

Educational Technology Plan:

Wise County Public Schools

2010 - 2015



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Introduction

Wise County Public Schools continues to commit many resources to the development of an infrastructure to support effective classroom instruction. The addition of approximately 2000 networked computers (approximately 4000 total), delivery of high speed fiber Internet connectivity to every school, and many more improvements over the last three years have changed forever the way educators prepare themselves for the challenge of meeting educational objectives.

The use of technology is not a new innovation for the instructional or administrative programs in Wise County Schools. Every day we are reminded of how quickly the world changes and how those changes impact student achievement. Obviously, successful schools today must learn to exist outside traditional boundaries. Deployment of technological tools for Wise County teachers and students must continue to improve our ability to compete in an ever-expanding and changing economic market throughout the world. The educational program operating in Wise County Public Schools must meet the challenge of serving a diverse student population. Our division will continue to encourage the development of new instructional strategies, participatory curriculum decisions, and attempts to infuse advanced technology into all content areas. Currently, the Wise County Public Schools technology infrastructure supports 100% Virginia SOL online testing as defined by the Virginia Web-based SOL Technology Initiative. This capability to conduct testing includes all tested subject areas in the primary, middle, and high school levels.

To meet global challenges, we must provide the leadership and the support to enable educators to provide learners with equitable access to worldwide information through state-of-the-art technologies and networks. In order to accomplish this goal, meaningful staff development programs must be provided for each faculty so all students will have the opportunity to learn from our best trained teachers. In turn, the effective use of technology by the instructional staff will complement more traditional pedagogies to create an environment that better meets the needs of today's students. Finally, the successful integration of technology within the curricula will improve opportunities for Wise County students to compete confidently in an ever-changing, complex world, as well as to enhance the quality of life for all citizens.

Philosophy

The Wise County School System recognizes the value of technological resources that are rapidly becoming available. The school system supports/models the use of these resources so teachers can offer students varied opportunities to develop the necessary higher-order thinking skills to function in the technology oriented society of the 21st century.

The wide-distribution of technology in the Wise County Schools has, as its goal, established an environment where technology is a seamless part of the educational experience, available whenever and wherever it is needed. We challenge students to use technology to be more adaptable problem solvers and life-long learners in pursuit of achievement and excellence. Integral to this competence is a critical awareness of the benefits of technology and the moral and ethical issues that relate to it. We believe in technology, not for its own sake, but for the role it plays in developing independent thinking and learning in the leaders of tomorrow.

For technology to become an integral part of the curriculum, teachers are provided with the technical competencies that enable them to enhance course content and course management in ways that inspire and support the students. On-going training and technical support are available to all faculty and staff.

Opportunities are provided that enrich learning, develop a desire and a motivation to learn, maintain a

continuance of learning, and foster skills that allow our students to be competitive in society. Through appropriate staff development training, all members of the professional staff are compelled to acquire skills in the use of technology so they may effectively integrate technology with the curriculum.

The philosophy of Wise County Schools embodies the belief that the division will create a community of lifelong learners. Wise County Schools is striving to build a world-class workforce that ensures competitiveness and promotes a democratic society. Technology will facilitate both powerful strategic linkages within the community (including business, industry, community resources, government agencies, and educational institutions) and educational development of all persons to fulfill their private and public potentials. A community of lifelong learners is created by providing universal access to educational resources and developing collaborative programs to engage all segments of the community. The workforce must adapt to ever-expanding and changing economic markets throughout the world. We are required to develop knowledge, skills, and proficiencies that may be unknown today. Learning will flourish in interactive and empowering environments. These environments merge curricula, leadership, management, and technology. A dynamic learning environment can be created by providing the infrastructure in every educational facility and classroom for all students to have access to global information.

Maturing use of the Internet, the World Wide Web, and other online services, will facilitate partnerships with other organizations, whether educational or business, to facilitate common goals. In order to accomplish the goal of effective integration of technological tools into the curriculum, the division must offer extensive opportunities for professional development. Staff training must provide opportunities to utilize current research, pioneer development of new techniques, and opportunities to collaborate with colleagues. Professional development can be facilitated by using the best resources within the region to create innovative and effective staff development programs that will produce quality strategies immediately useful for each person being trained. These efforts must be guided by the goal to support classroom instruction, specifically by addressing the Virginia SOL requirements.

The very nature of technology and technological change requires a system of funding that permits continuous investment. Wise County is committed to supporting all of these efforts to enable, equip, and provide opportunities for improvement of educational programs through the infusion of technology.

Resources

One of the major focal points of the Wise County Schools' technology department is to constantly evaluate the needs for upgrading the infrastructure and hardware throughout the county to meet the demands of increased technology use. Our dedicated technology staff continues to research new technologies. After ensuring that they remain stable as they operate within our network environment, new technologies will be implemented as the need arises. There is a maintenance plan in place for scheduled upgrading/updating of equipment throughout the school on a regular basis.

Instructional use of technology is the 'driving force' behind the evaluation process utilized in Wise County Schools to make purchasing and deployment decisions.

All administrators, faculty, staff, and students have access to e-mail, the Internet, and software needed for their computing and telecommunications needs. All have access to the following: word processors, spreadsheets, databases, presentation software, publishing software, webpage design software, and e-mail software. Other department specific programs are installed and updated as dictated by department/curriculum needs. Installation of necessary programs also occurs for administration and staff personnel.

Purpose of the Wise County Technology Initiative

Enhanced Learning: To provide high quality, on-going, professional development to assist teachers with the skills for integrating technology as a learning tool in all areas of the curriculum. To create and maintain a flexible, integrated, and safe technological environment, readily accessible to the school system and surrounding community, enhancing student ability to learn, create, and communicate in the pursuit of academic and personal excellence.

Technological Competency: To ensure that all students have the technological competencies needed for intellectual exploration, individual growth, and critical thinking skills.

Developing Technological Leaders: To afford students the opportunities to enable and inspire them to become technological leaders in our society.

Operational Effectiveness: To acquire and update technology ensuring efficient, effective administration of the school system.

Rationale

When technology is flexible and integrated, the inspiration for learning can occur from many sources. For technology to enhance learning, creativity, and communication, it must be available at all times and must be a seamless part of the educational experience. Universal accessibility to technology will enable all members of the school community to take advantage of its benefits.

Technological competency is a necessity in the rapidly changing society for which Wise County Schools prepares its students to become leaders. Wise County graduates must not only possess technical skills, but they must also know how to use them to be more adaptable problem-solvers and life-long learners. Integral to this competence is a critical awareness of the benefits of technology and the moral and ethical issues related to it.

Technology is evolving into a core element of the elementary and secondary school curriculum. Wise County Schools must offer comprehensive, technology-rich, courses of study in order to prepare our students with the ability for continued study at the college, and/or vocational, level so that they may become leaders in the unfolding technological evolution.

With further integration of highly evolved technology into everyday life, it becomes crucial that students exhibit an understanding of safe and responsible use of this technology. Safety being a primary concern of the Wise County Public Schools district, internet and technology safety measures continue to be implemented and improved upon in order to give students the most beneficial education through technology integration while maintaining a safe environment for learning to take place.

Like other professional organizations, Wise County Schools must use technology to enhance communication, administration, and operations. The school must invest in technology to ensure that there is a technological infrastructure to support its daily operations.

By adopting and enacting the initiatives set forth above, Wise County will produce graduates who are well equipped for the challenges of the future. In so doing, Wise County Schools can maintain its leadership among all schools, public and private, as it adapts its offerings and operations to the demands of a changing world.

Change Agent for At-Risk Students

Change comes about in part because effective use of technology for teaching dissolves many barriers and alters traditional methods and attitudes. New strategies are created. Successful technology integration involves complex sets of factors including, at a minimum, commitment to changing curriculum, high-quality professional development, flexible scheduling and instructional management, and a shift from rote learning to project-based learning.

Change means new attitudes and new roles for teachers and students. It means making a shift to learning that emphasizes intellectual achievement through problem solving and teamwork. Change puts students at the center of their own learning.

More than a decade of research, development, and implementation make it clear that integrating technology into the curriculum properly can produce dramatic change and improved prospects for at-risk students. The change can also be measured in classrooms transformed from places that many students wish to avoid to places where students are eager to work. The change can be measured in students who have altered their life course to become enthusiastic learners moving toward positive academic and career goals.

Investing in technology is a proven strategy to improve student learning, but it is clear from NFIE's *Learning Tomorrow* programs and other research that "the investment must reach well beyond hardware and software. To transform schools and students, technology integration must reflect shared commitment to create a positive, productive school culture focused on teaching and learning in new ways. Learning goals for students, not technology goals, must come first. In addition, successful integration of technology for at-risk students depends on the teachers who are knowledgeable, have opportunities for continuous collegial learning, and who challenge their students academically while providing the support to ensure their success.

Strategies to Maintain Technology Initiative as a "living document"

Wise County Schools has established a District Technology Committee, consisting of representation from each of the school level technology committees, which includes students, business partners, parents, other interested community members, Director of Technology, Instructional Technology Resources Teachers, and technicians, as well as central office level personnel.

An annual evaluation of program implementation is used to gauge the progress of the Wise County Schools' technology initiative. Needs assessment is conducted annually to ensure that the Wise County Technology Plan is, indeed, a "living document" providing the direction needed for administrators, teachers, staff, students, and community to compete globally.

Vision

To create a technology-infused learning environment where all students become motivated, self-directed learners who can work collaboratively through various technologies as evidenced by attendance and completion of meaningful academic performance and multimedia tasks that reflect higher-level thinking processes.

Mission

The impact of technology upon the world and specifically upon our society has been very evident. This impact has certainly not escaped the institution of education which now faces the rather serious challenge of preparing our students for success in an ever-changing and highly competitive global environment.

Wise County Public Schools is meeting this challenge by making extraordinary efforts to create and maintain an instructional and administrative system of technologies we believe to best serve our students and staff while existing within a reasonable budget. We realize that application of technology into instructional areas must enhance learning and not be integrated just for integration's sake.

Newer technologies are the most expensive technologies, yet the most recent innovations are precisely what schools need to provide for students since "current" technology for students today can be quite different by the time they enter the workforce.

Wise County Public Schools will continue to build capacity for excellence by improving access to technology for all our students, staff, and communities. The educational leadership team realizes that priorities can shift quickly in today's world and as a school system striving for excellence; we must be prepared to redirect our focus as necessitated by current appraisals.

Needs Assessment

In order to develop an updated educational technology plan that aligns with the Department of Education, key stakeholders from across the county met to discuss their thoughts on using technology to improve student learning and to develop a collaborative vision for Wise County Schools. The Wise County Technology Committee focused on the following five components of the *Educational Technology Plan for Virginia* to develop and administer a needs assessment instrument to all stakeholders.

1. **Application** refers to the appropriate use of specific technologies as highly effective tools in facilitating learning across all levels of cognitive inquiry and development.
2. **Engagement** covers both pre-service and in-service training with a specific focus on the Virginia Technology Standards for Instructional Personnel.
3. **Environment** includes such concerns as the development of electronic infrastructures and the supporting software and hardware that would allow all users to have equitable technical access to local, state, and worldwide educational resources.
4. **Tools** relate to the instructional and administrative applications that will run over the infrastructure "highway" referenced in the Connectivity element.
5. **Results** address the broad assessment of information technology and its specific value to teaching and learning environments, data management, and decision support functions.

As a result of the data analysis of the gathered needs assessment, goals were established and focus groups were organized to develop objectives, strategies, and measures of progress.

Measuring the Progress of the Plan

Available data on the current status of technology in Wise County Schools is used to measure progress toward the desired outcomes of the *Educational Technology Plan: Wise County Public Schools for 2009-2015*. Timely data collection and analysis will ensure the effective use of technology to improve student learning. In order to achieve this outcome, the Wise County Technology Department has deployed a web-based needs assessment and self-survey instrument to collect and utilize data to guide the planning process for good decision making regarding effective uses of technology to improve teaching and learning.

Planning for Tomorrow

In order to best prepare students for the future, Wise County Public Schools must plan for the purposeful use of new/emerging technologies, the infrastructure, professional development, and resources to support them. Even though it is difficult to predict the future of technology in education, it is important to consider the possibilities by carefully considering current trends as a means to identify and plan for the future.

With upcoming consolidation of the district's six high schools and the building of new, innovative learning environments that meet the needs of the 21st century learner, the school system will be given the opportunity to integrate these new/emerging technologies into the newly created infrastructures and potentially update technologies within existing schools. In the winter of 2010, Wise County Public Schools will begin to investigate these potentials and take the necessary steps to ensure that upon completion of construction and consolidation at the high school level, teachers and students will be equipped with emerging educational technologies, including but not limited to interactive whiteboards, multifunction-function handheld devices, content streaming devices, and other technologies that prove to be most beneficial in preparing students for the 21st century and meet requirements prescribed by Item 132 of House Bill 30 from the 2010 Reconvened Session of the Virginia Acts of Assembly — Chapter 874.

Educational Technology Plan 2010 – 2015

Wise County Public Schools

Executive Summary

The Wise County Public Schools' Technology Plan represents the combined efforts of community members, board members, parents, students, staff, and administration in designing a blue print which establishes the district's technological direction and priorities. With a vision firmly established, the stakeholders have developed goals, objectives, and strategies to ensure our students, staff, and community members will have the support and learning experiences necessary to meet the challenges of the next century. This plan is made possible through the support of all stakeholders, and through local, state, and federal programs which assist us in directing financial resources to these ambitious goals.

The Wise County School System recognizes the value of technological resources that are rapidly becoming available. The school system supports/models the use of these resources so teachers can offer students varied opportunities to develop the necessary skills to function in the technology oriented society of the 21st century.

The use of technology is not a new innovation for the instructional or administrative programs in Wise County Schools. Every day we are reminded of how quickly the world changes and how those changes impact student achievement. Obviously, successful schools today must learn to exist outside traditional boundaries. Deployment of technological tools for Wise County teachers and students must continue to improve our ability to compete in an ever-expanding and changing economic market throughout the world. The educational program operating in Wise County Public Schools must meet the challenge of serving a diverse student population. Our division will continue to encourage the development of new instructional strategies, participatory curriculum decisions, and attempts to infuse advanced technology into all content areas.

The goals and objectives are as follows:

APPLICATION

1. Goal 1: Improve teaching and learning through the appropriate use of technology.
 - a. Objective 1: By providing high quality professional development, teachers will be able to effectively integrate instructional technology to enhance student learning and higher-order thinking skills by June 2015. Teachers collaborate to improve and enrich instruction using technology.
 - b. Objective 2: By providing high quality professional development, teachers will utilize various forms of technology to enhance instruction for diverse learners by June 2015.
 - c. Objective 3: During the life of the Wise County Technology Plan (2010-2015), the Computer/Technology Standards of Learning will be fully integrated across all curriculum areas.
2. Goal 2: Continuance of improvements to district wide equity in the implementation of technology-enhanced teaching and learning.
 - a. Objective 1: During the life of the Wise County Technology Plan (2010-2015), teachers and students access to technology to support instructional goals will continue to be analyzed to ensure equity.
 - b. Objective 2: Appropriate technology-based instructional strategies will continue to be used for students with unique needs.

ENGAGEMENT

1. Goal 1: Provide a variety of technology staff development opportunities focusing on the integration of technology into the curriculum.
 - a. Objective 1: During the life of the Wise County Technology Plan (2010-2015), all instructional personnel will have met necessary requirements for the technology standards for instructional personnel.
 - b. Objective 2: During the life of the Wise County Technology Plan, the establishment of partnerships with other institutions and corporations to provide technology training opportunities will be continually updated.
 - c. Objective 3: During the life of the Wise County Technology Plan (2010-2015), grant programs and other funding sources will be utilized to support implementation of educational technology integration.
 - d. Objective 4: Maintain district-wide Instructional Technology Resources Teachers (ITRTs) to design and model effective integration of technology into the curriculum.

ENVIRONMENT

1. Goal 1: Ensure all instructional and administrative areas have access to appropriate high speed network services.
 - a) Objective 1: Continually analyze existing local area networks (LAN) in all school buildings to ensure that they provide adequate connectivity to support current/future instructional and administrative initiatives.
 - b) Objective 2: Maintain a minimum student to computer ratio in each instructional building that meets current educational standards.
 - c) Objective 3: Maintaining a wide area network (WAN) that will accommodate instructional and administrative needs with sufficient bandwidth for effective operations of current and for future needs.
2. Goal 2: Provide sufficient technical support to ensure ongoing, reliable network operations.
 - a) Objective 1: During the life of the Wise County Technology Plan, continue to provide adequate support personnel for maintaining all technology related items at each school community and the central office campus.
 - b) Objective 2: Continually provide training to ensure that support personnel are appropriately skilled.
3. Goal 3: Provide leadership and resources to promote efficient procurement of infrastructure, including the identification and procurement of emerging technologies.
 - a) Objective 1: Annually review procurement process to ensure that they are efficient, cost effective, and aligned with federal, state, and local policies.
 - b) Objective 2: Continually provide opportunities for the Technology department staff to stay aware of current and emerging technology trends.
4. Goal 4: Ensure network security, filtering, and disaster recovery plans are in place.
 - a) Objective 1: Annual reviews of existing policies, procedures, and technologies will be conducted to ensure that computing resources are secure and recoverable.
 - b) Objective 2: By September of each school year, a review of the Acceptable Use Policy (AUP) is scheduled for each school to ensure that all stakeholders understand the policy and procedures.
 - c) Objective 3: Filtering software utilized by Wise County Public Schools will be reviewed annually and updated as needed to meet federal, state, and local policies.
5. Goal 5: Update methods of communication among teachers, administrators, and support staff.
 - a) Objective 1: By June 2011, purchase and implement Voice Over IP (VOIP) phone connections for all teachers and administrators at the middle school level.
 - b) Objective 2: By June 2012, purchase and implement Voice Over IP (VOIP) phone connections for all teachers and administrators at the primary school level.
 - c) Objective 3: By June 2013, purchase and implement Voice Over IP (VOIP) phone

- connections for all teachers and administrators at the high school level.
- d) Objective 4: By February 2010, updated smartphones with voice and data plans (cellular service) for administrators at the central office level, technicians, and ITRTs.
- e) Objective 5: By February 2010, update cell phones with voice plans for custodial support staff at central office level.

TOOLS

1. Goal 1: Improve teaching and learning through the appropriate use of network-accessible educational applications.
 - a) Objective 1: Annually analyze schools access to appropriate networkable, educational applications to support the Virginia Standards of Learning (SOL).
 - b) Objective 2: Beginning fall of 2010, various curriculum resources will be made available to staff, teachers, and students through use of the online learning management system and will model acceptable technology use and integration practices.
2. Goal 2: Promote and expand web-based applications, services and resources.
 - a) Objective 1: During the life of the Wise County Technology Plan (2010-2015), all schools within the school district will continue to participate in the Virginia Web-based SOL Technology Initiative.
 - b) Objective 2: During the life of the Wise County Technology Plan, every school will continue to have an updated automated library media center connected to the Internet and networked to appropriate learning areas.
3. Goal 3: Offer digital learning opportunities to enhance student achievement.
 - a) Objective 1: Beginning the summer of 2010, expand the use of emerging digital learning opportunities for administrators, teachers, staff, and students.

RESULTS

1. Goal 1: Assess the value that Information Technology (IT) adds to teaching and learning environments.
 - a) Objective 1: During the life of the Wise County Technology Plan, the Instructional Technology Resources Teachers will continue to assist teachers in identifying elements of technology integration that benefits the teaching and learning environment.
 - b) Objective 2: Annually, assess the readiness of schools to further integrate emerging technology into teaching and learning.
2. Goal 2: Provide appropriate decision making support capabilities for all stakeholders.
 - a) Objective 1: During winter of 2010, begin process of identifying types of emerging technology such as interactive whiteboards, multifunction-function handheld devices, content streaming devices, and other technologies that would prove to be beneficial in future consolidated high school environment as well as current primary and middle school settings.
3. Goal 3: Assess Information Technology (IT) Literacy.
 - a) Objective 1: During the life of the Wise County Technology Plan, students will continue to become more effective users of technology for personal use and lifelong learning
 - b) Objective 2: Instructional personnel will continue to demonstrate effective use of technology to fulfill their professional responsibilities throughout each school year.
 - c) Objective 3: Paraprofessionals and support personnel will continue to demonstrate effective use of technology to fulfill their job related responsibilities throughout the school year.
4. Goal 4: Ensure that Wise County Schools' Technology Plan is consistent with the VA Department of Educations' Technology Plan.
 - a) Objective 1: The local technology plan will continue to contain current status information using standard technology issue descriptors, a needs assessment, and a method for assessing technology integration implementation.
 - b) Objective 2: Wise County will annually evaluate the progress and effectiveness of technology plans.

- c) Objective 3: The Wise County Technology Plan will be monitored at regular intervals, including, but not limited to, monthly meetings for progress reporting.

To meet global challenges, we must provide the leadership and the support to enable educators to provide learners with equitable access to worldwide information through state-of-the-art technologies and networks. In order to accomplish this, meaningful staff development programs must be provided for each faculty so all students will have the opportunity to learn from our best trained teachers. In turn, the effective use of technology by the instructional staff will complement more traditional pedagogies to create an environment that better meets the needs of today's students. Finally, the successful integration of technology within the curricula will improve opportunities for Wise County students to compete confidently in an ever-changing, complex world, as well as to enhance the quality of life for all citizens.

Acknowledgments and the Planning Process

Beginning in the 2002 - 2010 school years, a Wise County Technology Committee was formed to begin a visioning process. This Committee continues to determine the most effective way to integrate technology into the Wise County Public Schools' educational process.

The Technology Committee continues to research technology planning and the planning process utilizing websites, including, but not limited to the following:

1. <http://www.netc.org/cdrom/guide/html/gqres.htm>
2. <http://www.pen.k12.va.us/VDOE/Technology/EdTech/resources.shtml>
3. <http://www.sun-associates.com/resources/evalpln.html>
4. <http://ali.apple.com/acot2/>
5. <http://www.nsba.org/sbot/toolkit/tpt.html>
6. <http://www.seirtec.org/P2P.html>
7. <http://www.nctp.com/links.cfm>
8. http://www.netc.org/tech_plans/aup.html
9. <http://www2.ed.gov/about/offices/list/os/technology/plan/2004/site/edlite-default.html>

Using the ANGEL learning management system, the Technology Committee was able to develop and implement needs assessments. These indicators were formulated through prior research of technology integration patterns and practices, using the above mentioned resources. The composite needs assessment results were used for developing the 2010-2015 Wise County Schools Technology Plan.

Since the school technology committee needs to involve the entire community in the planning, development, implementation, and assessment processes, and also needs to be firmly integrated with staff/curriculum development and the strategic planning process, cross membership on these committees is the norm. Technology committee members sit on district committees and represent technology, providing a conduit for the interchange of information between all committees.

The vision that the district uses today, derives from a generational process, as the community has evolved, so has the vision. It is a work in progress.

Application

Application, or technology integration, is consistently using technology appropriately and effectively to facilitate learning for all students. This element specifically addresses the equity of access, partnerships, and collaboration between administrators, teachers, and students needed to integrate technology into common teaching practice.

Framework for Technology Integration

In order to integrate technology across the curriculum, a framework is needed to help guide us in the right direction.

Bailey (1997) suggests that there are ten essential concepts for the integration of technology in the 21st century. They are (1) change, (2) technology planning, (3) ethics, (4) teaching and learning, (5) safety and security, (6) curriculum, (7) staff development, (8) infrastructure, (9) technical support, and (10) technology leadership.

Planning for Integration of Technology into Instruction

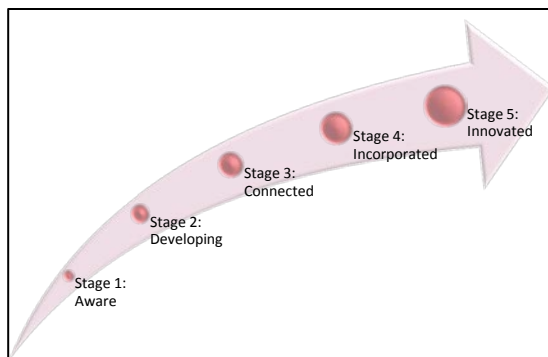
What is Technology Integration?

First we need to know what technology integration is not. Accordingly to Earle (2000), integration is not equal to putting hardware in the classrooms. In fact, he said that, "integrating technology is not about technology [itself, but rather] ... it is primarily about [the] content and [the] effective instructional practices." (p. 7) The focus must be on the curriculum and the learning; it must be on the pedagogy. (Earle, 2002) Technology integration must be understood as "an ongoing innovative process designed to meet instructional/learning needs". (Earle, 2002, p. 7)

Pierson (2000) suggests the following definition for technology integration: "technology integration ... [is represented by the] relationship among content, pedagogical, and technology knowledge" (p. 5). So again, the focus is on the pedagogy and not on the machines/tools themselves.

Five Stages of Technology Integration

Rather than using just one definition for 'technology integration,' it can be described as a 5 stage process. The five stages are shown in the diagram to the left and are thus explained:



Stage 1—Aware

Teachers are not comfortable with the use of technology within the realm of instruction. The computer and other technologies serve as a tool for creating tests and checking email. Students do not have any contact with technology unless it is used as a non-instructional reward.

Stage 2—Developing

Teachers are comfortable using a limited number of hardware and software applications for personal or professional productivity. Basic technology is at times used within instruction as a means of presenting information. Students are allowed to use computers as a means of reviewing content.

Stage 3—Connected

The teacher adapts current lessons and teaching strategies by adding appropriate technology to traditional teaching practices. The technology still remains in the hands of the teacher, who demonstrates the use of technology in problem solving. Student use of technology is limited to teacher guided activities.

Stage 4—Incorporated

The teacher uses a variety of technologies and teaching methods by creating objective-based lessons that open possibilities for higher order thinking skills, collaboration, and enhanced comprehension. The teacher gives the students a set of options in regard to the technologies that would be appropriate to use in creation of a solution for the task at hand.

Stage 5—Innovated

Teachers begin to create new learning environments that may not resemble conventional teaching models. Teachers make technology available to students as a seamless part of instruction. The teacher structures the learning process; however, the students are given flexibility to discover and apply concepts in problem solving and presenting solutions. Cooperative learning is essential in this learning environment with students being encouraged to go above and beyond expectations.

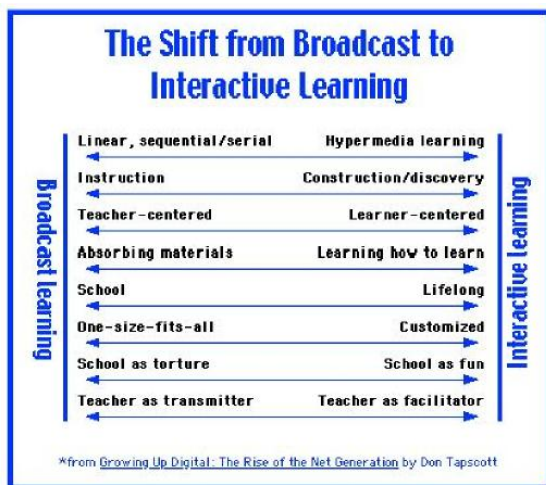
In the earlier stages, technology is an add-on to what has traditionally been happening in the classroom. It supplements and it enhances the curriculum.

In the middle stages, the technology itself tends to take a stand as a curricular area of its own. It becomes seen more as a tool, but its use is not yet very transparent.

In the later stages, the classroom experience is transformed by the integration of technology. Technology becomes less a curriculum in and of itself; the focus returns to meeting the needs of the rest of the school curriculum.

Educational strategies employed tend to be constructivist (see the shift chart). As researchers Henry Jay Becker and Margaret Riel have written, the more effective forms of technology integration are characterized by the "involvement [of students] in cognitively challenging tasks where computers are tools used to achieve greater outcomes of students communicating, thinking, producing, and presenting their ideas."

Effective staff development plans demonstrate an appreciation for the movement through these stages, and will recognize that teachers may represent a spectrum of technology integration. There is a national trend toward adopting educational technology standards for teachers (teacher standards are required to comply with "No Child Left Behind"). Many standards focus on specific technical competencies for teachers (using word processing, spreadsheets, grading programs, etc.). While other, more comprehensive, standards (such as the one from ISTE) encourage competencies which lead teachers to more effective instructional strategies for integrating technology.



Good classroom teachers employ all types of strategies and tools to meet their students' needs. Just as with students, each staff member has unique gifts, interests, learning styles, attention spans, etc.

"What does technology integration look like?"

Much of becoming effective with technology integration requires a role change for the teacher (see chart from *Growing Up Digital*, by Donald Tapscott) and an appreciation for how different the world is for children today. For the teacher, it begins with a willingness to take some risks and stepping out of comfort zones. A major factor in becoming effective is being professionally engaged and connected.

Application: Implementation Plan

“Technology is a tool like any other, and the value does not come from having access to it, but rather how it is used.”

- United States Department of Education, No Child Left Behind

CENTRAL ISSUE

One of the most important ingredients to the successful integration of technology in the classroom is the teacher. Three factors, associated with the teacher, contribute significantly to the success of technology integration: 1) technology proficiency, 2) pedagogical compatibility, and 3) social awareness. Technology proficiency not only means the knowledge of or the ability to use a specific piece of software or hardware, but it also means the understanding of other technologies and conditions that enables the use of the hardware and software. Pedagogical compatibility refers to the degree of consistency between a teacher’s pedagogical practices and the technology to be implemented by the teacher. Technology is not a neutral tool, but has content and pedagogical biases. Certain technologies are better suited for supporting certain types of pedagogical styles. Therefore, when the technology fits the content to be taught and teaching styles of the teacher, the likelihood that technology integration is successful will greatly increase. Social awareness is a teacher’s understanding of and ability to negotiate the social aspects of the school culture.

According to research, the use of technology is maximized when the infrastructure supports the integration of technology throughout the educational process. Three aspects of the school culture are of central importance to the success of technology integration: 1) the “human infrastructure”, 2) the technological infrastructure, and 3) social support. “Human infrastructure” refers to the organizational arrangement to support technology integration in the classroom. This infrastructure would include a flexible and responsive technical staff; knowledgeable and communicative technologists who can help the teacher understand and use technologies for his or her own classroom needs, and a supportive/informative administrative staff. It, also, includes policies and procedures related to technology issues, such as hardware and software purchases, professional development, and student access to computers and the internet. Technology infrastructure refers to the technological resources, such as hardware, software, and connectivity of a school; social support means the degree to which peers, and administrators, support technology integration.

Reflection: not only does adequate and appropriate technologies need to be in place for integration to occur, but teachers must, also, know how to use technology, and have sufficient support for sustainability and continued growth. The central issue of “how” to seamlessly utilize technology in teaching and learning must focus on assisting teachers with making the pedagogical or curricular connection, as well as developing knowledge of the social and organizational aspects of the school.

RATIONALE

Finding the most effective methods, software, and hardware for integrating technology is a collaborative effort representing a broad range of Wise County stakeholders, including teachers, parents, higher education, business and industry, professional organizations, and the Department of Education. Efforts are being made to promote, and provide, equity in integrating technology by providing adequate and appropriate technologies, both hardware and software, in all schools, as well as focusing on the pedagogical and curricular connections.

Goal 1: Improve teaching and learning through the appropriate use of technology.

Objective 1: By providing high quality professional development, teachers will be able to effectively integrate instructional technology to enhance student learning and higher-order thinking skills by June 2015. Teachers collaborate to improve and enrich instruction using technology.

Current Status: Teachers have opportunities to collaborate within their respective school community on issues relating to the infusion of technology into the curriculum. However, teachers have little opportunity to collaborate outside their school community. This facet of collaboration is important for diversity, sharing methodology, and exposure to "best practices."

Strategy 1.1.1: Beginning the fall of 2010, teachers will be provided with training opportunities that model best practices to enhance the use of technology in instruction.

Strategy 1.1.2: Beginning the fall of 2010, teachers will be provided with curriculum resources through the learning management system which will serve as examples of appropriate technology integration.

Strategy 1.1.3: Beginning the spring of 2010, math and science teachers in the high school level will be provided with various pieces of equipment and training opportunities on effective Science, Technology, Engineering, and Math (STEM) related strategies and lessons.

Strategy 1.1.4: Beginning the fall of 2011, math and science teachers in the middle school level will be provided with various pieces of equipment and training opportunities on effective Science, Technology, Engineering, and Math (STEM) related strategies and lessons.

Measure of Progress: 1.1.1) The number of teachers who attend technology trainings by June 2015. 1.1.2) The number of teachers who utilize the learning management system and resources provided within. 1.1.3) The number of high school math and science teachers who complete the STEM equipment training. 1.1.4) The number of middle school math and science teachers who complete the STEM equipment training.

Objective 2: By providing high quality professional development, teachers will utilize various forms of technology to enhance instruction for diverse learners by June 2015.

Current Status: Teachers use technology-based applications to assist with meeting the needs of diverse learners, but lack the skills needed to use technology to differentiate instruction for remediation and other special needs.

Strategy 1.2.1: Beginning the fall of 2010, Teachers will be encouraged to attend training opportunities that focus on how to use software and hardware solutions to differentiate instruction to meet all students' needs.

Measure of Progress: 1.2.1) The number of teachers attending differentiated instruction training opportunities that focus on the use of technology for differentiated instruction.

Objective 3: During the life of the Wise County Technology Plan (2010-2015), the Computer/Technology Standards of Learning will be fully integrated across all curriculum areas.

Current Status: Many teachers are integrating the Computer/Technology Standards of Learning across all curriculum areas. However, *all* teachers need assistance not only with integration across all curriculum areas, but also with mastering the skills to reach stage 5 of the Five Stages of Technology Integration. This will assist teachers with moving from "broadcast to interactive learning."(See diagram -page 6)

Strategy 1.3.1: During the summer of 2010, the instructional technology resources teachers will develop repositories within the online learning management system that contain exemplars of technology integrated lesson activities. This will be an on-going strategy.

Strategy 1.3.2: Beginning the fall of 2010, training opportunities for technology leaders to team with curriculum specialists to model classroom technology integration that includes the Virginia Computer/Technology Standards of Learning across all curriculum areas.

Measure of Progress: 1.3.1) The number of exemplars contained within the repository by June 2015.
1.3.2) The number of teachers attending training opportunities that model lesson plans showing the integration of Computer/Technology Standards of Learning.

Goal 2: Continuance of improvements to district wide equity in the implementation of technology-enhanced teaching and learning.

Objective 1: During the life of the Wise County Technology Plan (2010-2015), teachers and students access to technology to support instructional goals will continue to be analyzed to ensure equity.

Current Status: All instructional personnel and students have access to a networked computer and access to web-based applications, which includes digital video content. Wireless laptops are available in most schools. All schools have access to multimedia projectors and monitors to use in the classrooms. All schools have technology related learning devices such as microscopes, graphing calculators, probe ware, document viewers, scanners, and digital cameras.

Strategy 2.1.1: Develop up-dated inventories of availability, which will assist with the identification of needed classroom technology as it relates to hardware and other peripherals to assist with classroom instruction.

Strategy 2.1.2: Identify, purchase, and implement software titles to assist with technology integration in all core curriculum areas. Teachers will use Wise County Public Schools' Acceptable Technology Use Policy and Software Approval Form to assist in making good purchasing decisions.

Measure of Progress: 2.1.1) Number of classrooms equipped with appropriate technology

needed to support instruction by June 2015. This will be an on-going process that will be evaluated the spring of each school year beginning in March 2011 and continuing through March 2015. This will ensure the equitable placement of new, emerging technologies, as is appropriate. 2.1.2) The number of software evaluations completed by teachers beginning in August 2010 and continuing through August 2015.

Objective 2: Appropriate technology-based instructional strategies will continue to be used for students with unique needs.

Current Status: Collaboration exists with all departments to ensure that assistive/adaptive devices for special needs students are available as identified in their respective IEPs.

Strategy 2.2.1 Continue departmental collaboration to provide needed and appropriate assistive/adaptive technologies.

Strategy 2.2.2 During the life of the Wise County Technology Plan, provide resources and support to instructional personnel on the appropriate assistive/adaptive and instructional technology for special needs students.

Measure of Progress: 2.21) The number of schools that have access to assistive technologies when needed. 2.2.2) The number of resources available on the appropriate use of assistive/adaptive technologies to support instruction.

Engagement

This element addresses the collaborative development of materials, courses, certification programs, and various staff development delivery models related to the effective integration of technology into a differentiated classroom that focuses on student learning.

Framework for Professional Development

Professional development must be designed to provide technology skills within the context of meaningful classroom projects.

Based on design principles from researchers like Sylvia Chard (1998), Dennis Sparks and Stephanie Hirsch (ASCD), projects such as Apple Classrooms of Tomorrow Today (ACOT2), and the Challenge 2000 Multimedia Project, Wise County Schools' professional development opportunities provide participants with the information, resources, and experience necessary for successful technology integration.

As the English philosopher, Aldous Huxley stated, "Experience is not what happens to man. It is what a man does with what happens to him"

Four Principles of Design:

1. Participants learn by doing

- Educators experience first-hand learning in a technology-rich environment.
- Participants learn tasks based on a "just in time" approach, where a particular technology skill is learned at the precise moment the end user would like to integrate the skill into his/her project.

2. Workshop facilitators model appropriate instructional strategies

- Workshop leaders model the role of "teacher as facilitator" to help educators transform from "teachers telling" to "students doing."

3. Participants learn collaboratively

- This approach to learning encourages a diverse group of learners to combine their collective knowledge and resources to benefit an entire community, both locally and globally.

4. From design to implementation

- The principles of Project-based Learning, including essential questions and authentic tasks, are explored, giving participants the knowledge of *why* a project approach improves student understanding and *how* to integrate this type of learning in their classrooms.
- Using a project approach for workshops and online professional development assists participants with integrating technology into the classroom.

Planning for Professional Development

Wise County educators, students, and parents are united in the belief that a technologically rich curriculum is an essential component in preparing today's students for adulthood in the new millennium. Schools are wired with Internet connectivity through local area networks. There is wide public support for application of information technologies in education. The public understands little about how information technologies can most effectively enhance student learning and relies on educators to make sensible use of the considerable public investment. The goal is to enable large numbers of students to benefit from the technological revolution and its limitless contributions.

It is the teachers who face the main challenge of figuring out how best to incorporate technology into their practice. They look to professional development to help them fulfill that mission. In a 1996 national poll

conducted by the National Foundation for the Improvement of Education (NFIE), 93 percent of teachers placed “how to use information technologies for instructional purposes” as a top priority in striving for their overarching goal: helping students achieve. In survey after survey, these findings are consistent. Teachers recognize the importance of tapping into technology’s vast promise for enhancing teaching and learning, and they want to do it right.

Knowing how to integrate technology into the curriculum is a complex challenge. It will not be met by one-shot workshops. Instead, truly effective professional development in technology applications for educators is marked by several key components. Technologically proficient teaching and learning requires that teachers participate in ongoing individual and collegial study, reflective thinking, analysis of practice, and evaluation of student achievement. Such deep learning is job-embedded, rigorous, and systemically sustained—three hallmarks that differentiate solid, results-oriented professional development from the limited training reflected in much current practice.

Drawing upon decades of research and evaluation of what constitutes high-quality professional development, the findings, consistently, indicate that it is **what teachers know and can do** that makes the difference in improved student performance; and that **teacher learning is the key to helping students achieve**. Loretta Lynn, singer/musician, said, “You’ve got to continue to grow, or you’re just like last night’s corn bread---stale and dry.”

The Need for Technology-Based Professional Development

Technology can be a catalyst for changing how teachers teach, what they teach, and how they interact with students. It can also simplify routine responsibilities, thus freeing time for teachers by helping them and their students to work more efficiently.

Technology can facilitate teaching methods that build students’ inquiry and problem-solving skills and their content knowledge in every subject. For example, students can gain access to a wealth of research sources and experts via the Internet, manipulate complex dynamic models and simulations, work cooperatively in small groups with portable technology, use multimedia tools to present what they have learned, and collaborate on projects with students around the world.

Technology can accelerate changes in teacher roles, such as moving away from a lecture mode of instruction to one in which teachers coach students in solving complex, real-world problems. When teachers find his/herself in a classroom with six computers, Internet connectivity, a wide array of software, with a mandate to integrate them into his/her teaching, the reaction may well be confusion, discomfort, or even fear. *It is this very variety, flexibility, and complexity of technology that make it more difficult for teachers than other topics of professional development.*

There are special challenges associated with learning how to use information technologies that are not present with other educational tools. When educational television programming was introduced a few decades ago, teachers could learn within minutes how to operate the hardware—turn on the set, change the channel, adjust the picture, etc.—and view the programming. They could begin right away to focus on the content. They had no control over software, and it was not interactive. Familiar and comfortable instructional techniques could be used to prepare students for viewing and debriefing them about the content of the program afterwards.

With computer-based technology, however, *operational aspects take time to learn* and still more *time to practice* and *explore* before the technology becomes familiar enough that teachers can truly attend to the content of learning. Teachers must learn how to use the technology itself at the same time they learn how to integrate it into their teaching. Also, because hardware, software, and applications change so rapidly, even teachers who are adept users of technology must pay constant attention to the basic operational procedures of new applications.

Characteristics of High-Quality Professional Development

Whether technology will produce the deep, long-term, and systemic changes hoped for will depend greatly on the quality of the professional growth experiences in which teachers engage. Many people still think of professional development as one time “events,” like workshops, that take place on designated days. Based on experience, NFIE has identified characteristics associated with high-quality professional development that apply to technology as well as any skill or content area.

High-Quality Professional Development:

1. Focus on student learning;
2. Designed and directed by teachers themselves, incorporating teacher needs.
3. Rigorous and sustained over time
4. Realistic and visionary
5. Build collegial professional culture.

Focus on Student Learning

High-quality professional development has at its heart the goal of improving student learning. Educators must be able to use technology to further student learning in subject matter, such as science, mathematics, language arts, and other areas addressed in national, state, and local content standards. In addition, educators must help students to extend their information technology strengths to nurture the habits of mind that support critical thinking.

The **challenge** is to design professional development experiences that encourage teachers to incorporate technology into rigorous curricula and differentiated instruction.

Rather than centering professional development on hardware and software, educators should begin by looking at what students should learn. Then they can better determine the ways in which technology can support that learning and make it more effective (SEIR-TEC 1999).

Another approach is for teachers to look at how students can learn. Such an approach begins with a particular instructional strategy that will improve student performance. After the strategy is defined, the teachers can explore ways that technology could serve the educational objectives.

Professional development that is truly focused on student learning and employs technology as an educational tool must be attentive to the needs of students with *diverse learning styles*. Moreover, it considers effective methods of teaching students from a variety of cultural, linguistic, and socioeconomic backgrounds.

When technology is viewed as a servant to increasing knowledge, the integration of technology into the curriculum can open new opportunities for effectively teaching diverse learners.

Designed and Directed by Teachers, Incorporating Teacher Needs

One of the major findings from research and practice over the past decade is that professional development is more effective when it is designed and directed by teachers, rather than developed and delivered by central administration. Teachers know what they need in order to do their jobs better, and they are more likely to make a personal commitment to their own professional growth when they are involved in conceiving professional development and carrying it out. The process of taking charge of one’s own learning can be very empowering. It begins when teachers realize that they have knowledge worth sharing. It continues as they develop their knowledge and intellectual skills. It is augmented when they share their knowledge and skills with colleagues. It is amplified when they help one another professionally. It is sustained by the climate of collegial professional support that is the result.

Through such participation, teachers build their own leadership skills and empower themselves to take charge of their learning. In doing so, teachers also model the principles, the practice, and the effectiveness of self-directed learning, which is the behavior that they ultimately hope to nurture in their own

students—to become self-directed, life-long learners.

Rigorous and Sustained over Time

High-quality professional development is rigorous. It aims to sharpen teachers' intellectual skills, deepen their subject-matter knowledge, and improve their understanding of learning. To accomplish this, participants must be able to concentrate, reflect, and study—behaviors that are difficult to apply in the middle of a busy classroom.

Both the school reform literature and practical experience strongly indicate that ***it takes three to five years to implement changes in practice built around new technologies***. Often with technology, one of the principal goals is to change the teachers' fundamental beliefs and attitudes. To attain that goal, teachers need adequate time to discuss the implications of new beliefs, reflect on their practice, formulate new visions for where they are heading, find new methods of assessing progress, and develop new working relationships with peers, mentors, and others (Parsons 1998b).

Realistic and Visionary

Rather than presenting abstract concepts, high-quality professional development addresses the real issues that teachers face in using technology in their classrooms. Many effective programs set teachers to work on solving authentic problems that are relevant to their subject matter or grade level. Relevant professional development also means that teachers use the same tools their students will use. Teachers utilize technology applications in much the same ways as they expect their students to do.

Building a Collegial Professional Culture

Many effective strategies for professional development have a common goal of building a collegial and collaborative culture of teaching professionals. Collegial communities share certain characteristics: all the professional staff work toward common goals; they participate together in high-quality professional development; they share ideas and knowledge; they publicly recognize good ideas and accomplishments; and they provide constructive criticism and encouragement to their peers.

The goal is to create a climate where systemic improvement can take hold, even as individuals are improving their own skills and knowledge. Becker and Riel (1999) found that the more teachers were engaged in collaborative work within and beyond their schools, the more likely they were to report using instructional practices that emphasized deep thinking and project-based learning.

This type of culture takes time to build. Just as in other workplaces, teachers have different levels of comfort with and expertise in technology. They must learn to work with colleagues of different skill levels.

Engagement: Implementation Plan

CENTRAL ISSUE

As research over the past decade has shown, short-term activities that focus on building discrete skills do little to promote lasting improvement if they are not linked to more sustained and collegial opportunities for professional learning. This is especially true where technology is concerned.

Teachers “teaching teachers” is a common model for professional development. This model of developing cadres of skilled teachers is sometimes misunderstood. Schools may send a few teachers to a conference or workshop; then expect them to come back and immediately train a sizable group of colleagues in whatever new skills and knowledge they acquired. This approach seldom works, especially for technology, for many reasons: *the content is too complex to master in a short time, no follow-up is provided, and the would-be trainers may not be experienced in organizing professional development* for their colleagues (SEIR-TEC 1999).

High-quality professional development programs build in time and incentives for teachers to reach a level of mastery and develop leadership competencies.

It follows logically, then, that professional development for technology integration may need to be sustained for a period of years. Such professional development will require continuing support as teachers implement new ideas in their classrooms. In addition, it will require repeated cycles of shared professional development to help teachers keep pace with advances in technology and new research. As challenging as this path may seem, it is attainable, and by the best information available, it is also the most efficient and effective means to achieve technologically proficient teaching and learning.

RATIONALE

The effectiveness of professional development is shaped by many factors in the larger context. Having in place certain kinds of structures and services can make it easier to expand successful professional development efforts to a larger scale and can help to sustain them over time. Research from NFIE and others (NFIE 1996; Parsons 1998a; Parsons 1998b; Loucks-Horsley et al. 1998) has identified some of the most important supports.

Professional development tends to be more effective, substantive, and long-lived when it is aligned with or built into a school's/district's strategic plan. This plan should be created with meaningful involvement of teachers.

A related issue is the degree of synchronicity between technology acquisition and professional development. A general rule of thumb is that teachers should do their professional development on the hardware and software that is actually installed in the school as soon as it is installed, with repeated sessions for new staff or as new hardware and software are added.

Technology can change the process of professional development as well as the content. Information technologies open up new ways of conducting and participating in professional development. For example, teachers can learn new skills by videotaping classrooms in action. They can acquire new information by connecting with online experts and databases. In addition, technology can link teachers with distant learning opportunities and create professional learning communities not bound by location. Technology also allows teachers to work either individually or collaboratively.

Technology can help to embed professional learning opportunities into teachers' everyday responsibilities. Many technology-supported learning resources are available at any time and can be called up when needed.

Finally, projects that start by focusing on technology can end up leveraging greater support for professional development in general (Parsons 1998b). Successful models of technology-based professional development can be applied to teaching and learning in other areas. Technology can stimulate opportunities for life-long, job-embedded professional development that significantly increases how well we prepare students to meet the world of the twenty-first century.

Goal 1: Provide a variety of technology staff development opportunities focusing on the integration of technology into a differentiated learning environment.

Objective 1: During the life of the Wise County Technology Plan (2010-2015), all instructional personnel will have met necessary requirements for the technology standards for instructional personnel.

Current Status: Training opportunities are offered in the use of technology for integration into the curriculum. Training sessions utilize a variety of formats: workshops, college credit courses, face-to-face, online, and a combination there of. Some teachers have not completed the TSIPs, and need assistance with the integration of technology into instruction.

Strategy 1.1.1: Beginning the summer of 2011, training programs will include

models/techniques for the effective integration of technology.

Strategy 1.1.2: During the life of the Wise County Technology Plan, online learning will continue to be utilized to increase flexibility in accessing staff development offerings.

Measures of Progress: 1.1.1) The number of teachers completing TSIPs. 1. 1.2) The number of staff participating in training opportunities.

Objective 2: During the life of the Wise County Technology Plan, the establishment of partnerships with other institutions and corporations to provide technology training opportunities will be continually updated.

Current Status: Wise County Schools partner with UVA-Wise, Mountain Empire Community College, SVETN, Southwest VA Technology Coordinators Organization, Alpha Natural Resources, etc., to provide training opportunities. Continual monitoring of the many classes, workshops, and in-service offerings is needed to be sure that research-based, high quality professional development is provided.

Strategy 1.2.1: Continuing into the summer of 2011, publicize training opportunities offered by area colleges, universities, and consortia groups

Measures of Progress: 1.2.1) Number of training opportunities offered by area colleges, universities, and consortia groups that demonstrate above mentioned partnerships.

Objective 3: During the life of the Wise County Technology Plan (2010-2015), grant programs and other funding sources will be utilized to support implementation of educational technology integration.

Current Status: Title II-D Formula Grant has been used to purchase technologies within the district. Alpha Natural Resources has also contributed funding for Science, Technology, Engineering and Math (STEM) equipment for the high school mathematics and science classrooms.

Strategy 1.3.1: Continue partnership with Alpha Natural Resources as a means of acquiring STEM related equipment for math and science classrooms at the middle and primary school levels.

Strategy 1.3.2: Continue Title II-D Formula Grant funding.

Measure of Progress: 1.3.1) Acquisition of STEM related equipment for middle and primary school math and science classrooms. 1.3.2) Success will be measured by the utilization of 100% of available technology funds through June 2015.

Objective 4: Maintain district-wide Instructional Technology Resources Teachers (ITRTs) to design and model effective integration of technology into the curriculum.

Current Status: Wise County currently employs three (3) district wide ITRTs that provide support and assistance to instruction personnel and administrators within assigned schools on appropriate methods of technology integration and use.

Strategy 1.4.1: Beginning the spring of 2011, the ITRTs will assist curriculum specialists with integrating updated curriculum resources that will be shared district wide through the learning management system.

Strategy 1.4.2: Beginning the summer of 2010, the ITRTs will model/design training opportunities that focuses on technology integration into the curriculum.

Strategy 1.4.3: During the life of the Wise County Technology Plan, the ITRTs will continue to provide support and assistance to instruction personnel and administrators within assigned schools on appropriate methods of technology integration and use.

Measure of Progress: 1.4.1) The completion of the updated curriculum resources within the learning management system. 1.4.2) The number of technology integration focused training opportunities offered by June 2015. 1.4.3) The number of Instructional Technology Resources Teachers on staff.

Environment

This component embraces concerns such as the development of state and school division electronic infrastructures, including data, voice, and video networks, and the supporting software and hardware that would allow all computer users to have equitable access to local, state, and worldwide educational resources.

Access or Easy Access: Issues of Support and Technology

Studies have found that a supportive school environment is important for successful technology integration. Teachers need access not only to a human infrastructure but also a functional and convenient technical infrastructure. There are major differences between *access* and *easy access*. For example, in a school where computers are housed in labs, teachers can be said to have access to computers, but they may not have easy access to them-if they have to schedule lab time far in advance, compete with other teachers, or spend significant time trouble shooting. Similarly, a teacher can be said to have access to the Internet. But that access is by no means easy if the teacher has only one computer connected to the Internet and the district technology professional controls what content and functions the teacher can access.

Goal 1: Provide a variety of technology staff development opportunities focusing on the integration of technology into a differentiated learning environment.

Objective 1: Continually analyze existing local area networks (LAN) in all school buildings to ensure that they provide adequate connectivity to support current/future instructional and administrative initiatives.

Current Status: Currently, the LANs have adequate server and switching technology. Future applications may require additional server capacity. Future applications may require additional connectivity in our instructional and administrative areas.

Strategy 1.1.1: Beginning spring of 2011, review existing infrastructure plan to ensure new construction includes appropriate network technology to support current and future applications and adheres to industry standards.

Measure of Progress: 1.1.1) The network infrastructure review.

Objective 2: Maintain a minimum student to computer ratio in each instructional building that meets current educational standards.

Current Status: Even though most schools exceed the ratio of 5:1, many need to be upgraded or replaced to meet the high demands of today's applications. Computers are currently scheduled for replacement on a 4 year rotation.

Strategy 1.2.1: Continue to upgrade schools access to maintain a minimum student to computer ratio of 5:1, counting only computers capable of meeting the demands of today's applications.

Strategy 1.2.2: Continue systematic replacement of older, outdated computers. Maintain an up-to-date inventory for each school via web-based data collection.

Measure of Progress: 1.2. 1) The number of schools with a student to computer ratio of 5:1.
1.2.2) The number of computers in the system less than 4 years old.

Objective 3: Maintaining a wide area network (WAN) that will accommodate instructional and administrative needs with sufficient bandwidth for effective operations of current and for future needs.

Current Status: Upgrades to the WAN have improved network performance. Interactive two-way voice/video exists at each high school. Fiber circuits provide connectivity to all schools. A Sunset Digital Fiber circuit provides Internet access to all schools.

Strategy 1.3.1: Continue to improve performance of the WAN through scalable upgrades.

Strategy 1.3.2: During the life of the Wise County Technology Plan, continue to implement packet filtering to monitor network traffic to provide more support to essential applications.

Measure of Progress: 1.3.1) Percent of time WAN is stable and sufficiently supports the number of applications. 1.3.2) Documentation of changes implemented based upon monitoring of network traffic.

Goal 2: Provide sufficient technical support to ensure ongoing, reliable network operations.

Objective 1: During the life of the Wise County Technology Plan, provide adequate support personnel for maintaining all technology related items at each school community and the central office campus.

Current Status: Wise County has 1 Director of Technology, 3 Instructional Technology Resources Teachers, 1 Technology Secretary, and 9 Computer Technicians in the Technology Department. As the demand for technology access increases, so will the need for technical support.

Strategy 2.1.1: Annually analyze the technical support available; analyze the growth of the infrastructure, and related technologies, to ensure that sufficient numbers of high quality, efficient technical support is available. As a result of the analysis, request additional personnel as needed.

Strategy 2.1.2: By the summer of 2011, request one (1) additional personnel to fill vacant position of Instructional Technology Resources Teacher.

Measure of Progress: 2.1.1) Progress made toward reaching the state suggested guidelines for the number of information technology staff. 2.1.2) Progress made toward reaching the state suggested guidelines for the number of instructional technology staff.

Objective 2: Continually provide training to ensure that support personnel are appropriately skilled.

Current Status: Ongoing training is offered annually to each member of the Technology Department.

Strategy 2.2.1: Annually meet with the technology personnel to assist with the development of a training plan to meet the needs of each staff member.

Strategy 2.2.2: During the life of the Wise County Technology Plan, offer professional development opportunities to technology staff as needed.

Measures of Progress: 2.2. 1) The number of training sessions scheduled to meet the staff needs.

2.2.2) The number of professional development opportunities available to technology staff.

Goal 3: Provide leadership and resources to promote efficient procurement of infrastructure, including the identification and procurement of emerging technologies.

Objective 1: Annually, review procurement process to ensure that they are efficient, cost effective, and aligned with federal, state, and local policies.

Current Status: Procurement policies are in place and utilized for all technology purchases, including the purchasing of hardware and software

Strategy 3.1.1: Annually review all competitive procurement options provided by state agencies to ensure that Wise County Schools is benefiting fully.

Strategy 3.1.2: Annually review E-rate program to be sure that Wise County Schools receives full benefits from all eligible services.

Strategy 3.1.3: During the life of the Wise County Technology Plan, continue to provide all purchasing entities within the Wise County Schools access to bids, state contract pricing, and other sources, to ensure that purchases are cost efficient.

Strategy 3.1.4: During each purchasing cycle, assist all school entities with making decisions that will lead to the purchase of high quality hardware and software that seamlessly integrates with the existing infrastructure.

Measure of Progress: 3.1.1) Meet all requirements for participating in state technology grant programs and other state supported initiatives. 3.1.2) E-rate funding is received for all eligible and approved services. 3.1.3) Posting of a list available bids, location of state pricing lists, and etc, on a website. 3.1.4) Hardware and software purchases are seamlessly integrated with existing infrastructure.

Objective 2: Continually provide opportunities for the Technology department staff to stay aware of current and emerging technology trends.

Current Status: Technology staff is aware of current and emerging technology trends by (1) reading a variety of appropriate publications (2) attending vendor demonstrations, (3) attend training opportunities, (4) attending state and national conferences.

Strategy 3.2.1: Share items discussed at the annual state technology conferences with the entire technology staff by either developing an informational packet or face-to-face meeting, whichever is more appropriate.

Strategy 3.2.2: Schedule annual staff meetings where members share research concerning emerging technology trends that may have a direct impact upon the technology implementation plan for Wise County Public Schools. Staff will be given access to industry publications, vendor publications, and other sources to aid in keeping abreast of current trends.

Strategy 3.2.3: Each school year, attend at least 1 state and/or national conference to learn best practices and models of technology utilization.

Measure of Progress: 3.2. 1) The number informational packets and/or sharing sessions completed. 3.2.2) The number of annual staff meetings completed. 3.2.3) The number of conferences attended.

Goal 4: Ensure network security, filtering, and disaster recovery plans are in place.

Objective 1: Annual reviews of existing policies, procedures, and technologies will be conducted to ensure that computing resources are secure and recoverable.

Current Status: Staff has network and email accounts that are password protected. Appropriate training is provided to all new staff members. Outside access to the network is limited to an - - as needed - -basis. Virus, spam, worm, and firewall protection is in place.

Strategy 4.1.1: During the life of the Wise County Technology Plan, user account security will continue to be used for all network access.

Strategy 4.1.2: Throughout each school year, virus protection will be placed on all newly installed networked computers. Daily scheduled updates to the virus protection software will be handled via “push technology” from the domain controller to all computers on the network.

Strategy 4.1.3: Backup and recovery strategies for all networks will be created and reviewed monthly to ensure appropriateness of procedure in place.

Measure of Progress: 4.1.1) Number of violations to network security reported. 4.1.2) The frequency of downtime caused by viruses/worms. 4.1.3) The number of successful recoveries from backups.

Objective 2: By September of each school year, a review of the Acceptable Use Policy (AUP) is scheduled for each school to ensure that all stakeholders understand the policy and procedures.

Current Status: An adopted acceptable use policy, approved by VSBA is in place for all administrators, teachers, staff, and students with scheduled reviews.

Strategy 4.2.1: Administrators, teachers, staff, students, and parents are required to sign an acceptable use policy, which remains on file at each school.

Strategy 4.2.2: The acceptable use policy is posted on the District website and referenced in staff and student publications.

Measure of Progress: 4.2. 1) The number of unacceptable use by students or staff. 4.2.2) The posting of the AUP on Wise County’s website and documentation of staff and student publications.

Objective 3: Filtering software utilized by Wise County Public Schools will be reviewed annually and updated as needed to meet federal, state, and local policies.

Current Status: Filtering software is in place and continuously updated. Requests to unblock sites are handled individually.

Strategy 4.3.1: As new technology is added to the network, the appropriate Proxy settings will be implemented to ensure that Internet access will be filtered for all students and staff.

Strategy 4.3.2: Requests to block or unblock Internet sites will be handled by administrators, daily (or as needed), following instructional appropriateness guidelines.

Measure of Progress: 4.3. 1) The logging of newly networked technology by each technician. 4.3.2)

The number of requests to unblock sites. 4.3.2a) The number of reports of inappropriate material not being filtered.

Goal 5: Update methods of communication among teachers, administrators, and support staff.

Objective 1: By June 2011, purchase and implement Voice Over IP (VOIP) phone connections for all teachers and administrators at the middle school level, technicians, and ITRTs.

Current Status: Since 2008, the Alternative Education Center has been implementing the use of VOIP phones in the main office and every classroom.

Strategy 5.1.1: By October 2010, purchase VOIP phones for middle school teachers, middle school administrators, all technicians, and all ITRTs.

Strategy 5.1.2: By June 2011, install and implement VOIP phones in classrooms and offices at middle school level.

Strategy 5.1.3: By June 2011, install and implement VOIP phones for all technicians and ITRTs.

Measure of Progress: 5.1.1) Number of VOIP phones purchased. 5.1.2) The number of VOIP phones installed and implemented at middle school level. 5.1.3) The number of VOIP phones installed in all technician and ITRT offices.

Objective 2: By June 2012, purchase and implement Voice Over IP (VOIP) phone connections for all teachers and administrators at the primary school level.

Current Status: Since 2008, the Alternative Education Center has been implementing the use of VOIP phones in the main office and every classroom.

Strategy 5.2.1: By October 2011, purchase VOIP phones for primary school teachers and administrators.

Strategy 5.2.2: By June 2012, install and implement VOIP phones in classrooms and offices at primary school level.

Measure of Progress: 5.2.1) Number of VOIP phones purchased. 5.2.2) The number of VOIP phones installed and implemented at primary school level.

Objective 3: By June 2013, purchase and implement Voice Over IP (VOIP) phone connections for all teachers and administrators at the high school level.

Current Status: Since 2008, the Alternative Education Center has been implementing the use of VOIP phones in the main office and every classroom.

Strategy 5.3.1: By October 2012, purchase VOIP phones for high school teachers and administrators.

Strategy 5.3.2: By June 2013, install and implement VOIP phones in classrooms and offices at high school level.

Measure of Progress: 5.2.1) Number of VOIP phones purchased. 5.2.2) The number of VOIP phones

installed and implemented at high school level.

Objective 4: By February 2010, update smartphones with voice and data plans (cellular service) for administrators at the central office level, technicians, and ITRTs

Current Status: Since 2007, all central office directors have been supplied with smartphones with voice and data services or cell phones with basic voice service.

Strategy 5.4.1: By February 2010, purchase updated smartphones with voice and data plans for all central office directors.

Strategy 5.4.2: By February 2010, purchase smartphones with voice and data plans for all technicians and ITRTs.

Measure of Progress: 5.4.1) The number of updated smartphones purchased and implemented. 5.4.2) The number of smartphones purchased and implemented.

Objective 5: By February 2010, update cell phones with voice plans for custodial support staff at central office level.

Current Status: Since 2007, central office custodial staff have been supplied with cell phones with voice plans.

Strategy 5.5.1: By February 2010, purchase updated cell phones with voice plans for central office custodial support staff.

Measure of Progress: 5.5.1) The number of updated cell phones purchased and implemented.

Tools

This element includes issues that relate to the instructional and administrative educational applications that will make use of the infrastructure “highway,” which is referenced in the “Connectivity” section and how best to use these tools within the differentiated classroom environment.

What is the definition of Educational Applications?

Educational (Technology) Applications refer to software and systems which run on school equipment, which supports administrative and instructional functions.

There are four major categories of educational applications for school systems (NCES Technology in Schools, Ch 4).

- 1. Administrative management software and systems** financial accounting; staff attendance and payroll; operations and planning, including transportation and food systems; facilities management; inventory control; and decision support.
- 2. Instructional support software and systems** Instructional planning and management, including grading, testing, and individualized educational (IEP) management; instructional support, including student attendance; access to remote educational resources; distance education; assistive and adaptive systems; content area specialized software.
- 3. Communications support** electronic mail; local- and wide-area networks; access to the Internet and remote educational and administrative sites; satellite uplinks and downlinks; and Internet-based telephony (“voice over IP,” or voIP).
- 4. Operating systems** Windows (all versions, e.g., WIN98, WINXP, etc.); UNIX; MAC OS X.
- 5. Security Systems** firewall technology; secure transmission systems, and antivirus software.

Goal 1: Improve teaching and learning through the appropriate use of network-accessible educational applications.

Objective 1: Annually analyze schools access to appropriate networkable, educational applications to support the Virginia Standards of Learning (SOL).

Current Status: All instructional personnel are aware of resources that support the SOLs. Most teachers know how to find these resources, but many need training on how to use these resources in the classroom.

Strategy 1.1.1: Beginning summer 2010 and continuing through 2015 provide training on how to identify/implement teaching and learning resources that support the SOLs.

Measures of Progress: 1.1.1) The number of teachers who attend training on how to identify resources to support SOLs.

Objective 2: Beginning fall of 2010, various curriculum resources will be made available to staff, teachers, and students through use of the online learning management system and will model acceptable technology use and integration practices.

Current Status: Many instructional personnel use technology appropriately to support teaching and learning, but more collaboration and sharing of effective practices and innovations is needed.

Strategy 1.2.1: Beginning summer of 2010, identify, collect, and organize curriculum resources in online learning management repository. Curriculum resources will be added as

they become available.

Strategy 1.2.2: Beginning fall of 2010, create curriculum resources course in online learning management system that all instructional personnel will have access to. Curriculum resources will be published to this course as they are added to the repository.

Strategy 1.2.3: Beginning fall of 2011, set up RSS feed for curriculum resources course to notify teachers of new material published to the course.

Measure of Progress: 1.2.1) The number of items in curriculum resources repository. 1.2.2) The number items published to shared curriculum resources course. 1.2.3) The number of teachers utilizing RSS feed.

Goal 2: Promote and expand web-based applications, services and resources.

Objective 1: During the life of the Wise County Technology Plan (2010-2015), all schools within the school district will continue to participate in the Virginia Web-based SOL Technology Initiative.

Current Status: All schools are certified to deliver online SOL tests.

Strategy 2.1.1: All schools will continue to administer available online SOL tests.

Measure of Progress: 2.1.1) The number of schools participating in the online SOL test taking and retakes.

Objective 2: During the life of the Wise County Technology Plan, every school will continue to have an updated automated library media center connected to the Internet and networked to appropriate learning areas.

Current Status: All school library media centers have automated systems for circulation, inventory, and web-based instructional inventories. Most teachers use this resource appropriately but may need additional training for further integration into instruction.

Strategy 2.2.1: During the life of the Wise County Technology Plan, provide training to promote further use of the library media specialist as a source for learning resources for their school community.

Strategy 2.2.2: Continue the expansion of library media services to classrooms and other learning areas to promote the use of digital video for instruction.

Measure of Progress: 2.2. 1) The number of training opportunities promoting the use of the library media center. 2.2.2) The number of teachers reporting access and use of library media services in their classroom and other learning areas.

Goal 3: Offer digital learning opportunities to enhance student achievement.

Objective 1: Beginning the summer of 2010, expand the use of emerging digital learning opportunities for administrators, teachers, staff, and students.

Current Status: Wise County Public Schools have been using the ANGEL online learning management system to publicize and participate in professional development. Face-to-face sessions are used to supplement the online training. Wise County Schools, also, partner with Virtual Virginia to offer access to Advanced Placement Courses.

Strategy 3.1.1: Beginning the fall of 2010, expand the opportunities to online learning for students by creating courses within the ANGEL learning management system and offering training opportunities to teachers on effective use of an online learning management system within classroom instruction.

Strategy 3.1.2: During the life of the Wise County Technology Plan, continue to support the offering of Advanced Placement Courses through Virtual Virginia partnerships.

Measure of Progress: 3.1.1) The number of teachers using the ANGEL learning management system as an instructional resource. 3.1.2) The number of online learning opportunities available for students.

Results

This element addresses the value of technology to teaching and learning environments, and student data management and decision support.

With the spotlight of accountability that has been recently focused on school divisions, there is an increasing need to present a more transparent public image regarding everything from governance to fundraising. It is time for school divisions to evaluate their infrastructure and technological capabilities not only to be more efficient, but also more accountable. It is time to become proactive by acknowledging the need for standardization and promote the use of technology as a means to achieve a stronger more efficient organization.

Technology accountability is built on four pillars: the reliability and scalability of the technology; the ease of its integration; the viability of its vendor; and its business justification.

Goal 1: Assess the value that Information Technology (IT) adds to teaching and learning environments.

Objective 1: During the life of the Wise County Technology Plan, the Instructional Technology Resources Teachers will continue to assist teachers in identifying elements of technology integration that benefit the teaching and learning environment.

Current Status: Many teachers are using technology within classroom instruction but are in need of further development of integration skills as pertaining to their individual subject areas.

Strategy 1.1.1: Beginning summer of 2010, develop workshops for high school math and science teachers to explore the elements of technology integration through use of the Science, Technology, Engineering, and Math (STEM) equipment provided.

Strategy 1.1.2: Beginning fall of 2011, develop workshops for middle school math and science teachers to explore the elements of technology integration through use of the Science, Technology, Engineering, and Math (STEM) equipment provided.

Strategy 1.1.3: Beginning summer 2010, develop workshops for select teachers within the core subject areas from each school on effectively using the ANGEL online learning management system within classroom instruction

Measure of Progress: 1.1.1) The number of high school math and science teachers attending the STEM training. 1.1.2) The number of middle school math and science teachers attending the STEM training. 1.1.3) The number of select teachers within the core subject areas attending the ANGEL training

Objective 2: Annually assess the readiness of schools to further integrate emerging technology into teaching and learning.

Current Status: Teachers are at various levels of technology integration and skill. During the fall of 2009, teachers were given a likert scale based survey within the ANGEL learning management system to indicate each teacher's skill and integration level based upon the Five Stages of Integration.

Strategy 1.2.1: During the life of the Technology plan, utilize the data obtained by the survey given in 2009 to individualize training sessions for teachers.

Measure of Progress: 1.2.1) The number of individualized training and professional development opportunities documented by the Instructional Technology Resources Teacher.

Goal 2: Provide appropriate decision making support capabilities for all stakeholders.

Objective 1: During winter of 2010, begin process of identifying types of emerging technology such as interactive whiteboards, multifunction-function handheld devices, content streaming devices, and other technologies that would prove to be beneficial in future consolidated high school environment as well as current primary and middle school settings.

Current Status: Wise County Public Schools is currently involved in the planning process of consolidating the high schools. With this process, the Technology Department will be given the opportunity to assist with the selection of new emerging educational technologies, including but not limited to interactive whiteboards, multifunction-function handheld devices, content streaming devices, and other technologies that prove to be most beneficial in preparing students for the 21st century and meet requirements prescribed by Item 132 of House Bill 30 from the 2010 Reconvened Session of the Virginia Acts of Assembly — Chapter 874.

Strategy 2.1.1: During the winter of 2010, research various types of devices and technologies that would prove to be beneficial in the creation of 21st century learning environments within the newly consolidated high schools as well as the existing middle and primary settings.

Strategy 2.1.2: During the summer of 2011, begin purchasing process for the researched technologies as prescribed by Item 132 of House Bill 30 from the 2010 Reconvened Session of the Virginia Acts of Assembly — Chapter 874.

Measure of Progress: 2.1.1) The identification of devices and technologies that fulfill needs of the school system. 2.1.2) The acquisition of devices and technologies for the consolidated high schools and existing middle and primary levels.

Goal 3: Assess Information Technology (IT) Literacy.

Objective 1: During the life of the Wise County Technology Plan, students will continue to become more effective users of technology for personal use and lifelong learning.

Current Status: Students have more access today to technology, but are not utilizing it to its fullest within an instructional setting. Instructional personnel need assistance with how to create a technology-rich environment.

Strategy 3.1.1: During the life of the Wise County Technology Plan, provide assistance and resources to instructional personnel regarding the integration of technology into lesson plans.

Measure of Progress: 3.1.1)The listing of resources located within the online learning management system.

Objective 2: Paraprofessionals and support personnel will continue to demonstrate effective use of technology to fulfill their job related responsibilities throughout the school year.

Current Status: A majority of professional development and support has been provided to instructional personnel. Before all personnel can become technology literate, they have to be included in training models that target their needs.

Strategy 3.2.1: During the life of the Wise County Technology Plan, provide training for instructional assistants in the appropriate technology in-service. Provide technology in-service opportunities that target the duties of support personnel.

Measure of Progress: 3.2.1) The number of training opportunities offered to instructional assistants.

Goal 4: Ensure that Wise County Schools' Technology Plan is consistent with the VA Department of Educations' Technology Plan.

Objective 1: The local technology plan will continue to contain current status information using standard technology issue descriptors, a needs assessment, and a method for assessing technology integration implementation.

Current Status: Many technology plans are not updated annually. Wise County Schools monitor and continuously evaluates implementation of the technology plan.

Strategy 4.1.1: During the life of the Wise County Technology Plan, publicize goals of the technology plan to improve collaboration with all stakeholders.

Strategy 4.1.2: During the life of the Wise County Technology Plan, conduct up-to-date needs assessments and methods for assessing the integration of technology into the curriculum.

Measure of Progress: 4.1.1) Updating Technology Plan annually which contains current information, a needs assessment related to state initiatives, and 4.1.2) Provide a means for assessing technology integration.

Objective 2: Wise County will annually evaluate the progress and effectiveness of technology plans.

Current Status: Wise County has completed its annual evaluation of its technology plan. A Technology Committee reviewed the plan, developed and implemented a needs assessment; then, selected the goals, objectives, and strategies to align with the state technology plan.

Strategy 4.2.1: Beginning the summer of 2011, identify school, business, college/university, and community members to serve on the technology committee.

Strategy 4.2.2: During the fall of 2011, up-date the needs assessment instrument to meet the current needs and trends for technology infrastructure and curriculum integration.

Measure of Progress: 4.2.1) Technology committee is in place. 4.2.2) Needs assessment is developed and implemented.

Objective 3: Wise County Technology Plan will be monitored at regular intervals, including, but not limited to, quarterly meetings for progress reporting.

Current Status: The IT department has always scheduled quarterly meetings. For the implementation and monitoring of the 2010-2015 Wise County Schools Technology Plan, the IT department has completed the development of a tracking sheet with assigned areas. Yearly progress meetings have been scheduled.

Strategy 4.3.1: During the life of the Wise County Technology Plan, the Wise County Technology department will continue to hold quarterly meetings to discuss needs and address any changes that need to be made to the current technology plan

Measure of Progress: 4.3. 1) The scheduled meetings of the Technology Department.

Appendices

Appendix A

Financial Analysis

Financial Analysis

Educational Technology Plan Wise County Public Schools 2010 - 2015

<i>Budget by Major Categories</i>				
CATEGORIES	FUNDING SOURCE			
	Local	State	Federal	Total
Application	\$ 61,000.00	\$ 39,000.00	\$ 7,550.00	\$ 107,550.00
Engagement	\$ 132,000.00	\$ -	\$ 44,752.00	\$ 176,752.00
Environment	\$ 152,500.00	\$ 2,640,000.00	\$ 77,471.00	\$ 2,869,971.00
Tools	\$ 152,500.00	\$ 117,000.00	\$ 49,222.00	\$ 318,722.00
Results	\$ 30,000.00	\$ -	\$ -	\$ 30,000.00
			GRAND TOTAL	\$ 3,502,995.00

Appendix B

Action Plan

Educational Technology Action Plan:

Wise County Public Schools

2010-2015



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Action Plan

Application

<u>Goals</u>	<u>Objectives</u>	<u>Strategies</u>	<u>Person(s) Responsible</u>	<u>Time Line</u>	<u>Resources</u>	<u>When</u>	<u>Description</u>
Goal 1	Objective 1	Strategy 1.1.1: Beginning the fall of 2010, teachers will be provided with training opportunities that model best practices to enhance the use of technology in instruction.	Director of Technology, ITRTs	2010-2015	Materials that incorporate 5 Stages of Technology Integration, TSIPS, NETS for Students, ANGEL LMS	August 2010 Ongoing Process	Schedule training sessions with teachers on integration of educational technology.
		Strategy 1.1.2: Beginning the fall of 2010, teachers will be provided with curriculum resources through the learning management system which will serve as examples of appropriate technology integration.	ITRTs	2010-2015	Developed curriculum resources, ANGEL LMS	August 2010 Ongoing Process	Upload curriculum resources into LMS
		Strategy 1.1.3: Beginning the spring of 2010, math and science teachers in the high school level will be provided with various pieces of equipment and training opportunities on effective Science, Technology, Engineering, and Math (STEM) related strategies and lessons.	Director of Technology, ITRTs, High School Math and Science departments	2010-2015	STEM Equipment, Pre-designed STEM Lesson Plans, ANGEL LMS	March 2010	Acquire STEM equipment and distribute to High Schools. Schedule training sessions for HS Math and Science teachers. Upload resources into LMS
		Strategy 1.1.4: Beginning the fall of 2011, math and science teachers in the middle school level will be provided with various	Director of Technology, ITRTs, Middle School Math and Science departments	2011-2012	STEM Equipment, Pre-designed STEM Lesson Plans, ANGEL LMS	August 2011	Acquire STEM equipment and distribute to Middle Schools. Schedule training sessions for MS Math and Science teachers. Upload resources into LMS

<u>Goals</u>	<u>Objectives</u>	<u>Strategies</u>	<u>Person(s) Responsible</u>	<u>Time Line</u>	<u>Resources</u>	<u>When</u>	<u>Description</u>
		pieces of equipment and training opportunities on effective Science, Technology, Engineering, and Math (STEM) related strategies and lessons.					
	Objective 2	Strategy 1.2.1: Beginning the fall of 2010, Teachers will be encouraged to attend training opportunities that focus on how to use software and hardware solutions to differentiate instruction to meet all students' needs.	Director of Technology, ITRTs, Principals	2010-2015	ANGEL LMS, Materials that Incorporate 5 Stages of Integration, TSIPS, NETS-T, NETS for Students	August 2010 Ongoing Process	Schedule training sessions with teachers on proper use of hardware and software.
	Objective 3	Strategy 1.3.1: During the summer of 2010, the instructional technology resources teachers will develop repositories within the online learning management system that contain exemplars of technology integrated lesson activities. This will be an on-going strategy.	ITRTs	2010-2011	ANGEL LMS	July 2010	Create repositories for upload of curriculum resources
		Strategy 1.3.2: Beginning the fall of 2010, training opportunities for technology leaders to team with curriculum specialists to model classroom technology integration that includes the Virginia Computer/Technology Standards of Learning across all curriculum areas.	Director of Technology, ITRTs, Director of Curriculum and Instruction, Select Classroom Teachers	2010-2011	VDOE TSIPS, NETS for Students, VA C/T SOLs	August 2010	Assist select classroom teachers with integration of technology into updated curriculum. Assist with upload of updated curriculum into LMS
Goal 2	Objective 1	Strategy 2.1.1: Develop up-dated inventories of hardware, which will assist with the identification of needed classroom technology as it relates to hardware	Director of Technology, Technicians, ITRTs	2011-2015	Prior inventory lists	June 2011 Ongoing Process	Review technologies within school district.

<u>Goals</u>	<u>Objectives</u>	<u>Strategies</u>	<u>Person(s) Responsible</u>	<u>Time Line</u>	<u>Resources</u>	<u>When</u>	<u>Description</u>
		and other peripherals to assist with classroom instruction.					
		Strategy 2.1.2: Identify, purchase, and implement software titles to assist with technology integration in all core curriculum areas. Teachers will use Wise County Public Schools' Acceptable Technology Use Policy and Software Approval Form to assist in making good purchasing decisions.	Director of Technology, ITRTs, Technicians	2010-2015	Wise County Public Schools Acceptable Use Policy, Software Approval Form,	January 2010 Ongoing Process	ITRTs will assist teachers with understanding Acceptable Use Policy and Software Approval Form.
	Objective 2	Strategy 2.2.1: Continue departmental collaboration to provide needed and appropriate assistive/adaptive technologies.	Director of Technology, Special Education Department	2010-2015	Assistive technology inventory listing	January 2010 Ongoing Process	Assist Special Education Department with assistive technology needs
		Strategy 2.2.2 During the life of the Wise County Technology Plan, provide resources and support to instructional personnel on the appropriate assistive/adaptive and instructional technology for special needs students.	Director of Technology, ITRTs, Special Education Department	2010-2015	ANGEL LMS, curriculum resources pertaining to assistive/adaptive technology	January 2010 Ongoing Process	Upload resources pertaining to assistive/adaptive technology into LMS

Engagement

<u>Goals</u>	<u>Objectives</u>	<u>Strategies</u>	<u>Person(s) Responsible</u>	<u>Time Line</u>	<u>Resources</u>	<u>When</u>	<u>Description</u>
Goal 1	Objective 1	Strategy 1.1.1: Beginning the summer of 2010, training programs will include models/techniques for the effective integration of technology.	Director of Technology, ITRTs	2011-2015	ANGEL LMS, created training materials on instructional software and hardware	August 2010 Ongoing Process	Design training sessions for teachers K-12 on instructional software and hardware currently owned and newly purchased by the district

		Strategy 1.1.2: During the life of the Wise County Technology Plan, online learning will continue to be utilized to increase flexibility in accessing staff development offerings.	Director of Technology, ITRTs	2010-2015	Online Learning Management System	January 2010 Ongoing Process	Use LMS as means of professional development online.
	Objective 2	Strategy 1.2.1: Continuing into the summer of 2011, publicize training opportunities offered by area colleges, universities, and consortia groups	Director of Technology	2010-2015	Publications provided by local groups, email, A NGEL LMS	August 2010 through June 2011 Repeating Process	Using email, LMS, and other forms of communication, provide publications regarding professional development opportunities to all staff.
	Objective 3	Strategy 1.3.1: Continue partnership with Alpha Natural Resources as a means of acquiring STEM related equipment for math and science classrooms at the middle and primary school levels.	Director of Technology	2010-2015	Documentation of STEM trainings	August 2010 Ongoing Process	Utilize resources provided by Alpha Natural Resources and other possible sources of funding for the purchase and distribution of equipment related to the high school and middle school math and science classrooms
		Strategy 1.3.2: Continue Title II-D Formula Grant funding.	Director of Technology	2010-2015	Documentation regarding Title II-D funding	August 2010 Ongoing Process	Continue to apply and use Title II-D Formula Grant as source of funding for technologies within district
	Objective 4	Strategy 1.4.1: Beginning the spring of 2011, the ITRTs will assist curriculum specialists with integrating updated curriculum resources that will be shared district wide through the learning management system.	ITRTs, Director of Curriculum and Instruction, Select Classroom Teachers	2011-2015	ANGEL LMS, redeveloped curriculum	January 2011 through May 2011	Assist with uploading of redesigned curriculum into LMS
		Strategy 1.4.2: Beginning the summer of 2010, the ITRTs will model/design training opportunities that focuses on technology integration into the curriculum.	ITRTs	2010-2015	ANGEL LMS, documentation of training sessions, pre-developed training materials, STEM equipment	July 2010 Ongoing Process	Design training for STEM equipment for high school teachers as well as training for integration and use of ANGEL LMS and other instructional tools

		<p>Strategy 1.4.3: During the life of the Wise County Technology Plan, the ITRTs will continue to provide support and assistance to instruction personnel and administrators within assigned schools on appropriate methods of technology integration and use</p>	ITRTs	2010-2015	5 Stages of Integration, training and tutorial materials	January 2010 Ongoing Process	Assist classroom teachers, administrators, and support staff with the use and integration of technology
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Environment

<u>Goals</u>	<u>Objectives</u>	<u>Strategies</u>	<u>Person(s) Responsible</u>	<u>Time Line</u>	<u>Resources</u>	<u>When</u>	<u>Description</u>
Goal 1	Objective 1	Strategy 1.1.1: Beginning spring of 2011, review existing infrastructure plan to ensure new construction includes appropriate network technology to support current and future applications and adheres to industry standards.	Director of Technology, Technicians	2011-2015		May 2011	
	Objective 2	Strategy 1.2.1: Continue to upgrade schools access to maintain a minimum student to computer ratio of 5:1, counting only computers capable of meeting the demands of today's applications.	Director of Technology	2010-2015		August 2010 Ongoing Process	
		Strategy 1.2.2: Continue systematic replacement of older, outdated computers. Maintain an up-to-date inventory for each school via web-based data collection.	Director of Technology, Technicians	2010-2015		August 2010 Ongoing Process	
Goal 2	Objective 1	Strategy 2.1.1: Annually analyze the technical support available; analyze the growth of the infrastructure, and related technologies, to ensure that sufficient numbers of high quality, efficient technical support is available. As a result of the analysis, request additional personnel as needed.	Director of Technology	2010-2015		2010 Ongoing Process	
		Strategy 2.1.2: By the fall of 2011, request one (1) additional personnel to fill vacant position of Instructional Technology Resources Teacher.	Director of Technology	2011		August 2011	
	Objective 2	Strategy 2.2.1: Annually meet with the technology	Director of Technology	2010-2015		2010 Ongoing	

		personnel to assist with the development of a training plan to meet the needs of each staff member.				Process	
		Strategy 2.2.2: During the life of the Wise County Technology Plan, offer professional development opportunities to technology staff as needed.	Director of Technology	2010-2015		January 2010 Ongoing Process	
Goal 3	Objective 1	Strategy 3.1.1: Annually review all competitive procurement options provided by state agencies to ensure that Wise County Schools is benefiting fully.	Director of Technology	2010-2015		2010 Ongoing Process	
		Strategy 3.1.2: Annually review E-rate program to be sure that Wise County Schools receives full benefits from all eligible services.	Director of Technology	2010-2015		2010 Ongoing Process	
		Strategy 3.1.3: During the life of the Wise County Technology Plan, continue to provide all purchasing entities within the Wise County Schools access to bids, state contract pricing, and other sources, to ensure that purchases are cost efficient.	Director of Technology	2010-2015		January 2010 Ongoing Process	
		Strategy 3.1.4: During each purchasing cycle, assist all school entities with making decisions that will lead to the purchase of high quality hardware and software that seamlessly integrates with the existing infrastructure.	Director of Technology	2010-2015		January 2010 Ongoing Process	
	Objective 2	Strategy 3.2.1: Share items discussed at the annual state technology conferences with the entire technology staff by either developing an informational packet or face-to-face meeting, whichever is more appropriate.	Director of Technology, ITRTs, Technicians	2010-2015		Annually following conference dates	

		Strategy 3.2.2: Schedule annual staff meetings where members share research concerning emerging technology trends that may have a direct impact upon the technology implementation plan for Wise County Public Schools. Staff will be given access to industry publications, vendor publications, and other sources to aid in keeping abreast of current trends.	Director of Technology	2010-2015		2010 Ongoing Process	
		Strategy 3.2.3: Each school year, attend at least 1 state and/or national conference to learn best practices and models of technology utilization.	Director of Technology, ITRTs	2010-2015		Contingent on dates of conferences	
Goal 4	Objective 1	Strategy 4.1.1: During the life of the Wise County Technology Plan, user account security will continue to be used for all network access.	Director of Technology, Technicians	2010-2015		August 2010 Ongoing Process	
		Strategy 4.1.2: Throughout each school year, virus protection will be placed on all newly installed networked computers. Daily scheduled updates to the virus protection software will be handled via “push technology” from the domain controller to all computers on the network.	Director of Technology, Technicians	2010-2015		August 2010 Ongoing Process	
		Strategy 4.1.3: Backup and recovery strategies for all networks will be created and reviewed monthly to ensure appropriateness of procedure in place.	Technicians	2010-2015		August 2010 Ongoing Process	
	Objective 2	Strategy 4.2.1: Administrators, teachers, staff, students, and parents are required to sign an acceptable use policy, which remains on file at each school.	Director of Technology	2010-2015		Fall 2010 Repeated Process	
		Strategy 4.2.2: The acceptable use policy is posted on the District website and referenced in staff and student publications.	Director of Technology, Webmaster	2010-2015		January 2010 Ongoing Process	

	Objective 3	Strategy 4.3.1: As new technology is added to the network, the appropriate Proxy settings will be implemented to ensure that Internet access will be filtered for all students and staff.	Director of Technology, Proxy Administrators	2010-2015		January 2010 Ongoing Process	
		Strategy 4.3.2: Requests to block or unblock Internet sites will be handled by administrators, daily (or as needed), following instructional appropriateness guidelines.	Director of Technology, Proxy Administrators	2010-2015		January 2010 Ongoing Process	
Goal 5	Objective 1	Strategy 5.1.1: By October 2010, purchase VOIP phones for middle school teachers, middle school administrators, all technicians, and all ITRTs.	Director of Technology	2010		October 2010	
		Strategy 5.1.2: By June 2011, install and implement VOIP phones in classrooms and offices at middle school level.	Director of Technology, Technicians, ITRTs	2011		June 2011	
		Strategy 5.1.3: By June 2011, install and implement VOIP phones for all technicians and ITRTs.	Director of Technology, Technicians, ITRTs	2011		June 2011	
	Objective 2	Strategy 5.2.1: By October 2011, purchase VOIP phones for primary school teachers and administrators.	Director of Technology	2011		October 2011	
		Strategy 5.2.2: By June 2012, install and implement VOIP phones in classrooms and offices at primary school level.	Director of Technology, Technicians, ITRTs	2012		June 2012	
	Objective 3	Strategy 5.3.1: By October 2012, purchase VOIP	Director of Technology	2012		October 2012	

		phones for primary school teachers and administrators.					
		Strategy 5.3.2: By June 2013, install and implement VOIP phones in classrooms and offices at primary school level.	Director of Technology, Technicians, ITRTs	2013		June 2013	
	Objective 4	Strategy 5.4.1: By February 2010, purchase updated smartphones with voice and data plans for all central office directors.	Director of Technology	2010		February 2010	
		Strategy 5.4.2: By February 2010, purchase smartphones with voice and data plans for all technicians and ITRTs	Director of Technology	2010		February 2010	
	Objective 5	Strategy 5.5.1: By February 2010, purchase updated cell phones with voice plans for central office custodial support staff.	Director of Technology	2010		February 2010	

Tools

<u>Goals</u>	<u>Objectives</u>	<u>Strategies</u>	<u>Person(s) Responsible</u>	<u>Time Line</u>	<u>Resources</u>	<u>When</u>	<u>Description</u>
Goal 1	Objective 1	Strategy 1.1.1: Beginning summer 2010 and continuing through 2015 provide training on how to identify/implement teaching and learning resources that support the SOLs.	ITRTs	2010-2015	VA Standards of Learning, ANGEL LMS	June 2010 Ongoing Process	Design training sessions
	Objective 2	Strategy 1.2.1: Beginning summer of 2010, identify, collect, and organize curriculum resources in online learning management repository. Curriculum resources will be added as they become available.	ITRTs	2010	ANGEL LMS, collection of curriculum resources and materials	June 2010	Upload resources into ANGEL LMS repository
		Strategy 1.2.2: Beginning fall of 2010, create curriculum resources course in online learning management system that all instructional personnel will have access to. Curriculum resources will be published to this course as they are added to the repository.	ITRTs	2010-2015	ANGEL LMS, uploaded curriculum resources repository	August 2010	Publish resources to course in ANGEL LMS. Add all teachers to course.
		Strategy 1.2.3: Beginning fall of 2011, set up RSS feed for curriculum resources course to notify teachers of new material published to the course.	ITRTs	2011-2015	Online LMS	August 2011 Ongoing Process	Create RSS feed for curriculum resources course that will notify teachers of new content that has been published to the course.
Goal 2	Objective 1	Strategy 2.1.1: All schools will continue to administer available online SOL tests.	Director of Technology, ITRTs, Technicians, Principals, Director of Curriculum and	2010-2015	Pearson TestNav, mobile and stationary labs	January 2010 Ongoing Process	Continue to conduct online SOL testing in all schools.

			Instruction				
	Objective 2	Strategy 2.2.1: During the life of the Wise County Technology Plan, provide training to promote further use of the library media specialist as a source for learning resources for their school community.	Director of Technology, ITRTs, Library Media Specialists	2010-2015	Curriculum resources course within online LMS	January 2010 Ongoing Process	Upload content within LMS that promotes use of library and media center as an educational tool
		Strategy 2.2.2: Continue the expansion of library media services to classrooms and other learning areas to promote the use of digital video for instruction.	Director of Technology, ITRTs, Technicians	2010-2015	RCA Small Wonder Cameras, document cameras, scanners	January 2010 Ongoing Process	Offer assistance and support for digital video hardware and software to teachers with the incorporation of such materials into instruction.
Goal 3	Objective 1	Strategy 3.1.1: Beginning the fall of 2010, expand the opportunities to online learning for students by creating courses within the ANGEL learning management system and offering training opportunities to teachers on effective use of an online learning management system within classroom instruction.	ITRTs	2010-2015	ANGEL LMS	August 2010 Ongoing Process	Create courses within ANGEL, upload students to courses.
		Strategy 3.1.2: During the life of the Wise County Technology Plan, continue to support the offering of Advanced Placement Courses through Virtual Virginia partnerships.	Director of Technology, Technicians	2010-2015	Library and Media Center, Virtual Virginia Online AP Courses	January 2010 Ongoing Process	Continue using Virtual Virginia to offer AP courses to students through online learning environment.

Results

<u>Goals</u>	<u>Objectives</u>	<u>Strategies</u>	<u>Person(s) Responsible</u>	<u>Time Line</u>	<u>Resources</u>	<u>When</u>	<u>Discription</u>
Goal 1	Objective 1	Strategy 1.1.1: Beginning summer of 2010, develop workshops for high school math and science teachers to explore the elements of technology integration through use of the Science, Technology, Engineering, and Math (STEM) equipment provided.	Director of Technology, ITRTs	2010	STEM equipment, STEM lesson plans, ANGEL LMS	July 2010	Using face-to-face and online training, offer opportunity for teachers in high school math and science to learn strategies for incorporating STEM equipment into classroom instruction.
		Strategy 1.1.2: Beginning fall of 2011, develop workshops for middle school math and science teachers to explore the elements of technology integration through use of the Science, Technology, Engineering, and Math (STEM) equipment provided.	Director of Technology, ITRTs	2011-2012	STEM equipment, STEM lesson plans, ANGEL LMS	August 2011- January 2012	Using face-to-face and online training, offer opportunity for teachers in middle school math and science to learn strategies for incorporating STEM equipment into classroom instruction.
		Strategy 1.1.3: Beginning summer 2010, develop workshops for select teachers within the core subject areas from each school on effectively using the ANGEL online learning management system within classroom instruction	Director of Technology, ITRTs	2010-2011	ANGEL LMS	July 2010 - September 2010	Train select teachers on proper use and integration of an online LMS into classroom environment.
	Objective 2	Strategy 1.2.1: During the life of the Technology plan, utilize the data obtained by the survey given in 2009 to individualize training sessions for teachers.	Director of Technology, ITRTs	2010-2015	Skills and Integration Survey Data from 2009, training materials that relate to 5 Stages of Integration	January 2010 Ongoing Process	Offer face-to-face and online training opportunities to teachers that focus on individual needs.
Goal 2	Objective 1	Strategy 2.1.1: During the winter of 2010, research various types of devices and technologies that would prove to be beneficial in the creation of 21 st century learning	Director of Technology, ITRTs, Technicians	2010-2011	Emerging technology review publications, company websites, prior inventory listings	November 2010 - February 2011	Research emerging technologies for use within consolidated high schools and current primary and middle schools

		environments within the newly consolidated high schools as well as the existing middle and primary settings.					
		Strategy 2.1.2: During the summer of 2011, begin purchasing process for the researched technologies as prescribed by Item 132 of House Bill 30 from the 2010 Reconvened Session of the Virginia Acts of Assembly — Chapter 874.	Director of Technology	2011	House Bill 30 from the 2010 Reconvened Session of the Virginia Acts of Assembly — Chapter 874, research results from Strategy 2.1.1	May 2011-August 2011	Purchase emerging technologies for use within consolidated high schools and current primary and middle schools
Goal 3	Objective 1	Strategy 3.1.1: During the life of the Wise County Technology Plan, provide assistance and resources to instructional personnel regarding the integration of technology into lesson plans.	ITRTs, Classroom Teachers	2010-2015	Various technologies dispersed throughout school district, training materials within curriculum resources course	January 2010 Ongoing Process	Assist teachers with integration of technology into classroom instruction
	Objective 2	Strategy 3.2.1: During the life of the Wise County Technology Plan, provide training for instructional assistants in the appropriate technology in-service. Provide technology in-service opportunities that target the duties of support personnel.	Director of Technology, ITRTs	2010-2015	Various technologies dispersed throughout school district, training materials within curriculum resources course	January 2010 Ongoing Process	Offer training opportunities to instructional assistants and support personnel with proper use of instructional technologies
Goal 4	Objective 1	Strategy 4.1.1: During the life of the Wise County Technology Plan, publicize goals of the technology plan to improve collaboration with all stakeholders.	Director of Technology, Technology Staff	2010-2015	Email, district website, online LMS, Technology Plan 2010-2015	January 2010 Ongoing Process	Discuss technology plan with stakeholders on goals and achievements of Technology Department
		Strategy 4.1.2: During the life of the Wise County Technology Plan, conduct up-to-date needs assessments and methods for assessing the integration of technology into the curriculum.	Director of Technology	2010-2015	Needs assessment data from previous years, inventory lists, emerging technology research	January 2010 Ongoing Process	Conduct up-to-date needs assessments and methods for assessing the integration of technology into the curriculum
	Objective 2	Strategy 4.2.1: Beginning the summer of 2011, identify	Director of Technology	2011	N/A	May 2011-August 2011	Identify possible committee members and contact for interest in serving on

		school, business, college/university, and community members to serve on the technology committee.					technology committee
		Strategy 4.2.2 During the fall of 2011, up-date the needs assessment instrument to meet the current needs and trends for technology infrastructure and curriculum integration.	Director of Technology	2011-2012	Needs assessment data from previous years, inventory lists, emerging technology research	August 2011- January 2012	Update needs assessment to ensure best utilization of current and emerging technologies.
	Objective 3	Strategy 4.3.1: During the life of the Wise County Technology Plan, the Wise County Technology department will continue to hold quarterly meetings to discuss needs and address any changes that need to be made to the current technology plan.	Director of Technology	2010-2015	Technology Plan 2010-2015	March 2010 May 2010 August 2010 December 2010 March 2011 May 2011 August 2011 December 2011	Conduct quarterly meetings to address any needed technology plan revisions

Appendix C

Acceptable Use Policy

ACCEPTABLE COMPUTER SYSTEM USE

The School Board provides a computer system, including the Internet, to promote educational excellence by facilitating resource sharing, innovation and communication. The term computer system includes hardware, software, data, communication lines and devices, terminals, printers, CD-ROM devices, tape drives, servers, mainframe and personal computers, the Internet and other internal or external networks.

All use of the Division's computer system must be (1) in support of education and/or research, or (2) for legitimate school business. Use of the computer system is a privilege, not a right. Any communication or material used on the computer system, including electronic mail or other files deleted from a user's account may be monitored or read by school officials.

The Division Superintendent shall establish administrative procedures, for the School Board's approval, containing the appropriate uses, ethics and protocol for the computer system. The procedures shall include:

1. a prohibition against use by division employees and students of the division's computer equipment and communications services for sending, receiving, viewing or downloading illegal material via the Internet;
2. provisions, including the selection and operation of a technology protection measure for the division's computers having Internet access to filter or block Internet access through such computers, that seek to prevent access to
 - a. child pornography as set out in VA Code § 18.2-374.1:1 or as defined in 18 U.S.C. §2256;
 - b. obscenity as defined in VA Code § 18.2-372 or 18 U.S.C. §1460; and
 - c. material that the school division deems to be harmful to juveniles as defined in VA Code § 18.2-390, material that is harmful to minors as defined in 47 U.S.C. § 254(h)(7)(G), and material that is otherwise inappropriate for minors;
3. provisions establishing that the technology protection measure is enforced during any use of the Division's computers by minors;
4. provisions establishing that the online activities of minors will be monitored
5. provisions designed to protect the safety and security of minors when using electronic mail, chat rooms, and other forms of direct electronic communications;
6. provisions designed to prevent unauthorized online access by minors, including "hacking" and other unlawful activities by minors online; and
7. provisions prohibiting the unauthorized disclosure, use, and dissemination of personal information regarding minors.

Use of the School Division's computer system shall be consistent with the educational or instructional mission or administrative function of the Division as well as the varied instructional needs, learning styles, abilities and developmental levels of students. The Division's computer system is not a public forum.

Each teacher, administrator, student and parent/guardian of each student shall sign the Acceptable Computer System Use Agreement, GAB/IIBEA-E2, before using the Division's computer system. The failure of any student, teacher or administrator to follow the terms of the Agreement, this policy or accompanying regulation may result in loss of computer system privileges, disciplinary action, and/or appropriate legal action.

The School Board is not responsible for any information that may be lost, damaged or unavailable when using the computer system or for any information retrieved via the Internet. Furthermore, the School Board will not be responsible for any unauthorized charges or fees resulting from access to the computer system.

The Division Superintendent shall submit to the Virginia Department of Education this policy and accompanying regulation biennially.

Amended: August 8, 2000

Amended: July 31, 2001

Amended: October 9, 2001

Amended: August 9, 2005

Legal Refs: Code of Virginia, 1950, as amended, §§ 18.2-372, 18.2-374.1:1, 18.2-390,

22.1-70.2 ,and 22.1-78.

18 U.S.C. §§ 1460, 2256.

47 U.S.C. § 254.

ACCEPTABLE COMPUTER SYSTEM USE

All use of the Wise County School Division's computer system shall be consistent with the School Board's goal of promoting educational excellence by facilitating resource sharing, innovation and communication. The term computer system includes hardware, software, data, communication lines and devices, terminals, printers, CD-ROM devices, tape drives, servers, mainframe and personal computers, the Internet and any other internal or external network.

Computer System Use-Terms and Conditions:

1. **Acceptable Use.** Access to the Division's computer system shall be (1) for the purposes of education or research and be consistent with the educational objectives of the Division or (2) for legitimate school business.

2. **Privilege.** The use of the Division's computer system is a privilege, not a right.

3. **Unacceptable Use.** Each user is responsible for his or her actions on the computer system. Prohibited conduct includes:

- using the network for any illegal activity, including violation of copyright or other contracts, or transmitting any material in violation of any federal, state or local law.
- sending, receiving, viewing or downloading illegal material via the computer system.
- unauthorized downloading of software .
- downloading copyrighted material for unauthorized use.
- using the computer system for private financial or commercial gain.
- wastefully using resources, such as file space.
- gaining unauthorized access to resources or entities.
- posting material authorized or created by another without his or her consent.
- using the computer system for commercial or private advertising

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- submitting, posting, publishing or displaying any obscene, profane, threatening, illegal or other inappropriate material.

- using the computer system while access privileges are suspended or revoked.

- vandalizing the computer system, including destroying data by creating or spreading viruses or by other means.

4. Network Etiquette. Each user is expected to abide by generally accepted rules of etiquette, including the following:

- Be polite.

- Users shall not forge, intercept or interfere with electronic mail messages.

- Use appropriate language. The use of obscene, lewd, profane, threatening, discriminatory remarks or disrespectful language is prohibited.

- Users shall not post personal contact information about themselves or others.

- Users shall respect the computer system's resource limits.

- Users shall not post chain letters or download large files.

- Users shall not use the computer system to disrupt others.

- Users shall not read, modify or delete data owned by others.

5. Liability. The School Board makes no warranties for the computer system it provides. The School Board shall not be responsible for any damages to the user from use of the computer system, including loss of data, non-delivery or missed delivery of information, or service interruptions. The School Division denies any responsibility for the accuracy or quality of information obtained through the computer system. The user agrees to indemnify the School Board for any losses, costs or damages incurred by the School Board relating to or arising out of any violation of these procedures.

6. Security. Computer system security is a high priority for the school division. If any user identifies a security problem, the user shall notify the building principal or system administrator immediately. All users shall keep their passwords confidential and shall follow computer virus protection procedures.

7. Vandalism. Intentional destruction of any part of the computer system through creating or downloading computer viruses or by any other means is prohibited.

8. Charges. The School Division assumes no responsibility for any unauthorized

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charges or fees as a result of using the computer system, including telephone or long-distance charges.

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9. Electronic Mail. The School Division's electronic mail system is owned and controlled by the School Division. The School Division may provide electronic mail to aid students and staff in fulfilling their duties and as an education tool. Electronic mail is not private. Student's electronic mail will be monitored. The electronic mail of staff may be monitored and accessed by the School Division. Unauthorized access to an electronic mail account by any student or employee is prohibited. Users shall be held personally liable for the content of any electronic message they create. Downloading any file attached to an electronic message is prohibited unless the user is certain of that message's authenticity and the nature of the file.

10. Enforcement. Software will be installed on the division's computers having Internet access to filter or block Internet access through such computers to child pornography and obscenity. The online activities of minors may also be monitored manually. Any violation of these regulations shall result in loss of computer system privileges and may also result in appropriate disciplinary action, as determined by School Board policy, or legal action.

Amended: August 8, 2000

Amended: July 31, 2001

Amended: October 9, 2001

Amended: August 9, 2005

Legal Refs: Code of Virginia, 1950, as amended, §§ 18.2-372, 18.2-374.1:1, 18.2-390, 22.1-70.2 and 22.1-78.

18 U.S.C. §§ 1460, 2256.

47 U.S.C. § 254

Cross Refs: JFC, Student Conduct
JFC-R, Standards of Student Conduct

ACCEPTABLE COMPUTER SYSTEM USE AGREEMENT

Each employee must sign this Agreement as a condition for using the School Division's computer system. Each student and his or her parent/guardian must sign this Agreement before being granted use of the School Division's computer system. Read this Agreement carefully before signing.

Prior to signing this Agreement, read Policy and Regulation GAB/IIBEA, Acceptable Computer System Use. If you have any questions about this policy or regulation, contact your supervisor or your student's principal.

I understand and agree to abide by the School Division's Acceptable Computer System Use Policy and Regulation. I understand that the School Division may access and monitor my use of the computer system, including my use of the Internet, e-mail and downloaded material, without prior notice to me. I further understand that should I violate the Acceptable Use Policy or Regulation, my computer system privileges may be revoked and disciplinary action and/or legal action may be taken against me.

Student/Employee Signature _____ Date

I have read this Agreement and Policy and Regulation GAB/IIBEA. I understand that access to the computer system is intended for educational purposes and the Wise County School Division has taken precautions to eliminate inappropriate material. I also recognize, however, that it is impossible for the School Division to restrict access to all inappropriate material and I will not hold the School Division responsible for information acquired on the computer system. I have discussed the terms of this agreement, policy and regulation with my student.

I grant permission for my student to use the computer system and for the School Division to issue an account for my student.

Parent/Guardian Signature _____ Date

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Parent/Guardian Name _____
(Please Print)

WISE COUNTY PUBLIC SCHOOLS

LETTER TO PARENTS:
ACCEPTABLE COMPUTER SYSTEM USE

Dear Parent/Guardian:

The Wise County School Board offers your child the use of electronic communications through the Wise County School Division's computer system. Your child will be able to communicate with other schools, colleges, organizations and individuals around the world through the Internet and other electronic information systems/networks.

Part of the School Division's responsibility in preparing students for the 21st century is to provide them access to the tools they will be using as adults. The Internet will likely be one of these tools. Through the Division's computer system your child will have access to databases, libraries and computer services from all over the world. We accept the responsibility of teaching your child about his/her role as a "network" citizen and the code of ethics involved with this new community.

With this educational opportunity also comes responsibility on the part of your child. It is important that you and your child read the enclosed division policy, administrative regulation and agreement form and discuss these requirements. The Division takes precautions to prevent access to inappropriate material. However, it is impossible to control access to all material and a user may access inappropriate material.

In order for your child to take advantage of this educational opportunity, your authorization is needed. Attached to this letter are the Acceptable Computer System Use Policy and Regulation (GAB/IIBEA) and the Acceptable Computer System Use Agreement which both you and your child must sign before your child may use the computer system. Please review these materials carefully with your child before signing the required agreement.

Sincerely,

Appendix D

Internet Safety

Wise County Public Schools

Internet Safety Program Overview

As stated in the Wise County Public Schools' Acceptable Use Policy (AUP), in accordance with Virginia Code § 22.1-70.2, all students receive Internet safety training. Internet safety is incorporated within the everyday classroom curricula. Teachers, administrators, and other employees participate in face-2-face (f2f) in-service, online course work, and hybrid training (mix of f2f and online), during the school year.

1. Teaching Internet safety to teachers, administrators, and all employees
 - a. Teachers and administrators will have online professional development available to them.
 - b. Wise County Public Schools offers college coursework which includes instruction in Internet safety.
2. Teaching Internet safety to students
 - a. "Teachable moments" – internet safety activities that are incorporated into the regular classroom as appropriate to the situation
 - b. Teachers will plan activities from the internet safety curriculum that blend with daily lessons/pacing guides.
3. Teaching Internet safety to the community
 - a. Information is provided to the parents through newsletters/informational flyer.
 - b. Internet Safety information for parents and the community is available on the Wise County Schools website.
4. Barracuda Filtering System is in place for all Internet access, which blocks sites such as:
 - a. sexually explicit sites
 - b. violent sites
 - c. anonymous browser sites
 - d. inappropriate sites in all languages
 - e. sites which are commonly used by teenagers to display personal information such as myspace.com, facebook.com, Xinga.com, etc
5. All Internet use by students, teachers, administrators, and all employees is logged
 - a. Internet use by students in all schools is supervised by adults
 - b. Internet use in schools cannot be done anonymously
 - c. Internet use logs are maintained by the network administrators
6. Updating, publicizing and enforcing our Acceptable Use Policy
 - a. Policy IIBEA is included in student handbook
 - b. Violators are reported to the appropriate school administrator for disciplinary action
7. Teachers and Technicians monitor student Internet use
 - a. Technicians and teachers have access to software which can allow workstations to be monitored in real-time and remotely
8. Securing the WCPS network both internally and externally with Barracuda filter system.
 - a. Unfiltered Internet access is impossible from within the network
 - b. A secure firewall is in place to prevent intrusion from outside the network
 - c. Anti-spam and anti-virus software is installed and kept up-to-date

Appendix E

Alignment Checklist

Alignment Checklist

Each division must complete and submit this checklist with its plan for the Virginia Department of Education to review.

Planning Process

1. Planning committee group includes all stakeholders (including parents and other elements of community).

Evidence: List of planners includes wide variety of stakeholders and/or other ways of receiving input.

Note page numbers: 16, 28, 40–42

2. Planning committee collaborates regularly.

Evidence: Dates of planning meetings (face-to-face or electronic) and benchmarks are included in the plan or posted on division Web site.

Note page numbers or URL: Appendix B–17

3. Division's mission and vision—and its comprehensive plan's goals and objectives—have been reviewed to inform priorities in relation to its technology plan's goals, objectives, and strategies.

Evidence: Introduction to plan references specific divisionwide priorities.

Note page numbers: 7–13

4. Needs assessment has been conducted.

Evidence: The plan includes a summary of the needs assessment findings (no need to include the complete findings). The needs assessment must be done before or during the planning process and within the last year. The needs assessment must include staffing, infrastructure, training (including pedagogical approaches), and tools. Resources (i.e., budget, partnerships, and other supporting mechanisms) should be identified to help realistically frame the plan's goals, objectives, and strategies.

Note page numbers: 11, 23–29

5. Evaluation is planned as a yearly process.

Evidence: The evaluation must also include a process by which results of the evaluation are incorporated into the plan over time.

Note page numbers: 40–43

Actions

1. State goals and objectives are included as part of the division plan; planning committee develops local strategies.	
Evidence: List of goals and objectives, along with strategies and measures, meets this requirement.	Note page numbers: 17–22 , 38–40
2. Division may include other goals and objectives as determined by planning committee, but these must be tied to divisionwide priorities.	
Evidence: List of goals and objectives, along with strategies and measures, meets this option.	Note page numbers (or N/A): N/A
3. Plan includes a reasonable timetable for implementation as well as a reasonable budget.	
Evidence: Timetable and budget are included.	Note page numbers: Appendix A (Financial Analysis) and Appendix B (Action Plan)
4. Plan is available on the division's Web site.	
Evidence: URL is provided on cover sheet of plan.	http://www.wise.k12.va.us/technology/Forms&Docs/WCPSTechPlan2010-2015
5. The evaluation of the plan looks at both the “big picture” and at the specifics. The end goal is not to use more technology but to use technology more effectively to meet educational goals.	
Evidence: The evaluation of the effectiveness of the plan focuses on this question: “Did we help meet statewide and divisionwide priorities as stated in our plan?” Each strategy should have at least one defined measure as well.	Note page numbers: 40–43