various technologies

ELEMENTARY RESPONSES

	I use this technology for personal productivity	I create lessons which require students to use this technology	I don't use this, nor do I assign its use to my students
Word Processors	84%	32%	12%
Network File Storage	66%	14%	30%
IEP Database	23%	2%	70%
Integrated Learning Systems	10%	5%	79%
Spreadsheets and Graphing	43%	3%	53%
Games (tutorial and basic skill development)	24%	64%	22%
Special Applications for Reading and Math	16%	28%	58%
Electronic Mail	91%	6%	9%
Internet	86%	40%	7%
Presentation Software (PowerPoint)	38%	19%	53%
Presentation Hardware (lcd projector, large screen TV)	32%	19%	51%
Inspiration/Kidspiration	10%	23%	69%
Online Encyclopedias	33%	33%	49%
Graphing Calculators	4%	1%	90%
Probes for data acquisition	7%	5%	86%
EasyTech	18%	59%	32%

MIDDLE SCHOOL RESPONSES

	I use this technology for personal productivity	I create lessons which require students to use this technology	I don't use this, nor do I assign its use to my students
Word Processors	91%	62%	6%
Network File Storage	70%	19%	20%
IEP Database	22%	2%	72%
Integrated Learning Systems	4%	9%	83%
Spreadsheets and Graphing	52%	32%	33%
Games (tutorial and basic skill development)	24%	40%	48%
Special Applications for Reading and Math	9%	29%	63%

Electronic Mail	93%	19%	4%
Internet	94%	67%	0%
Presentation Software (PowerPoint)	66%	41%	24%
Presentation Hardware (LCD projector, large screen TV)	340	30%	46%
Inspiration/Kidspiration	17%	17%	68%
Online Encyclopedias	43%	47%	33%
Graphing Calculators	9%	7%	84%
Probes for data acquisition	9%	8%	83%
EasyTech	2%	3%	88%

HIGH SCHOOL RESPONSES

	I use this technology for personal productivity	I create lessons which require students to use this technology	I don't use this, nor do I assign its use to my students
Word Processors	91%	62%	6%
Network File Storage	70%	19%	20%
IEP Database	22%	2%	72%
Integrated Learning Systems	4%	9%	83%
Spreadsheets and Graphing	52%	32%	33%
Games (tutorial and basic skill development)	24%	40%	48%
Special Applications for Reading and Math	9%	29%	63%
Electronic Mail	93%	19%	4%
Internet	94%	67%	0%
Presentation Software (PowerPoint)	66%	41%	24%
Presentation Hardware (LCD projector, large screen TV)	40%	30%	46%
Inspiration/Kidspiration	17%	17%	68%
Online Encyclopedias	43%	47%	33%
Graphing Calculators	9%	7%	84%
Probes for data acquisition	9%	8%	83%
EasyTech	2%	3%	88%

The following responses are from <u>all levels</u>

	Elementary	**Middle**	**High**
I have received the most help integrating technology from someone in the following role			
Tech Specialist	34%	7%	12%
No One	8%	11%	14%
Teacher	45%	68%	56%
LMS	0%	0%	6%
Parent, Other	6%	7%	8%
I use a variety of teaching strategies which incorporate technology use (choose one)			
Daily	7%	26%	24%
Rarely	44%	24%	24%
Specific Lessons	34%	46%	50%
The learning activities I develop (choose one) require students to use technology			
Always	0%	6%	12%
Frequently	2%	14%	20%
Sometimes	31%	48%	44%
Seldom	67%	32%	24%
My students use technology primarily in settings			
Single	21%	37%	28%
Class	46%	21%	14%
Small Group	13%	14%	14%
All	10%	22%	20%
I believe that my school's computer labs are…			
Not Useful	13%	22%	24%
Useful	0%	0%	0%
Somewhat Useful	61%	52%	34%
Very Useful	20%	23%	36%
No Labs	2%	0%	2%
I use technology to maintain student records (i.e. grades)	48%	72%	80%
I use technology to monitor student performance (i.e. electronic portfolios)	23%	24%	26%
I use technology in specific ways to adapt instructional practices to meet the needs of diverse learners	63%	51%	76%
I am aware of the district technology standards	73%	54%	54%
I have been assisted in finding ways to integrate technology into the curriculum	49%	39%	32%

Future Goals

The Mansfield Technology Planning Committee has developed implementation goals for its five-year vision of technology's role in teaching and learning. These goals are separated into three broad areas: Curriculum, Professional Development, and Infrastructure. Goals for each of these groups are presented in this chapter of our Strategic Plan.

It is important to note that the goal groups we have defined are not mutually exclusive. In many cases, it would be possible to list a goal from one group (e.g., Curriculum) in another (e.g., Professional Development). The Committee does not believe that this is a structural problem with its plan. Rather, we believe that this overlap is indicative of the holistic and systemic nature of technology as a tool for educational improvement and change. Technology in and of itself is just a tool; it is how that tool is *applied* that makes it a catalyst for change. Our plan, and hence our goals, are about how technology tools will be applied systemically throughout the school system, in all of our classrooms, so as to benefit all Mansfield students.

Curriculum

In order to achieve our vision, technology will be embedded into the curriculum to maximize teaching and learning. To make technology an effective teaching and learning tool, teachers across the system must integrate it into the daily curriculum to support a variety of learning styles and provide our students with a range of experiences. All of these curriculum-related goals and objectives are targeted at the same ultimate goal -- the promotion of student success in a rapidly changing technological society.

Curriculum Goals

1. To utilize technology as an effective learning tool in support of the Massachusetts Curriculum Frameworks.

    - To embed technology into the curriculum as an effective tool for teaching and learning.

2. To utilize technology to support a variety of learning styles, learning skills, and levels of understanding in the application of knowledge.

    - To develop an instructional technology curriculum overlay for implementation in all appropriate areas of curriculum.

3. To provide our students with a range of experiences designed to develop the technological skills necessary to function responsibly in life situations marked by rapid technologic change.

    - To prepare students to choose appropriate technologies that demonstrate their knowledge and understanding

Professional Development

In order to achieve our vision, teachers across the system must integrate technology in daily curriculum. Teachers will be given professional development so that they can use technology daily in all aspects of their duties and responsibilities. The overview of this professional development is to provide teachers the time and resources to become productive and effective users of technology.

Professional Development Goals

1. To provide teachers and staff with the professional development opportunities, resources, incentives, and time necessary to enable the use of appropriate technologies in support of the Mansfield Public Schools curriculum

    - To develop teachers' understanding of the role of technology as a tool for learning (vs. just a productivity tool) that supports the Massachusetts Curriculum Frameworks
    - To investigate national and state standards for student and teacher use
    - To develop an understanding of where technology tools map to specific curriculum areas
    - To be trained to critically evaluate and select technology and technology use

2. To provide Mansfield's special education staff with the tools, training, and information necessary to enable them to meet expectations for reporting and promoting access to the general curriculum, as set by local, state, and federal guidelines

    - Providing training to improve knowledge of options and skills in using IEP and test scoring software as well as assistive technology.

3. To provide teachers and staff with professional development as necessary to make them proficient users of technology tools and resources that support teacher productivity

    - Defining standards for how teachers are to use productivity tools
    - Providing ongoing and systematic training

Infrastructure

Infrastructure is more than just computers. It is the vehicle that carries the technology of Mansfield Public Schools. In order to integrate technology into our schools we need to have available high quality, reliable, equipment and software. Our goal is to provide the hardware, software and support to help teachers seamlessly imbed technology into the everyday curriculum expanding our instructional repertoire and maximizing the capacity of all teachers and learners.

Infrastructure Goals

1. To provide technical support as necessary for all Mansfield Public Schools staff and students to efficiently use technology in their teaching, learning and administrative tasks

    - Creating expectations
    - Staffing
    - Providing ongoing support

2. To provide, support, and maintain adequate hardware devices, peripherals, and network resources for Mansfield's staff and students

    - Analyzing current and anticipated future needs
    - Researching and analyzing options
    - Creating standards
    - Implementation

3. To standardize, evaluate, update, and support software that serves the present and anticipated needs of all staff and students

    - Working with curriculum and professional development goals/actions to assess needs
    - Creating structures for evaluation and implementation
    - Implementation and ongoing support

4. As part of the annual budget process, the district's infrastructure needs will be assessed, updated and articulated.

    - This annual review will provide the basis for Mansfield's annual updates of its Local Technology Plan as required by the Massachusetts Department of Education.

Infrastructure

If there is a central, guiding principle to Mansfield's technology plan, it is that curriculum drives infrastructure. More specifically, student achievement (of which curriculum is a component) drives all. Therefore, in our five-year strategic technology plan, it is essential for us never to forget that no hardware, software, or network "equipment" should be contemplated without first understanding the connection between that technology and improved student achievement.

Hardware Upgrades

With the constant change in technology it is hard to foresee what hardware specifications will be adequate for the system in the future. We would like to see the advisory subcommittee responsible for hardware recommendations have the flexibility to plan for the most current hardware that is available to best meet the needs of our system.

Although the FY'09 budget has not been approved, it includes a capital improvement request to establish a 3-year computer replacement cycle. We intend to initiate a computer replacement policy utilizing refurbished computers that will provide an influx of classroom computers and peripherals at each school. An annual budget amount for computer replacement should keep our inventory current to a far greater degree than in the past.

Existing budget line items will need to be maintained to run the hardware, and local and wide area networks throughout the district.

Evaluation Plan

An Evaluation Process for Educational Technology

Mansfield Public Schools believes that evaluation is critical to the progress of its educational technology plan. Therefore, we will engage in a rigorous, formative evaluation process as a part of the ongoing nature of our planning work.

Developing an Evaluation Framework

Using the goals and objectives from Mansfield's educational technology plan, the District will craft a framework for assessing progress toward meeting these goals. This work will involve a district-wide evaluation committee that can be the same committee of stakeholders responsible for creating this current technology plan.

The outcomes of this part of our evaluation process will be:

- Committee training and orientation
- Creation of evaluation questions
- Creation of indicators and rubrics

Evaluation Data Collection and Analysis

Data collection will be designed in response to the evaluation rubrics developed by the District. The point of data collection is to gather information that will enable Mansfield to "answer" the evaluation questions and "score" our performance on the evaluation rubrics.

While the exact nature of Mansfield's data collection effort will be determined by the District's particular evaluation rubrics, existing data, and time restraints, we would expect that our data will contain the following:

- Surveys -- Our surveys will be of teachers, administrators, students, and/or community members. Unique surveys are created for each target population.
- Focus Group Interviews -- We expect to interview teachers (one group at each school), administrators, and technology staff.
- Classroom Observations -- Our team of evaluators will spend time in schools and classrooms throughout the District. Our goal is not to only observe teachers and students using technology. Rather, we find that we can learn much about how technology is being used to impact teaching and learning by observing classroom setups, teaching styles, and student behaviors.
- Artifact Analysis -- Our team will develop an assessment protocol of student technology work. This assessment will focus on an examination of how students at different grade levels and in different subject areas have used technology to enrich content-area (curriculum) learning. We will work with the

evaluation committee and school administrators to develop an accurate sample of student work for this assessment.

Our evaluation will not rely on a single data source (e.g., surveys). Rather, we have designed a data collection *strategy* that has the optimum chance of capturing the big picture of technology's use and impact within Mansfield schools.

The outcomes of this part of our evaluation process will be:

- Creation of data collection instruments
- Data collection
- Data analysis

Creating the Evaluation Report -- Findings, Recommendations, Reporting

We believe that reporting is the most critical stage of a formative evaluation effort, as it establishes a common knowledge base for reflection. An evaluation that is never shared with the community it evaluates never results in reflection; and of course, no reflection means no positive change.

Therefore, each year we will produce a full evaluation report that is based in a thorough data collection and analysis effort and then uses that data to holistically "score" the District's performance against its own rubrics. This scoring will be done with the entire evaluation committee in a facilitated meeting. The goal for this part of the work is to develop a clear understanding of *why* we have arrived each year at the scores we have. This is important, as a score itself is rather insignificant. What *is* important is the explanation of what the District has done well and what it still needs to do to accomplish its goals. Therefore, the evaluation committee will create a report that provides a detailed explanation of *how* scores were given and the rationale for choosing one score -- or level of performance -- versus another. All of this information will be documented in a detailed set of findings and recommendations in each year's evaluation report.

The outcomes for this part of our evaluation process will be:

- Scoring the rubrics
- Writing the report, findings, and recommendations
- Report dissemination

Use of Evaluation Data

Our evaluation work will serve a multitude of purposes. First and most importantly, our evaluation effort will formatively guide the implementation of technology as an integrated tool for teaching and learning in Mansfield Schools. The regular data collection, benchmarking, and reporting of findings will draw attention to the value we place on technology integration and the degree to which we hold ourselves accountable for effective use of technology.

Second, we will use evaluation as a way of continually updating our five-year plan. While annual plan updates are required by the Massachusetts Department of Education, we also intend our plan to be a living document that is supported by an on-going planning, review, and evaluation effort. Beyond the creation of this initial document, our technology planning committee will be maintained as a plan updating and evaluation group.

Funding Strategies

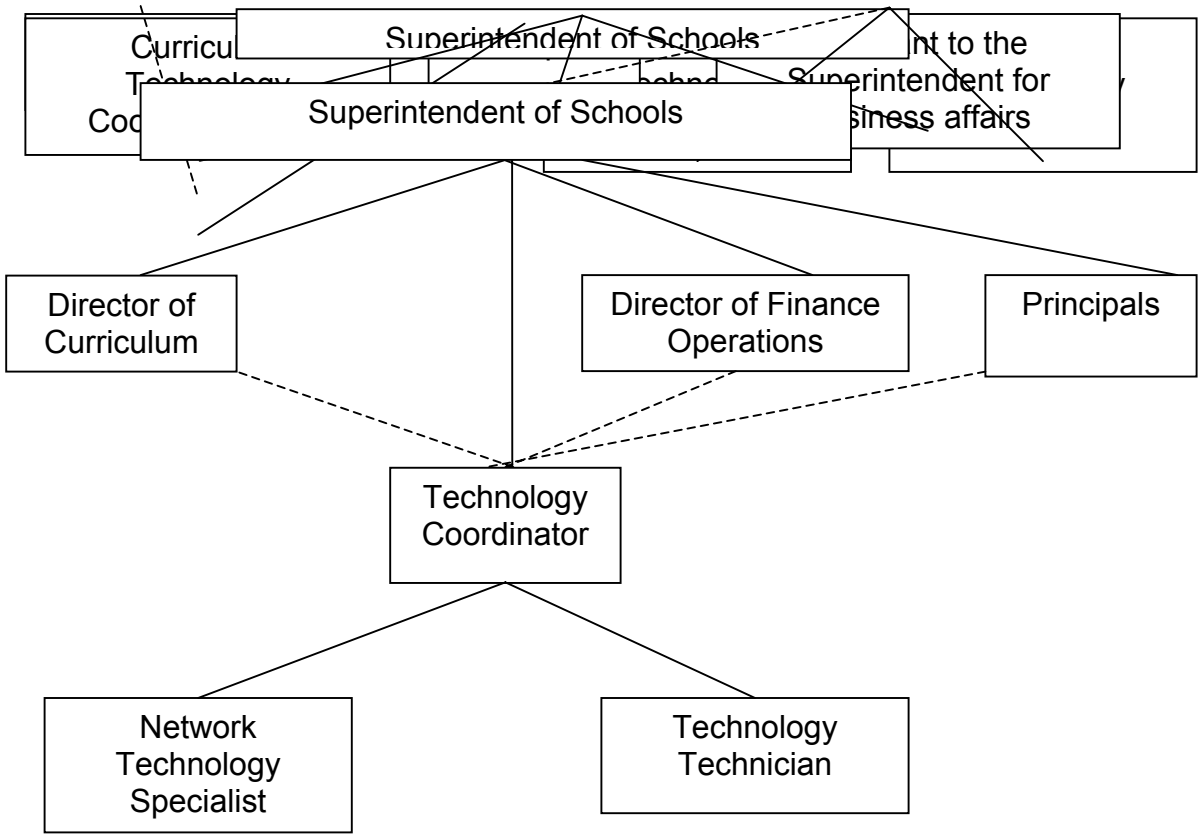
Mansfield's technology initiative will require a variety of funding strategies.

The Mansfield Schools will consider all of the following strategies in its search for ways to fund all aspects of its five-year technology plan:

- Inclusion of technology support in the annual operating budget.
- Inclusion of classroom and computer lab hardware as well as network infrastructure (wiring, distribution systems, etc.) in capital improvement budgets.
- Earmarking of entitlement (federal and state) funds to support some aspects of the plan (e.g., professional development, curriculum work, and software and hardware acquisition).
- Pursuit of federal, state, and foundation grants that can support particular aspects of the District's technology plan -- specifically professional development and curriculum integration work.
- Using the Universal Service Fund ("e-rate") to fund portions of networking expenses such as network infrastructure modernization.
- Slowly shifting textbook money to cover more

Roles and Responsibilities

Implementation of Mansfield's technology plan will require the focused attention of a number of staff members and groups within the District. In this section of our plan, we outline whom these individuals and groups are, and provide some broad rationale for their designated responsibilities.



Ongoing Role of the Technology Planning Committee

The Technology Planning Committee that is responsible for this five-year plan has ongoing responsibilities that go beyond the creation of the plan. Specifically, the Committee, insofar as reasonable, will remain intact to:

- Facilitate continual and ongoing development/refinement of the technology plan
- Serve as an advisory committee to the Director or Technology
- Serve as "opinion leaders" by disseminating information about the plan and other aspects of Mansfield's technology implementation effort to peers and community members
- Oversee District-wide data gathering and assessment
- Manage and implement evaluation of the technology plan goals