

# 5 Administrative and Instructional Technology

## *Summary*

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The Bradford County School District is using seven of the nine administrative and instructional technology best practices. The district acquires technology in a cost-effective manner and generally provides timely and cost-effective support services; employs a dependable network and provides access to the Internet to personnel and students and encourages its use throughout the district; relies on well-developed data systems to deliver accurate financial and student information; and has written policies that direct safe and appropriate use of technology.

To meet the remaining best practice standards, the district needs to make improvements in two areas. First, the district should improve technology planning by broadening stakeholder participation, conducting assessments of technology needs, and developing goals in the technology plan that are feasible and measurable and include expected completion dates to track and evaluate goal achievement. Second, the district should improve performance in technology professional development by better assessing technology skills of employees to ensure those individuals who need additional training receive it. In addition, the district should track technology training received and evaluate its effectiveness, and principals should consider technology skills used in the classroom as a criterion in evaluations.

## *Background*

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Instructional and administrative technology is an important aspect of school district operations. Technology affects student performance by enabling students to access and analyze information, solve problems, collaborate with others, and effectively communicate their thoughts and ideas. Teachers should use technology as a tool to assist in administrative duties, provide curriculum support, and prepare students for life after graduation. The exposure of students to technology is of pressing importance since computer application skills are essential foundations for a large number of current work force employments. The U.S. Department of Labor estimates that a significant background in technology will be required in all but 8 of the 54 fastest growing job categories in the next 10 years. Technology use by administrators and district employees facilitates timely information to effectively manage the district resources and make informed decisions.

The instructional and administrative technology resources in the Bradford County School District serve the district office and 10 schools, including four elementary schools, one combination elementary and middle school (K-8), one middle school, one high school, one vocational school, one adult school, and one alternative education school. The district has provided basic technology resources throughout the district and established an efficient infrastructure to support networking and telecommunications allowing access to the Internet and connectivity between the schools and the district. Most schools have fiber optic connectivity while four schools are connected to the district office by T1 communications circuits. Most classrooms, with the exception of certain portables, have Internet access with at least one computer per

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classroom connected to the district network. However, teachers in some schools experience network connection problems, some of which are due to periodic and persistent computer hardware problems.

The majority of schools use computer labs, including Title I labs with special curriculum software, to assist with instruction in a variety of ways. Most commonly used applications in labs range from reading software, drill and practice, to FCAT training, while Internet research and integrated learning systems and business applications are available to students in a few schools.

The district contracts for a resource management system called TERMS that tracks student demographics, attendance, test scores, grades, health records, contact and discipline information, full-time equivalent (FTE) student counts, and transcripts.<sup>1</sup> The management system also supports administrative functions for payroll, personnel, fixed assets, warehouse, and finance. The system runs on the AS400 in the district office, which is supported by the district and connected to the Northwest Regional Data Center. School employees enter data into the system through terminals and personal computers running terminal emulation. District employees access data through terminals housed at the district office. Support for the system is provided by a software provider who also offers application support and training.

The Bradford County School District avoids some of the high cost of services for financial management and student record services by participating in cooperative agreements with other small districts. The district is a member of the North East Florida Educational Consortium (NEFEC) with 14 other districts and the AS/400-TERMS Consortium with six other small counties. As a partner of the Florida Learning Alliance, the Panhandle Area Educational Consortium (PAEC) provides a digital dish network for the Florida Educational Channel to seven schools in Bradford County.<sup>2</sup>

Exhibit 5-1 shows the district's total technology expenditures for Fiscal Years 1999-2000 through 2001-02. The district has invested at least 2% of its budget in technology each of the past three years and increased its investment to 4% in Fiscal Year 2000-01. Most of this increase in spending was made possible through a Technology Literacy Challenge Fund grant award (\$573,777) in Fiscal Year 2000-01. According to district personnel, this increase was mostly used for wiring several schools. Most technology expenses were for salaries and benefits of personnel in the Management Information System (MIS) department and a TERMS programmer. Training accounted for 1% (\$4,150) of technology expenditures in Fiscal Year 2001-02.

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<sup>1</sup>Total Educational Resource Management System (TERMS) is a commercially available resource management software package. OPPAGA's disclosure of the product's name should not be construed as an endorsement of the product.

<sup>2</sup> The [Florida Learning Alliance](#) is a consortium of 34 rural and small districts and the Florida Virtual School with the mission to increase academic achievement of students.

**Exhibit 5-1  
The Bradford County School District Has Expended at Least  
2% of Its Budget on Technology In the Past Three Fiscal Years**

	Fiscal Year		
	1999-00	2000-01	2001-02
<b>Technology Expenditures</b>			
Contracted Services—Technology	\$ 60,477	\$ 328,334	\$ 39,500
Hardware Acquisitions	115,070	148,204	28,021
Software Licensing	69,878	129,262	21,563
Salaries and Benefits	289,051	344,355	232,784
Technology Training	8,475	11,291	4,150
Communication and Technology	92,977	60,625	66,120
Parts, Supplies and Repairs	74,545	204,220	113,628
<b>Total Expenditures</b> <sup>1</sup>	<b>\$ 710,473</b>	<b>\$ 1,226,291</b>	<b>\$ 505,766</b>
<b>Total District Budget</b>	<b>\$32,156,549</b>	<b>\$34,553,583</b>	<b>\$31,928,472</b>
<b>Expenditure as percentage of district budget</b>	<b>2%</b>	<b>4%</b>	<b>2%</b>
FTEs	3,984	4,013	3,986
<b>Expenditures per FTE</b>	<b>\$178</b>	<b>\$306</b>	<b>\$127</b>

<sup>1</sup> Expenses include those for the MIS department, technology categoricals, AS/400-TERMS Consortium Fund, and grants directly related to technology.

Source: Bradford County School District expenditures as of May 1, 2003, DOE Florida Education Finance Program FTE final calculation, and OPPAGA analysis.

In Fiscal Year 2002-03, the Florida Department of Education (DOE) awarded \$31,518 federal Enhancing Education Through Technology (EETT) funds, based on full-time equivalent students served, to the Bradford County School District.<sup>3</sup> The district applied for but was not awarded the second part from the competitive portion of EETT funding even though Bradford County School District’s high percentage of low performing students and children from families with incomes below the poverty line made it eligible to compete. In the last three years, the district was awarded a few other grants for programs that integrate technology into the curriculum. These grants include the Florida Learning Alliance Grant and an INTEL grant for \$5,000. Individual teachers’ initiatives were instrumental in the pursuit and award for most of these grants. One teacher received additional pay for writing the application for the EETT grant. The district uses other sources of funds, such as non-federal grants and monies received from other AS/400-TERMS consortium counties to fund the consortium, to cover additional technology expenditures.

As shown in Exhibit 5-2, the district’s MIS program consists of three positions: an MIS director, an operational specialist, and a data entry person. Currently, the district’s MIS director is responsible for providing and organizing technical support to keep data processing and instructional programs functional throughout the district, with help from the operational specialist, school-based technology contacts, and a NEFEC contracted technician. The MIS director also gives authorized users access to the student information system and offers training workshops in administrative technology at a district-based technology laboratory. In addition, the director of curriculum allocates available funding for technology acquisitions and training in response to needs identified by the technology committee.

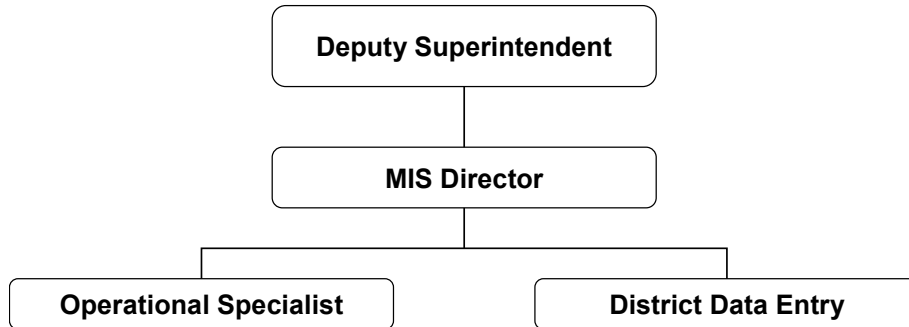
Each school has a technology contact, who typically is a teacher or other school employee with some experience in technology, voluntarily providing additional technical support at each school. Three schools allocate extra time to a technology teacher during the school day to help with technology needs.<sup>4</sup>

<sup>3</sup> See [Enhancing Education Through Technology \(EETT\)](#) for more information.

<sup>4</sup> The three schools are Bradford High School, Starke Elementary School and Southside Elementary School.

If these technology contacts cannot solve a problem on their own, they request help from the district MIS director who then tries to solve problems over the phone or in person, or delegates services to the NEFEC technician, who comes to the district one day per week.

**Exhibit 5-2**  
**The Bradford County School District's MIS Program**  
**Has Three Positions Responsible for Meeting Technology Needs**



Source: Bradford County School District, April 2003.

# Conclusion and Recommendations

## Summary of Conclusions for Administrative and Instructional Technology Best Practices

Practice Area	Best Practice	Using the Best Practice?	Page No.
<b>Technology Planning</b>	1. The district has a comprehensive technology plan that provides direction for administrative and instructional technology decision making.	No	5-6
<b>Cost-Effective Technology Acquisition</b>	2. The district acquires technology in a cost-effective manner that will best meet its instructional and administrative needs.	Yes	5-7
<b>Technology Professional Development</b>	3. District and school-based staff receive professional development training for all technologies used in the district.	No	5-8
<b>Technical Support</b>	4. The district provides timely and cost-effective technical support that enables educators and district staff to successfully implement technology in the workplace.	Yes	5-10
<b>Infrastructure and Network Communication</b>	5. The district maintains a dependable, standards-based infrastructure employing strategies that cost-effectively maximize network and Internet access and performance.	Yes	5-11
	6. The district uses technology to improve communication.	Yes	5-12
	7. The district has written policies that apply safe, ethical, and appropriate use practices that comply with legal and professional standards.	Yes	5-12
<b>Information Management and Delivery</b>	8. The district has established general controls in the areas of access, systems development and maintenance, documentation, operations, and physical security to promote the proper functioning of the information systems department.	Yes	5-13
	9. The information needs of administrative and instructional personnel are met by applying appropriate project management techniques to define, schedule, track and evaluate purchasing, developing, and the timing of delivering IT products and services requested.	Yes	5-13

# TECHNOLOGY PLANNING

## **Best Practice 1: Not Using**

### **The district does not have a comprehensive technology plan that provides direction for administrative and instructional technology decision-making.**

Planning is the key to a well-implemented, well-delivered technology system. Effective planning helps ensure that district technology meets the instructional needs of students and teachers and the administrative needs of decision makers, including administrators, teachers, and non-instructional personnel. An effective planning process identifies the technology needs of users, develops strategies to acquire needed technology in a cost-effective manner, and identifies available funds required for acquisitions. To ensure that all critical needs are identified, the planning process should include a broad range of stakeholder input. The decisions made during the planning process should be in writing and the resulting plan should guide technology-related policymaking and acquisitions. While the complexity of the technology plan will vary based on the size of the district, it should include a mission statement and reasonable, measurable goals and objectives that can be accomplished, in most cases, with available resources. The district's budget also should reflect the financial commitment to major technology initiatives included in the technology plan. In addition, the planning process should include follow-up procedures that allow decision makers to assess the benefits of district investments in technology and abandon or modify failed strategies in favor of more successful ones. District plans should state who is responsible for implementing and updating the technology plan.

The Bradford County School Board approved a districtwide technology plan in December 2002 that addresses important issues such as basic technology needs and goals, resource allocation by school, and technology acquisition. However, the district can improve this technology plan and meet best practice standards by addressing the following four conditions.

1. Stakeholder input has been limited in developing the technology plan, as parents (apart from teachers who are parents) and community partners were not involved in the discussion and development of the plan. In addition, technology committee meetings addressing technology planning have been infrequent and attendance by members is often insufficient to hold a meeting when it is scheduled.
2. While the district identified basic technology needs through information informally obtained from members of the technology committee during its meetings, the district did not formally and systematically assess district and school-level technology needs to guide in the planning of technology resource allocations.
3. Some goals in the technology plan need to be more clearly defined to allow for measurement and evaluation based on outcomes. For example, the goal proposing integration and immersion of technology in the classroom is a strategic goal that does not indicate desired outcomes for evaluation. In addition, goals have no expected completion dates necessary in assessing whether progress is met within appropriate time periods.
4. The current plan does not fully reflect significant changes in the technology budget initiated by the board, which affects achievement of short-term and long-term goals in the plan. For example, the plan did not include that in September 2002 the district school board removed \$75,000 budgeted for Public School Technology to be used as a reserve for board-specified academic classroom instruction.

While the district's current technology plan represents a good blueprint for implementing and delivering an efficient technology system, several revisions would improve its usefulness to the district. The district should include greater stakeholder participation, assess technology needs, and develop goals with timelines for implementations that can be measured, tracked, and evaluated. The district should use the services provided by North East Florida Educational Consortium (NEFEC) to improve the technology

plan and should present the plan to the school board for approval. The school board should use the plan as a valuable resource when prioritizing technology funding and allocating resources.

**Action Plan 5-1**

**We recommend the district improve the technology plan by encouraging broader stakeholder input and more commitment of technology committee members; and refining, tracking, and evaluating the implementation of goals.**

Action Needed	<p>Step 1. To obtain broader stakeholder input, the technology committee should invite parents and an identified liaison of each school’s advisory council to its meetings. In addition, the committee should recruit members that are more available to participate, since several meetings had to be cancelled due to poor attendance. The technology committee should use NEFEC’s services for steps 2 through 5.</p> <p>Step 2. The technology committee should survey and evaluate district and school-level technology needs on an annual basis. NEFEC could work with this committee to develop an instrument to meet this purpose.</p> <p>Step 3. The technology committee should develop feasible, clearly defined and measurable, outcome-based objectives for the technology plan that link technology initiatives to the district budget, identifying the funding commitment required for each initiative.</p> <p>Step 4. The technology committee should include specific, time-bound steps necessary to attain the goals in the plan. For example, the survey in step 2 should be conducted and evaluated prior to the academic year.</p> <p>Step 5. At least annually, the technology committee should meet to evaluate goal achievement and modify or abandon failed strategies and update the plan accordingly. The technology committee should review and approve the plan, ascertaining that updates are current.</p> <p>Step 6. A member of the technology committee should present the revised plan to the school board annually for approval, summarizing the progress of the previous year’s efforts.</p> <p>Step 7. The district should use the board-approved technology plan to prioritize and allocate technology funding decisions.</p>
Who Is Responsible	District technology committee, NEFEC, and the district school board
Time Frame	Prior to the 2004-05 school year

## COST-EFFECTIVE TECHNOLOGY ACQUISITION

### Best Practice 2: Using

**The district acquires technology in a cost-effective manner that will best meet its instructional and administrative needs.**

Districts can reduce and better anticipate technology-related expenses and avoid downtime by developing acquisition strategies that consider not only the initial purchase price, but also the cost of fully implementing and supporting the systems. Implementation and support cost considerations should include professional development requirements, training, standardization of equipment, system interoperability, technical support, and disposal costs. In addition, districts should base technology acquisitions on need and ensure that technology resources are equitably distributed throughout the district.

The Bradford County School District has processes in place to meet the intent of this best practice. The district has developed strategies to cope with limited technology funding by relying substantially on the use of donated computers and computers purchased through grants. The district also purchases new computers at low cost assembled by students from the Bradford Union Vocational Center. The district purchased a mobile technology lab with 22 laptop computers and two wireless connection points with EETT funding it received in Fiscal Year 2002-03.

Although the district meets the intent of this best practice, it could reduce disparity in access to technology across schools. While access to and utilization of technology for most elementary schools are generally good, the level of technology at the middle and high school level is relatively low. The 2003 DOE Technology Resource Survey (TRS) shows the disparity of access to computers and computer age across schools. For example, the exposure of teachers and students at Bradford Middle School and those at Starke Elementary School to technology is very dissimilar with respect to the number and age of computers available to them. We found that, on average, two students share one computer in a classroom at Starke Elementary School, while nine students share one computer per classroom at Bradford Middle School. Computer age is an issue too, as 90% of the computers at Starke Elementary School were purchased within the past five years, while only 11% of Bradford Middle School's computers fall into this category. District personnel told us that most schools use equipment that is over eight years old. In addition, we found that Lawtey Community School still uses some Intel 386 and 486 computers in a few classrooms, which are several years behind current technology standards.

**To improve disparity in access to technology across schools, we recommend that the district target schools with predominantly obsolete computers (i.e., older than 5 years) and higher student-to-computer ratios as compared to other schools when allocating future technology resources. Information on school-based resources should be based on needs identified in the yearly DOE Technology Resource Survey and updated information on schools' current resources ascertained by the technology committee.**

## **TECHNOLOGY PROFESSIONAL DEVELOPMENT**

### **Best Practice 3: Not Using**

**School-based staff does not receive sufficient professional development training to ensure technology skills development and the integration of technology in the classroom.**

The importance of technology skills in postsecondary education and for hiring in a large number of jobs make it imperative that students receive adequate training in technology at the secondary school level. Professional development of teachers is essential to ensure that they maximize their use of existing technology. Administrative personnel need to use technology in order to meet reporting requirements and to carry out their work efficiently. However, given the potentially wide range of knowledge and abilities among district staff, it is essential that districts identify the employees and specific areas in which employees are in the greatest need of training and then use this information to focus professional development efforts. To accomplish this, districts must define the level of competency to be mastered, clearly state the training requirements, and develop strategies to provide the needed training. These strategies include traditional classroom, individualized computer lab instruction, web-based instruction, electronic bulletin boards, videotapes, and other self-directed, technology-based methods. In evaluating training effectiveness, districts should strive to go beyond issues such as whether participants liked the professional development opportunity and should focus on the intended outcomes and skills to be mastered. Assessing training effectiveness is important to plan and budget for future training initiatives.

The Bradford County School District does not meet the intent of this best practice. We identified four issues the district should address to improve technology training and meet best practice standards.

1. The district has not developed technology standards for teacher performance. Even though the district's technology plan mentions the short-term goal of establishing standards using the International Society for Technology in Education (ISTE) National Education Technology Standards, these standards have not yet been developed or adapted and there are no current efforts in place to do so. The adoption of standards is important to define the level of mastery desired by the district to guide the planning of professional technology training of employees.



2. The need for training has not been systematically and periodically assessed to identify specific training areas that would benefit employees the most and to assign technology skills training. The identification of areas of greatest need would allow the district to target its limited resources to these needs. Some districts we have previously reviewed are using assessment tools for professional development assessment such as the School Technology and Readiness (STaR) Chart, the Florida Learning Alliance (FLA) Survey, and the Department of Education's Technology Resources Survey.<sup>5</sup> For example, the STaR Chart, developed by the Florida Department of Education, is a rubric of technology benchmarks that relate to a variety of education issues. The benchmarks for each issue are presented at stages, providing the opportunity to chart a school or district's progress in educational technology.<sup>6</sup> In addition, some of the benchmarks can be used to chart an individual's progress; that is, it can assist teachers with tracking and assessing their progress on a technology continuum. This use of the chart would allow teachers to assess whether they are moving toward a higher point of technology usage from year to year.
3. While administrative employees receive periodic training in using technology to conduct their work, teachers expressed concerns that technology training opportunities needed to be expanded to ensure the development of technology skills in the classroom.
4. The district does not track and evaluate technology training received to help identify training taken by staff and to assess whether they achieved desired levels of competency. The STaR chart described in point 2 above would be helpful in this effort as well, as it can be used to define and identify stages of desired and achieved development.

We identified several reasons for these deficiencies.

- The technology committee discusses training needs during its meetings, but these needs are based on the opinions of attending committee members rather than periodic and systematic feedback obtained from teachers.
- The district did not assign a person knowledgeable in technology the task of effectively communicating, coordinating, tracking and evaluating training. The director of curriculum sends information about training opportunities to principals and allocates funding for training. However, due to other pressing duties, she has not done sufficient follow-up to effectively evaluate training outcomes.
- Teachers told us that many training sessions are not offered on-site but at NEFEC offices in Palatka, approximately 40 miles from the district's central office. This location makes it inconvenient and difficult for them to attend.
- Since most communication is directed to principals who already receive a large number of messages, the dissemination of technology training information may not always reach teachers in a timely fashion.
- Finally, teacher work load and reservations about using substitute teachers prevent many teachers from taking time off for training sessions.

We recommend the following action plan to improve the technology professional development of district employees.

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<sup>5</sup> The Monroe County School District uses the STaR chart, while Franklin County uses the FLA survey.

<sup>6</sup> See [Florida STaR Chart](#) for further information on the use of the STaR Chart.

**Action Plan 5-2**

**We recommend that the district improve the professional development training of its employees by conducting needs assessments and expanding technology training opportunities; tracking and evaluating training.**

Action Needed	<p>Step 1. The technology committee should adopt standards developed by the International Society for Technology in Education (ISTE) for technology professional development of teachers.</p> <p>Step 2. The technology committee or school-based administrators should survey and identify administrators' and teachers' skills in technology and the extent to which teachers integrate technology in the classroom. Existing assessment tools such as the School Technology and Readiness (STaR) Chart, the Florida Learning Alliance Survey, and DOE's Technology Resources Survey could be employed in this effort.</p> <p>Step 3. Once the district identifies training needs through surveys, the technology committee should develop a schedule of expanded and coordinated training through NEFEC or designated local mentors. Expanded and coordinated training opportunities should also include more locally held sessions with NEFEC to alleviate traveling for teachers. The technology committee should periodically invite a representative from NEFEC to its meetings to obtain and provide feedback concerning technology issues. Incentives such as extra pay from grants or extra time off from school duties may encourage better attendance.</p> <p>Step 4. Principals should use survey results to allocate training opportunities to teachers and consider offering training sessions during teacher planning and early release days.</p> <p>Step 5. To improve communication about training opportunities, the technology committee should consider assigning one of its members the responsibility of disseminating training information. This responsibility could be rotated among members to avoid burdening one person. To improve disseminating this information at the school level, each school's technology contact or other designated person should be responsible for forwarding this information to all teachers.</p> <p>Step 6. The technology committee should explore using existing district tracking systems used for in-service training hours or Florida Learning Alliance's free tracking system on the web, at <a href="http://www.my-points.org">www.my-points.org</a> to track training.</p> <p>Step 7. The technology committee and principals should assess the effectiveness of training to guide in the decision to pursue only training that produces desired results or to modify the training schedule. The district could pursue the option to use the STaR chart in evaluating training.</p> <p>Step 8. Principals should use teacher technology skills and use of technology in the classroom as criteria in the evaluation process.</p>
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Who Is Responsible	MIS Director, district technology committee, principals and the district school board
Time Frame	Prior to the 2004-05 school year.

## **TECHNICAL SUPPORT**

### **Best Practice 4: Using**

**The district generally provides timely and cost-effective technical support that enables educators and district staff to successfully implement technology in the workplace.**

Timely, helpful technical support can be a determining factor in whether technology is used or abandoned, decisions are made in a timely manner, and essential district services are maintained or interrupted. Districts should provide responsive technical support to all users. Instructional personnel should provide media-rich curricula, and non-instructional personnel should conduct administrative tasks without technical interruptions. Areas of technical support include email support, intranet/Internet access, software application support, web development, and computer hardware installation and maintenance.

Providing technical support can be accomplished in a variety of ways, including providing a trained non-instructional technology support person or providing a technology facilitator in each school; managing a central help desk at the district; implementing a work order tracking system; and contracting for regional or vendor support services. In addition, districts can minimize the cost of supporting out-of-warranty equipment by establishing replacement guidelines that specify a time frame for when technologies should be recycled or replaced as resources become available.

The Bradford County School District has processes in place to meet the intent of this best practice. Although the district is using this best practice, it could improve technological capacity by enhancing communication between some schools and the district. Since teachers are required to enter attendance and grades electronically, access to the Internet and functional computers is essential to meeting these responsibilities. Most schools reported satisfaction with the response time and quality of technical support by the district. However, Lawtey Community School in particular experienced reported delays in access to the network and the Internet of up to several months. These delays were caused by the lack of response to teacher service requests due to the school's failure to convey these issues to the MIS office.

**To further improve technical support, we recommend that the district identify and improve current communication problems concerning the need for services between some schools and the district office. The MIS director should require that employees designated as technology contacts communicate service requests by teachers to the district within a specified timeframe, such as two days. In addition, the MIS director, in collaboration with the school technology contacts, should set a standard that service requests to solve problems related to teachers' access to a computer and to the Internet are met within a specified timeframe, such as one week.**

## **INFRASTRUCTURE AND NETWORK COMMUNICATION**

### **Best Practice 5: Using**

**The district maintains a dependable, standards-based infrastructure employing strategies that cost-effectively maximize network and Internet access and performance.**

A district's success in meeting the demands for information depends largely on the ability of its infrastructure to receive and transmit data for effective communication and resource sharing. Thus, districts should have a districtwide infrastructure that provides communication, data transmission, resource sharing, and Internet capabilities in a cost-effective manner. The district's network should be fully operational and consistently available to users. To help ensure network dependability, the district should protect its network from viruses and have speed and access standards for district network resources. Network access and dependability is crucial for meeting the information needs of students, teachers, administrators, and non-instructional personnel.

The Bradford County School District has processes in place to meet the intent of this best practice. The district has implemented and established a dependable infrastructure. A central network system consists of an AS400 server that runs the resource management system and is connected to servers located at each school site. School employees use TERMS to enter data such as attendance and grades into the system through terminals and personal computers. All schools have access to the Internet and email through the district's connection to the Florida Information Resource Network (FIRN). In addition, one school has internal email capability. Even though the district has not yet installed a virus protection software system, it allocated funding to and contracted for the purchase of a software system.

## **Best Practice 6: Using**

### **The district uses technology to improve communication.**

Technology has revolutionized communications, providing tools to disseminate large amounts of information to a wide audience. Email, websites, and teleconferencing are examples of technologies that enhance communication within and beyond school boundaries. Whenever possible, districts should use web technologies, such as Internet and intranet sites, and email to improve and enhance communications. Using email can expedite communication between and among colleagues without having to wait for a meeting to discuss important issues, saving time and travel. Posting information on websites, such as policies, announcements, and calendars, improves access to important information district wide and decreases the expense associated with sending hardcopy updates. Voice, email, and website technologies can facilitate communication with parents by providing information regarding the expectation, progress, and well-being of their children, as well as providing general information about specific programs and course offerings.

The Bradford County School District has processes in place to meet the intent of this best practice. The district uses email districtwide and encourages school employees to make more use of email to communicate with other schools or district office employees. All but one of the district's schools use the Florida Information Resource Network (FIRN) as the central email system offering adequate email connections throughout the district and state at no cost. The remaining school uses a separate internal email system as part of its operating system at no additional cost. In addition, the technology teacher at this school reported that she currently does not invest a significant amount of time to manage the system, even though she had to devote extra time during initial system implementation. Another elementary school is considering the purchase of a school-based email system at a cost of \$2,000. We believe this purchase is unnecessary because FIRN provides an adequate email system for the school. In addition to the purchase price, the installation and management of the system will result in an unnecessary diversion on the district's limited technology resources. As discussed in Action Plan 5-1, a comprehensive technology plan would establish priorities for technology purchases.

## **Best Practice 7: Using**

### **The district has written policies that apply safe, ethical, and appropriate use practices that comply with legal and professional standards.**

While technological innovations have provided districts with numerous opportunities to improve communication and increase efficiency and productivity, it can be inappropriately used causing potential harm to students and exposing districts to lawsuits. Thus, districts must develop effective strategies and comprehensive guidelines for the appropriate use of technology. Safe use of online resources is important to everyone. The federal Children's Internet Protection Act (CIPA) requires districts using E-rate funds to protect students from harmful online content. Because the infringement of copyright has legal ramifications, districts must provide guidelines for employees and others to comply with copyright laws.

The Bradford County School District has processes in place to meet the intent of this best practice. The district provides clearly written instructions and user agreement forms to employees and students on the appropriate use of the Internet and district computers.

# **INFORMATION MANAGEMENT AND DELIVERY**

## **Best Practice 8: Using**

**The district has established general controls in the areas of access, systems development and maintenance, documentation, operations and physical security to promote the proper functioning of the information systems department.**

Districts are becoming increasingly dependent on information systems to manage their operations. These systems are typically used to track student information and financial management. For example, the Florida Department of Education requires student data to be submitted electronically. Because student data is used for assessment and funding, it is important that controls are in place for the district to secure access and to ensure the reliability and accuracy of the data. Districts should have processes in place that ensure they are following typical electronic data processing (EDP) practices and have controls to promote the proper functioning of all information systems.

The Bradford County School District has processes in place to meet the intent of this best practice as most equipment is secured in areas inaccessible to non-authorized users. However, during our site visits, we observed that the physical security of communications equipment in some schools was not sufficiently secured. For example, the wiring hubs in Lawtey Community School and Bradford High School were left easily accessible to non-authorized use. As a result, the network was unavailable to users because of equipment tampering. The district could improve access reliability to the network by ensuring that all communications equipment is secured from non-authorized access.

**To enhance the security of technology equipment, we recommend that wiring hubs and other communications equipment be secured at all schools by ensuring that they are enclosed within a room inaccessible to non-authorized users or locked within a cabinet.**

## **Best Practice 9: Using**

**The information needs of administrative and instructional personnel are met by applying appropriate project management techniques to define, schedule, track, and evaluate the implementation of requested Information Technology (IT) products and services.**

Because districts depend heavily on data from information systems to make informed decisions, this data must be accessible when needed and presented in useful report formats. To ensure that information needs of teachers and administrators are being met, districts should use common project management techniques to schedule, prioritize, and provide users with a projected timeline when developing reports and applications. Districts should have procedures in place to gauge user satisfaction with information systems and services. Districts then should analyze alternatives to identify the most cost-effective method of responding to these needs.

The Bradford County School District has processes in place to meet the intent of this best practice. The district's MIS director, who is mostly responsible for processing requests for products and services, is in close and frequent contact with most school employees and regularly spends time at most schools. The district could further improve its performance in project management by adopting Action Plan 5-1 and prioritizing the delivery of IT products and services based on the needs assessment as recommended in step 2 of the action plan.