



Technology Integration For Administrators

Help Is On The Way!



Presented by
Education Service Center Region 12
Technology for Instruction Component
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Technology Integration For Administrators

Prescription for Success



To ensure effective integration of technology, complete the following steps:

1. Examine Federal and State Technology Requirements
2. Explore Curriculum Resources and Best Practices
3. Create an Implementation Plan for Technology Integration

Technology Requirements



Federal Technology Requirements

NCLB Title II, Part D

Enhancing Education Through Technology

The No Child Left Behind Act requires that ***every student should be technology literate by the time they finish the 8th grade. 2006 is the target date for districts to meet this mandate*** as stated in Objective 8.1 of 3: *Fully integrate* technology into the curricula and instruction in all schools by December 31, 2006 (FY 2007) to enhance teaching and learning.

Local Education Agency Requirements

In order to be eligible to receive a subgrant from a State educational agency, an eligible local entity or agency shall submit to the State educational agency an application containing a new or updated local long-range strategic educational technology plan that is consistent with the objectives of the statewide educational technology plan and any other information as the State educational agency may reasonably require, at such time and in such manner as the State educational agency may require.

The application shall include each of the following:

1. **A description of how the applicant will use Federal funds to improve the student academic achievement, including technology literacy, of all students attending schools served by the local educational agency and to improve the capacity of all teachers teaching in schools served by the local educational agency to integrate technology effectively into curricula and instruction.**
2. **A description of the applicant's specific goals for using advanced technology to improve student academic achievement aligned with challenging State academic content and student academic achievement standards.**
3. A description of the steps the applicant will take to ensure that all students and teachers in schools served by the local educational agency involved have increased access to educational technology, including how the agency would use funds under this subpart (such as combining the funds with funds from other sources), to help ensure that students in high-poverty and high-needs schools, or schools identified for improvement or corrective action, have access to technology; and teachers are prepared to integrate technology effectively into curricula and instruction.
4. A description of how the applicant will:
 - a. **identify and promote curricula and teaching strategies that integrate technology effectively into curricula and instruction, based on a review of relevant research, leading to improvements in student academic achievement, as measured by challenging State academic content and student academic achievement standards; and**
 - b. **provide ongoing, sustained professional development for teachers, principals, administrators, and school library media personnel serving the local educational agency, to further the effective use of technology in the classroom or library media**

center, including, if applicable, a list of the entities that will be partners with the local educational agency involved in providing the ongoing, sustained professional development.

5. A description of the type and costs of technologies to be acquired under this subpart, including services, software, and digital curricula, and including specific provisions for interoperability among components of such technologies.
6. A description of how the applicant will coordinate activities carried out with funds provided under this subpart with technology-related activities carried out with funds available from other Federal, State, and local sources.
7. **A description of how the applicant will integrate technology (including software and other electronically delivered learning materials) into curricula and instruction, and a timeline for such integration.**
8. A description of how the applicant will encourage the development and utilization of innovative strategies for the delivery of specialized or rigorous academic courses and curricula through the use of technology, including distance learning technologies, particularly for those areas that would not otherwise have access to such courses and curricula due to geographical isolation or insufficient resources.
9. A description of how the applicant will ensure the effective use of technology to **promote parental involvement and increase communication with parents**, including a description of how parents will be informed of the technology being applied in their child's education so that the parents are able to reinforce at home the instruction their child receives at school.
10. A description of how programs will be developed, where applicable, in collaboration with adult literacy service providers, to maximize the use of technology.
11. A description of the process and accountability measures that the applicant will use to evaluate the extent to which activities funded are effective in integrating technology into curricula and instruction, increasing the ability of teachers to teach, and enabling students to meet challenging State academic content and student academic achievement standards.
12. A description of the supporting resources (such as services, software, other electronically delivered learning materials, and print resources) that will be acquired to ensure successful and effective uses of technology.

National Education Technology Plan

- Officially launched on January 7, 2005
- Press release available at <http://www.nationaledtechplan.org/>
- Encourages us to listen to our students
<http://www.videobookmark.com/AIR/TheMillenials.aspx>

America's students are our ultimate constituents. We need to listen to them. They have demonstrated that they have a better understanding of the intricacies and opportunities presented by the technological revolution than many of their elders, notably including a generation of teachers and administrators who did not have the advantage of growing up with the Internet.

In developing and soliciting input for the Plan, the U.S. Department of Education made a special effort to connect itself to students. By partnering with NetDay and helping support Speak Up Day 2003, the Department was able to reach and receive input from over 200,000 students in a survey effort that collected viewpoints from all 50 states, from a balanced mix of urban, rural, and suburban schools, and from all ages and grade levels. Data from this effort provided inspiration, insight, and content for the Plan. NetDay's full Speak Up Day 2003 report, *Voices and Views of Today's Tech-Savvy Students*, is available online at http://www.netday.org/speakupday2003_report.htm

- Proposes seven action steps & recommendations

Action Steps

To help states and districts prepare today's students for the opportunities and challenges of tomorrow, a set of seven action steps and accompanying recommendations have been developed.

1. Strengthen Leadership
 - Invest in leadership development programs to ensure a new generation of tech-savvy leaders.
 - Retool administrator education programs to provide training in technology decision making and organizational change.
 - Develop partnerships between schools, higher education and the community.
 - Encourage creative technology partnerships with the business community.
 - Empower students' participation in the planning process.
2. Consider Innovative Budgeting
 - Consider a systemic restructuring of budgets to realize efficiencies, cost savings and reallocations. This can include reallocations in expenditures on textbooks, instructional supplies, space and computer labs.
 - Consider leasing with 3-5 year refresh cycles.
 - Create a technology innovation fund to carry funds over yearly budget cycles.
3. Improve Teacher Training

- Teachers have more resources available through technology than ever before, but have not received sufficient training in the effective use of technology to enhance learning.
 - Teachers need access to research, examples and innovations as well as staff development to learn best practices.
 - The U.S. Department of Education is currently funding research studies to evaluate the effective use of technology for teaching and learning.
4. Support E-Learning and Virtual Schools
- Provide every student access to e-learning.
 - Enable every teacher to participate in e-learning training.
 - Develop quality measures and accreditation standards for e-learning that mirror those traditionally required for course credit.
5. Encourage Broadband Access
- Evaluate existing technology infrastructure and access to broadband to determine its current capacities and explore ways to ensure its reliability.
 - Ensure that broadband is available all the way to the end-user for data management, online and technology-based assessments, e-learning, and accessing high-quality digital content.
 - Ensure adequate technical support to manage and maintain computer networks, maximize educational uptime and plan for future needs.
6. Move Toward Digital Content
- Ensure that teachers and students are adequately trained in the use of online content.
 - Encourage that each student has ubiquitous access to computers and connectivity.
 - Consider costs and benefits of online content, aligned with rigorous state academic standards, as part of a systemic approach to creating resources for students to customize learning to their individual needs.
7. Integrate Data Systems
- Establish a plan to integrate data systems so that administrators and educators have the information they need to increase efficiency and improve student learning.
 - Use assessment results to inform and differentiate instruction for every child.
 - Implement School Interoperability Framework (SIF) Compliance Certification as a requirement in all RFPs and purchasing decisions.

Partnership for 21st Century Skills

<http://www.21stcenturyskills.org>

The Partnership for 21st Century Skills is a unique alliance of education, business and government leaders working to fully address the education needs and challenges of work and life in the 21st century.

Learning for the 21st Century is the result of a lengthy and in-depth dialogue on improving education for the 21st century that was initiated by the Partnership. The Partnership reached out to hundreds of educators, academics, business leaders and employers to determine a vision for learning in the 21st century, to reach consensus on the definition of 21st century skills, and to develop tools to aid communities in its implementation.

SIX KEY ELEMENTS OF 21ST CENTURY LEARNING:

1. EMPHASIZE CORE SUBJECTS

Knowledge and skills for the 21st century must be built on core subjects. No Child Left Behind identifies these as English, reading or language arts, mathematics, science, foreign languages, civics, government, economics, arts, history and geography. Further, the focus on core subjects must expand beyond basic competency to the understanding of core academic content at much higher levels.

2. EMPHASIZE LEARNING SKILLS

As much of students need knowledge in core subjects; they also need to know how to keep learning continually throughout their lives. Learning skills comprise three broad categories of skills:

- a. information and communication skills,
- b. thinking and problem-solving skills,
- c. and interpersonal and self-directional skills.

3. USE 21ST CENTURY TOOLS TO DEVELOP LEARNING SKILLS

In a digital world, students need to learn to use the tools that are essential to everyday life and workplace productivity. They need to appropriately use digital technology and communication tools to access, manage, integrate and evaluate information, construct new knowledge, and communicate with others in order to participate effectively in society.

4. TEACH AND LEARN IN A 21ST CENTURY CONTEXT

Students need to learn academic content through real-world examples, applications and experiences both inside and outside of schools. Students understand and retain more when their learning is relevant, engaging and meaningful to their lives. In the global, networked environment of the 21st century, student learning also can expand beyond the four classroom walls. Students must reach to their communities, employers, community members and, of course, parents to reduce the boundaries that divide schools from the real world.

5. TEACH AND LEARN 21ST CENTURY CONTENT

Three significant emerging content areas that are critical to success in communities and workplaces are 1) global awareness; 2) financial, economic and business literacy; and 3) civic literacy

6. USE 21ST CENTURY ASSESSMENTS THAT MEASURE 21ST CENTURY SKILLS

States and districts need high-quality standardized tests that measure students' performance of the elements of a 21st century education. A balance of assessments including standardized testing and classroom assessments are needed. To be effective, sustainable and affordable assessment at all levels must

use new information technologies to increase efficiency and timelines.

State Technology Requirements

February 12, 2004

TO THE ADMINISTRATOR ADDRESSED:

Subject: Requirement of Enrichment TEKS

On June 21, 2003, Governor Perry signed **Senate Bill (SB) 815 into law requiring school districts, as a condition of accreditation, to provide instruction in the Texas Essential Knowledge and Skills (TEKS)** at appropriate grade levels in all subjects of the required curriculum, effective September 1, 2003. **The required curriculum includes both the foundation and enrichment subjects.**

Prior to the passage of SB 815, the TEKS were required in providing instruction in the foundation curriculum (English language arts, mathematics, science, social studies); whereas the TEKS were required only as "guidelines" in providing instruction in the enrichment curriculum (languages other than English, health, physical education, fine arts, economics, career and technology education, **technology applications**). School districts may apply to the Commissioner of Education for an extension for implementation of this requirement until the 2004-05 school year and may reapply in the summer of 2004 to delay implementation until the 2005-06 school year.

Many school districts already utilize the TEKS for instruction in the enrichment content areas and have developed a rigorous curriculum that is aligned with the standards. For those districts that have not fully implemented the TEKS for the enrichment content areas, **SB 815 could necessitate professional development for teachers on standards-based instruction.**

The prevailing philosophy of the "No Child Left Behind" Act is anchored in instruction based on state academic content and achievement standards. Utilizing the TEKS for all of the required curriculum will be a significant factor in providing a high quality and balanced education for all students. Please do not hesitate to contact the Division of Curriculum at (512) 463-9581 if additional information or assistance is required regarding this matter.

Sincerely,

Robert Scott
Chief Deputy Commissioner

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<http://www.tea.state.tx.us/taa/comm021204.html>

State Technology Requirements

Required Curriculum: Technology Applications

<http://www.tea.state.tx.us/rules/tac/ch126toc.html>

Technology Applications is a required enrichment curriculum specified in TEC §28.002. This curriculum focuses on the teaching, learning, and integration of digital technology knowledge and skills across the curriculum, especially in the foundation areas, to support learning and promote student achievement. The state's Technology Applications curriculum provides a vertical look at what is expected for students Prekindergarten through Grade 12. It prepares all students with a background for whatever they may choose to do today as well as in their future. **The Technology Applications curriculum defines the technology literacy requirement for students and teachers specified in No Child Left Behind, Title II, Part D.**

Digital technology literacy standards are specified through Technology Applications Prekindergarten guidelines and Technology Applications Texas Essential Knowledge and Skills (TEKS) for Grades K-12 in 19 TAC Chapter 126. There are benchmarks at Grades 2, 5, and 8. These standards are to be integrated throughout the curriculum in grades K-8 and expanded through **specialized, focused courses in Grades 9-12**. The Technology Applications TEKS are not to be taught in isolation; rather, they are an integral part of every classroom's use of technology. In the standards in the **core curriculum areas of English Language Arts and Reading, Mathematics, Science, and Social Studies, there are references to the use of technology throughout the standards**. The importance of students meeting the technology literacy benchmarks for acquiring and integrating the Technology Applications TEKS across the curriculum are paramount in leading to success in meeting the curriculum goals for Texas students and meeting the requirements of **No Child Left Behind, Title II, Part D** for technology literacy and integration.

<http://www.tea.state.tx.us/technology/ta/>

Required Needs Assessment: Texas Campus STaR Chart

Districts must complete the online Texas STaR Chart Needs Assessment for each campus at least once annually online at <http://www.tea.state.tx.us/starchart> . The Texas STaR Chart is a tool for technology planning, budgeting for resources, and evaluation of progress in integrating technology into the school curriculum and infrastructure.

Required Technology Standards for Students

Technology Applications TEKS (K-12) and Guidelines (PreK)

The Technology Applications Texas Essential Knowledge and Skills (TEKS) found in 19 TAC Chapter 126 describe what students should know and be able to do using technology. The goal of the Technology Applications TEKS is for students to gain technology-based knowledge and skills and to apply them to all curriculum areas at all grade levels. There are benchmark years at Grades 2, 5, and 8 with courses specified at the high school level. The TEKS are organized with four common strands for Grades K-12: Foundations, Information Acquisition, Work in Solving Problems, and Communication.

The TEKS standards follow:

Grades K-2

Students gain basic skills such as inputting information, beginning touch keyboarding and becoming familiar with the computer. Using technology, students access information that can include text, audio, video, and graphics. They use computers and related technology to make presentations and prepare projects for foundation curriculum areas.

Grades 3-5

Students use proper keyboarding techniques and acquire information by selecting the most appropriate search strategies. Students use word processing, graphics, databases, spreadsheets, simulations, multimedia, and telecommunications. They solve problems and communicate information in various formats and to a variety of audiences and evaluate their results.

Grades 6-8

Students become fluent in using multiple software applications and applying them across the curriculum. They build on the Grades 3-5 knowledge and skills. The students continue to demonstrate keyboarding proficiency in technique and posture while building speed. The TEKS can be taught integrated into other areas (such as English Language Arts and Reading, Mathematics, Social Studies, and Science), as a separate class, or both.

Grades 9-12

Students have a variety of options from the adopted courses which allow for growth, specialization, integration into other curriculum areas, and preparation for the technological world. The high school courses in Technology Applications, Chapter 126 include:

Computer Science I, Computer Science II, Desktop Publishing, Digital Graphics/Animation, Multimedia, Video Technology, Web Mastering, and Independent Study in Technology Applications.

In addition, there are guidelines for Prekindergarten:

Grade PreK

Prekindergarten guidelines for Technology Applications were made available to schools in December 1999. They articulate what three- and four- year old students should know and be able to do using technology.

Required Technology Standards for Educators

http://www.sbec.state.tx.us/SBECOnline/standtest/standards/techapps_allbegtch.pdf

The State Board for Educator Certification (SBEC) has approved educator certification standards in Technology Applications for all beginning educators. The standards have been developed for inclusion in SBEC-approved educator preparation programs. They are based on the Technology Applications TEKS for Grades 6-8. These standards are a part of the Texas Examination of Educator Standards (TExES) test frameworks in Pedagogy and Professional Responsibilities. These new TExES tests were implemented in fall 2002.

Current educators should strive to meet the SBEC standards in Technology Applications for all beginning educators.

Technology Applications, Standards I–V

- I. All teachers use technology-related terms, concepts, data input strategies, and ethical practices to make informed decisions about current technologies and their applications.
- II. All teachers identify task requirements, apply search strategies, and use current technology to efficiently acquire, analyze, and evaluate a variety of electronic information.
- III. All teachers use task-appropriate tools to synthesize knowledge, create and modify solutions, and evaluate results in a way that supports the work of individuals and groups in problem-solving situations.
- IV. All teachers communicate information in different formats and for diverse audiences.
- V. All teachers know how to plan, organize, deliver, and evaluate instruction for all students that incorporates the effective use of current technology for teaching and integrating the Technology Applications Texas Essential Knowledge and Skills (TEKS) into the curriculum.

Stages of Technology Integration

Entry/Adoption Stage. Educators move from the initial struggles to learn the basics of using technology to successful use of technology on a basic level (e.g., integration of drill and practice software into instruction)

Adaptation Stage. Educators move from basic use of technology to discovery of its potential for increased productivity (e.g., use of word processors for student writing and research on the Internet)

Appropriation Stage. Having achieved complete mastery over technology, educators use it effortlessly as a tool to accomplish a variety of instructional and management tasks

Invention Stage. Educators are prepared to develop entirely new learning environments that utilize technology as a flexible tool. Learning becomes more collaborative, interactive and customized.

Why Consider Requiring Teacher Technology Competencies?

Educator standards are required for all beginning educators and highly recommended for current educators. These standards tie directly to the Technology Applications student standards. Many districts believe that technology competencies should be required of all teachers. Why?

Technology Instruction is now mandated by:

- NCLB – all students must be technology literate by the end of 8th grade
- NCLB – all teachers must be technology literate
- NCLB – technology must be fully integrated across all curriculum areas by Dec 31, 2006
- Texas SBOE has mandated that all enrichment TEKS will be taught (K-8 Technology TEKS are enrichment TEKS)
- Texas TEKS for secondary courses all have technology expectations
- SBEC now requires technology competencies of all beginning teachers
- TEA recommends technology competencies be mastered by current educators
- Technology applications textbooks are available for adoption and should be funded for the 2005-2006 school year



Teacher Technology Competencies Programs

To ensure that all teachers are technology literate, many districts have established Technology Competencies Programs.

Duncanville ISD Focal Points Program

www.duncanvilleisd.org/focalpoints

Galena Park ISD Technology Proficiencies

<http://www.galenaparkisd.com/training/>

Irving ISD Tech Fusion Program

<http://www.irvingisd.net/techfusion/>

Pflugerville ISD Technology Proficiencies

<http://www.pflugervilleisd.net/dept/tech/instructional.html>

San Antonio ISD Technology Competency Certification Plan (TCCP)

<http://itls.saisd.net/tccp>

ESC Region 11

Technology Applications Teacher Certification Preparation Program

<http://edtech.esc11.net/tatc/>

Curriculum Resources & Best Practices



Technology Applications Center for Educator Development

<http://www.tea.state.tx.us/technology/techapp/>

The Technology Applications Center for Educator Development (TACED) housed at the Texas Education Agency supports the Technology Applications curriculum. The TACED is a part of the Texas Education Agency (TEA) Educational Technology Division. From Summer 1997 through Summer 2002, TEA funded the Texas Center for Educational Technology (TCET) at the University of North Texas to develop resources and maintain the TACED Web Site. The resources for teaching and learning Technology Applications for grades preK-12 are provided on this Web Site. TEA hopes these resources continue to be useful in providing sample instructional materials and teaching strategies that focus on the TA TEKS for use in the classroom.

Technology Applications Curriculum Connections

<http://www.tea.state.tx.us/technology/techapp/instruct/ccindex.htm>

Technology Applications is the curriculum that includes the use of computers and other related electronic tools such as digital cameras and scanners. The curriculum focuses on creating, accessing, manipulating, utilizing, communicating, and publishing information. The **Technology Applications TEKS** provide standards for implementing this curriculum.

The TEKS are organized by grade clusters rather than by grade levels. Benchmark years are grades 2, 5, and 8. The TEKS are divided into four strands—**Foundations**, **Information Acquisition**, **Solving Problems**, and **Communication**—with three Knowledge and Skills for each strand.

There are many **connections** that can be made between the Technology Applications TEKS and the TEKS in other areas—especially in the foundation curriculum areas of **English Language Arts and Reading**, **Mathematics**, **Science**, and **Social Studies**. Connections can be made through direct references to the use of technology in the foundation area TEKS. Additionally, many indirect references to the use of technology can be made in other TEKS areas that do not specifically mention technology but are easily accomplished with technology.

The **Curriculum Connections** planning tool available on TEA's website provides several examples of direct connections and indirect connections.

Technology Applications Assessment Resources

To meet the Technology Applications TEKS requirements, districts must develop a scope and sequence to determine which of the TEKS will be required at which grade levels. In addition, they must establish a method of measurement for mastery of the Technology Applications TEKS for each grade level. Samples measurement tools developed by other districts are as follows.

Yselta ISD Technology Applications Curriculum Guide

<http://teks.yisd.net/>

Conroe ISD checklists

K-6 <http://www.conroe.isd.tenet.edu/instructional/teks/benchmarks.htm>

7-12 <http://www.conroe.isd.tenet.edu/instructional/teks/bench7-12.htm>

Irving ISD

Kindergarten TA TEKS Summary and Checklist

<http://www.tea.state.tx.us/technology/techapp/assess/snapshotk.pdf>

<http://www.tea.state.tx.us/technology/techapp/assess/profick.pdf>

First Grade TA TEKS Summary and Checklist

<http://www.tea.state.tx.us/technology/techapp/assess/snapshot1.pdf>

<http://www.tea.state.tx.us/technology/techapp/assess/profic1.pdf>

Second Grade TA TEKS Summary and Checklist

<http://www.tea.state.tx.us/technology/techapp/assess/snapshot2.pdf>

<http://www.tea.state.tx.us/technology/techapp/assess/profic2.pdf>

Third Grade TA TEKS Summary and Checklist

<http://www.tea.state.tx.us/technology/techapp/assess/snapshot3.pdf>

<http://www.tea.state.tx.us/technology/techapp/assess/profic3.pdf>

Fourth Grade TA TEKS Summary and Checklist

<http://www.tea.state.tx.us/technology/techapp/assess/snapshot4.pdf>

<http://www.tea.state.tx.us/technology/techapp/assess/profic4.pdf>

Fifth Grade TA TEKS Summary and Checklist

<http://www.tea.state.tx.us/technology/techapp/assess/snapshot5.pdf>

<http://www.tea.state.tx.us/technology/techapp/assess/profic5.pdf>

Sixth – Eighth Grade TA TEKS Summary and Checklist

http://www.tea.state.tx.us/technology/techapp/assess/prof6_8.pdf

Pflugerville ISD:

K-5 TA TEKS Checklists

<http://www.pflugervilleisd.net/curriculum/tech/index.html>

Middle School TA TEKS Activity Requirements

<http://www.pflugervilleisd.net/curriculum/tech/docs/ActivityReq.pdf>

Sample Technology Applications Checklist from Pflugerville ISD

Technology Applications Texas Essential Knowledge & Skills

<u>Third Grade</u>
General Skills:
<input type="checkbox"/> Reinforce K-2 skills and terminology
<input type="checkbox"/> Modifier keys: Command, Option
<input type="checkbox"/> Use appropriate computer etiquette in Classroom, Lab, on Network
Word Processing Skills:
<input type="checkbox"/> Reinforce K-2 skills and terminology
<input type="checkbox"/> Change font style
<input type="checkbox"/> Select spacing
<input type="checkbox"/> Change text alignment / margins
<input type="checkbox"/> Import text / video
Database Skills:
<input type="checkbox"/> Reinforce K-2 skills and terminology
<input type="checkbox"/> Enter data into a template file
<input type="checkbox"/> Sort / Find data
Spreadsheet Skills:
<input type="checkbox"/> Reinforce K-2 skills and terminology
<input type="checkbox"/> Enter data into a table
<input type="checkbox"/> Create graphs from data
<input type="checkbox"/> Label graph with Title, X-axis, Y-axis
Multimedia Skills:
<input type="checkbox"/> Reinforce K-2 skills and terminology
<input type="checkbox"/> Introduce presentations which include:
<input type="checkbox"/> Sound, Text, Graphics, Animation
Drawing Skills:
<input type="checkbox"/> Reinforce K-2 skills and terminology
<input type="checkbox"/> Use all drawing / painting tools in AppleWorks
<input type="checkbox"/> Place, resize clip art
Keyboarding Skills:
<input type="checkbox"/> Reinforce K-2 skills and terminology
<input type="checkbox"/> Use correct fingering/ hand position for: Home row, Shift, Space, Return
<input type="checkbox"/> (End of Year=5 wpm with 95% accuracy)
Telecommunication Skills:
<input type="checkbox"/> Reinforce K-2 skills and terminology

Technology Integration Planning



Creating Effective Change in Schools

In order to effectively implement new products and strategies into your instructional setting, a process of change must occur. Change happens over time but can be expedited by considering the following five key elements. Including these fundamentals in your implementation plan is essential.



If you are not able to effectively articulate the vision, there will be confusion. What is your vision for instructional technology? Can you communicate it clearly to your staff? Do they support the vision and are open to change?



If the users do not possess the necessary skills, there will be anxiety. How will you identify the areas of need for your staff? When and how will your staff obtain the skills necessary for a successful implementation? Has a Professional Development plan been established?



If incentives are not present and valued by individuals, there will be gradual change. What are the expected outcomes of the implementation? Does your staff understand the value of the tools and resources? Do the students and parents understand how the instructional technology will enhance their educational experiences?

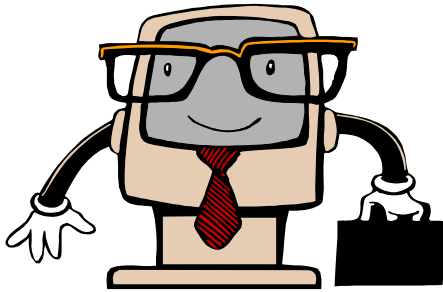


If usable and appropriate resources are not included, there will be frustration. **Have you identified the needed resources for success? Are there supports you have not included? Has the plan for accessibility been communicated to your staff?**



If a solid action plan does not exist, there will be false starts. Have you chosen a focus or target group? What are the goals for student use? Have you established an action plan for the implementation of instructional technology?

Based on a chart by Jacqueline S. Thousand & Richard A. Villa, "Managing Complex Change Toward Inclusive Schooling," in Creating an Inclusive School, ASCD 1995. CompassLearning, 2001



TOP-DOWN TECHNOLOGY

Technology Integration requires a strong commitment by the leaders at both the district and campus level. Staff members need the encouragement and support of the administrator to successfully incorporate technology into the classroom. Administrators need to work with their staff members to set the vision for technology and ensure that vision is implemented.

Robin Ryan (ryanr@cisdmail.com), principal at Carroll High School, has made that commitment to technology. Here are some of her strategies for success.

Make Technology a Priority

- ✓ Model Technology Usage Every Day!
- ✓ Be a CHEERLEADER!
- ✓ Conduct Cutting Edge Staff Meetings
- ✓ Provide Release Time
- ✓ Require a Technology Component in Team Notes and Lesson Plans

Use Power Point Presentations

- ✓ Teacher Orientation
- ✓ Staff Development
- ✓ Student Registration
- ✓ Parent Orientation

Use Communications Tools

- ✓ Staff E-Mail - <http://65.125.82.43/contact.htm>
- ✓ Scanner
- ✓ Brochures
- ✓ Newsletters - <http://65.125.82.43/diary/default.htm>

Give Rewards and Recognitions

- ✓ Technology Contests
- ✓ Encouraging E-Mails to Faculty
- ✓ Production Studios - Video Announcements, Lost & Found Style Show, Sports Clips, Interviews, Cafeteria Menus, Weather Reports, etc.
- ✓ Radio Station

Note: For more inspiration in technology leadership, read the feature article in the January 2005 issue of Technology and Leadership magazine entitled *Leadership: Walking the Talk*. <http://www.techlearning.com/story/showArticle.jhtml?articleID=56900348>

Just imagine...

You're sitting in the back of the room during a faculty meeting daydreaming about your weekend plans, tonight's dinner or Friday's lineup. Suddenly, you hear the same three words that sent you into shock as a high school student...

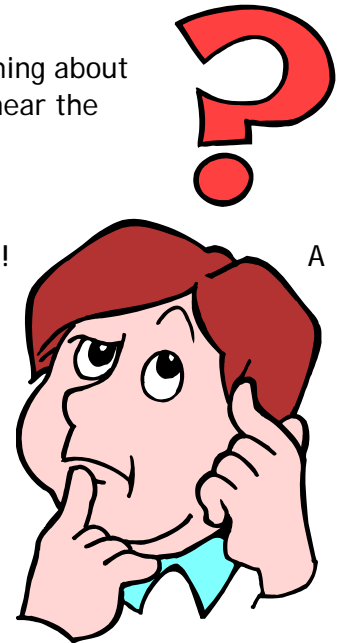
"Your homework is..."

This can't be! You must have fallen asleep and had a horrible nightmare! principal can't assign homework to the teachers! Well, YES SHE CAN and YES SHE DID!

Dr. Kimbroy Pool, principal of Carroll Middle School in Southlake, Texas took technology training into her own hands! She assigned every teacher the task of creating a PowerPoint presentation describing their course and firmly announced that the presentations would be running in every classroom at Open House during Texas Public School Week. Did she hear some moaning and grumbling from her staff? Of course, but after a few short weeks, those feelings of unfairness and desperation passed. The organized Dr. Pool made sure that before she assigned homework to her staff, she had a plan in place. Dr. Pool met with her Campus Instructional Technology Teacher, Jennifer Waldroop to devise a plan of action.

- Give the staff plenty of time to plan and organize their presentation and to learn or improve their skills on PowerPoint.
- Schedule one day to close a computer lab and arrange for Mrs. Waldroop to be there the entire day to work with the teachers during their conference period.
- A few weeks before the designated training day, Mrs. Waldroop began sending PowerPoint tips to the teachers every other day via e-mail.
- The day before the training, Mrs. Waldroop sent out the following message:
"Have you enjoyed your PowerPoint tips? Don't forget our training sessions tomorrow in the Computer Lab. I will be there to help you whether you are a beginner or a pro!"
- On the day of the training, Mrs. Waldroop posted PowerPoint tips around the lab, printed a handout for beginning PowerPoint users and the "Top Ten PowerPoint Tips" (included in folder and CD). She provided snacks and door prizes to help relieve the tension.

Attitudes have changed at Carroll Middle School since that fateful faculty meeting! Teachers are working on their presentations and are actually having fun and realizing the importance of technology in the classroom for everyone, not just the students! The digital cameras are checked out round-the-clock because teachers want to take pictures of their classes in action during the day, at ball games and in concerts. Wow, what a transformation! And just think... it all began with a homework assignment from the principal!



And what are some of the next homework assignments?

- A tri-fold brochure created in MS Publisher to be used at "Meet the Teacher Night" in the fall. It must include biographical information about the teacher, contact information and conference times, course description, grading policy, etc.
- A web page for each teacher
- An independent project - the teachers design and create a technology project on their own.

Contributed by:

Joan Gore - Lewisville ISD

Janet Corder - Carroll ISD

Jennifer Waldroop - Carroll ISD



Tech Night Fever Guide to Open House 2003

1.) Ever heard of a Classroom Performance System?

Go to Team 6D to see one in action.

2.) Did you know CTIS has two laptop labs?

Visit Mr. Kizer's Science room (5A) and Mrs. Steen's room 209 (6D)

**3.) Iraq, Key Largo, Minneapolis, MN, Connecticut, NASA, and T. A. Howard
 What do these places have in common?**

CTIS students have been there via our Distance Learning Lab in the library

Check out these projects!

Team 5A		
Mondi 213	Power Point/Digital Camera/Excel Graphs	Geometric Shapes
Crouse 216	Internet Research/Downloaded Clipart	Pop Up Book Project
Dunn 227	Excel/ Power Point	Graphs and Jeopardy
Snider 215	Power Point/MS Word	Jeopardy and Obituaries
Ramsdell 214	MS Publisher	Newsletters
Kizer SL2F	Power Point/Digital Camcorder/ <i>Laptops</i>	Sound Unit
Team 5B		
Overstreet 104	Internet/ Math Software	Real World Applications
Cole 102	Power Point	Book Projects
Moseley SL1A	Internet	Web Links to Science
Davis 101	Power Point/Presentation Station/Software	Grammar Activities
Gromish 103	Math Software	Real World Applications
Team 5C		
Falk 109	Digital Camcorder	Revolutionary Newscasts
Thompson 108	Excel Graphs	Graphing Random Data
Arnold 112	Power Point/Digital Camera	5C Activities
Schutt 110	Power Point/Digital Camera	5C Activities
Badovinac 107	Power Point/Digital Camera	5C Activities
Townes SL1B	Power Point/Digital Camera	5C Activities
Team 5D		
Archibald 220	Excel Graphs	Graphing Collected Data
Howell 225	Internet/Power Point	Declaration of Independence
Ford 218	Software/ Surround Sound System	Grammar Activities
Banik 217	Language Software	Word Munchers & Spelling Puzzles
Tatum 219	Math Software/Excel	Real World Applications
Marshall SL2E	<i>Digital Camcorder w/Tripod</i> /Power Point	Earth Science & The Water Cycle
Team Area	Power Point/Digital Camera w/ Tripod	5D Activities
Team 5E		
Cassell P1	Digital Camcorder/Power Point	Student Interviews & Word Problems
Golson P2	Power Point/Distance Lab/Internet	Iraq Conference & American History



Tech Night Fever Guide to Open House 2003

Team 6A		
Schott 106	Power Point	Grammar Lessons
Solby Lab1	Excel Graphs	Calculating Distance of Planets
Gambrell 205	Excel Graphs	Calculating Distance of Planets
McDaniel 206	Internet	Web Quests of Countries
Yeager SL2B	Excel Graphs/ Digital Camcorder	Planets & Cleaner Commercials
Radisewitz 207	Internet	Holocaust Research
Team 6B		
Smith 212	Internet Sites	CoolMath.com
Melchiorre SL2D	FlexCam Camera	TxU Light Unit
Buck 224	Software	Multicultural Authors and Swahili Folktale
Corbin 222	Internet/Software	Escape From Knab Site
Withers 223	Internet/Digital Camera	Map Puzzles & Kongo Trek
Jordan 221	Internet	Web Links
Team Area	Power Point	6C Activities
Team 6C		
B. Johnson 203	Excel/Power Point/Internet Research	Graphing Probability/Famous Mathematicians
S. Jones 201	Digital Camera/	Tree Gap News-Student Broadcasts
Bruner 202	Power Points	African Research
Yates 204	MS Publisher/ MS Word	Pamphlets and Poetry
Thornberry SL2A	Digital Camcorder	Window Cleaner Commercials
Team 6D		
Norwood 208	Digital Camcorder/ Distance Lab	Writing Project with 7 th Grade
Palmer SL2C	Power Point/ Digital Camcorder	6D Activities & Window Cleaner Commercials
Steen 209	Laptops/ Web Writing Tools	Student produced Web pages on Poetry
Coyl 210	VHS/ TV	History Alive
Deel/Team Area	CPS System	Content Trivia
Dubose 226	Software/Internet Sites	Math Web Links/ Decimal Football
Electives		
Strickland	Internet/Software	Metro. Art Gallery
Gorrell & Ho	Power Point	P. E. Activities Throughout the Year
Nicole	Power Point	Quest Activities
Pierce	Digital Camera/Power Point	Spanish Activities
Paz & Jimenez	Power Point	P. E. Activities Throughout the Year
Purdy	Power Point	Quest Activities

Stop by the CTIS Library to see a demonstration of our *Distance Learning Lab*.
Speak to our counselor, Mrs. Franklin airing from T.A. Howard Middle School.

Visit our campus web site:
www.mansfieldisd.org/Timbers/index2.htm

Technology Integration Administrator Resources

What Every Principal Needs to Know About Technology & Where to Find It Online

By Marianne Handler

http://www.techlearning.com/db_area/archives/WCE/archives/handlerp.html

Why integrate technology into the curriculum?

Standards

- Texas Long-Range Plan for Technology
<http://www.tea.state.tx.us/technology/lrpt/index.html>
- National Education Technology Plan
<http://www.nationaleedtechplan.org/>
- ISTE - International Society for Technology in Integration
<http://www.iste.org/>
- NETS National Education Technology Standards
<http://cnets.iste.org/>

Research

- NCREL Using Technology to Improve Student Achievement
<http://www.ncrel.org/sdrs/areas/issues/methods/technlgy/te800.htm>
- Technology's Four Roles in Student Achievement by Bernajeau Porter
<http://www.bjpcconsulting.com/articles/technologyroles.html>

How do you integrate technology into the curriculum?

Staff Development

- NSDC – National Staff Development Council
<http://www.nsd.org/library/strategies/technology.cfm>
A middle school in Connecticut designed a plan based on three guiding principles:
 1. Accommodate the needs and concerns of individual learners in planning and implementing the project (Hord, Rutherford, Huling-Austin, & Hall, 1987).
 2. Provide planned training and guided, continuous practice (Ericsson, Krampe, & Tesch-Romer, 1993).
 3. Offer ongoing technical support within the work environment (Sparks & Hirsh, 1997).
- How Teachers Learn Technology Best by Jamie McKenzie
<http://www.fno.org/mar01/howlearn.html>

Set Expectations – Be the Instructional Leader.

- EnGauge from NCREL – North Central Educational Regional Laboratory
<http://www.ncrel.org/engage/>

Model Technology Integration

ISTE has Administrator Standards called TSSA- Technology Standards for School Administrators <http://cnets.iste.org/tssa/>

What is successful Technology Integration?

Three Levels of Technology Integration

Literacy Uses: Student uses are described as technology stories

Adaptive Uses: Learning is telling the same stories with new tools

Transforming Uses: Learning is creating new stories with new tools

<http://www.pvpusd.k12.ca.us/tech/techplan/Summary%20of%20Literacy.pdf>

Problem Based Learning – Professional Development Academy

<http://itls.saisd.net/pbl/default.htm>

What are the obstacles preventing successful technology integration?

Money - Other funding sources

- techLearning <http://www.techlearning.com/grants.html>
- eSchool News <http://www.eschoolnews.com/erc/funding/>
- Earthwalk <http://www.earthwalk.com/Education/eClassroom/index.html>

Teachers

Attitude - Educator Standards for All Beginning Educators

http://www.sbec.state.tx.us/SBECOnline/standtest/standards/techapps_allbe_gtch.pdf

Training – Education Service Center Region 12

<http://www.esc12.net/instructionaltech>

How can I get started integrating technology into the curriculum?

Get a plan - Prepare a Technology Plan

- Resources for Technology Planning <http://tpesc.esc12.net>
- EnGauge from NCREL – North Central Educational Regional Laboratory <http://www.ncrel.org/engage/>
- A Guide to Technology Planning for Texas Public School Districts from TCET <http://www.tcet.unt.edu/pubs/otherp.htm>
- Technology Applications Resources from TCET <http://www.tea.state.tx.us/technology/techapp/index.html>

Internet resources

- Funbrain – Site for K-8 Teachers and Kids <http://www.funbrain.com/>
- Marco Polo - <http://www.marcopolo-education.com>
- Kathy Schrock's Guide for Educators <http://school.discovery.com/schrockguide/>
- A Web Portal for Educators <http://www.teach-nology.com/>
- Web Quests <http://webquest.sdsu.edu/>
- Virtual Field Trips <http://www.ibiblio.org/cisco/trips.html>
- RubiStar – Free online Rubric maker <http://rubistar.4teachers.org/>
- TrackStar – Organize and annotate websites <http://trackstar.4teachers.org/trackstar/index.jsp>
- Web portal for kids 3-9 www.alfy.com
- Game Show Templates http://www.leesummit.k12.mo.us/ITS/game_templates.htm

Organizations and Agencies

- Regional Technology Educational Consortia <http://rtec.org/>
- Texas Center for Educational Technology <http://www.tcet.unt.edu>
- US Dept. of Education, Dept. of Ed. Technology <http://www.ed.gov/Technology/>

Online Newsletters with teaching ideas

- Technology and Learning <http://www.techlearning.com>
- I Love that Teaching Idea <http://www.ilovethatteachingidea.com/>
- Riverdeep Classroom Flyer <http://www.riverdeep.net/>

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Technology Integration Implementation Plan

Date: _____

Name: _____

District: _____

Campus: _____

Target Activity	Resources Needed