Kansas State Department of Education
Technology Plan
2002-2006

Adopted by the Kansas State Board of Education
December 10, 2002

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Introduction and Purpose

The Kansas State Department of Education (KSDE) recognizes that opportunities for learning extend beyond the classroom – to the home, the workplace and a host of nontraditional educational environments. The Kansas State Board of Education (KSBE) promotes student academic achievement by providing educational vision, leadership, opportunity, accountability, and advocacy for all.

To this end the State Board has established the following **priorities** to guide its work:

- **helping all students meet or exceed academic standards by:**
    - **improving the school accreditation system.**
    - **increasing student achievement and reducing the achievement gap.**
    - **increasing public participation in schools and awareness of academic expectations.**
- **recruiting, preparing, supporting and retaining a competent, caring and qualified teacher for every classroom and leader for every school by:**
    - **increasing the supply of qualified teachers and school leaders.**
    - **improving the preparation programs for educators.**
    - **providing high quality support for new and experienced teachers.**
- **redesigning Kansas schools and learning environments for a new century by:**
    - **increasing understanding of current and future educational expectations and delivery systems.**
    - **establishing a vision that identifies a preferred future for Kansas schools and learning environments.**

(*Adopted by the Kansas State Board of Education April 2001*)

The Leadership Team of the Kansas State Department of Education has developed a plan for Strategic Directions as a result of the Future Search 2002 meetings. Strategic Direction Number 3 outlines the direction the Leadership Team will undertake to:

Provide Leadership for the utilization of technology to enhance the educational system

- **Develop and implement standards for effective use of technology**
- **Promote accessible KSDE data systems to enable data-based decision making**

(Strategic Directions, KSDE, October 2002.)

The primary purpose of this Kansas State Department of Education Technology Plan is to provide information, goals, and recommendations to guide Kansas educators as they integrate technology tools in the curriculum to effectively meet the State Board of Education priorities and to enhance and develop the strategic directions of the Kansas State Department of Education.

Background Information

In the 21st Century, literacy requires more than the ability to read, write and do math and science. Though learning still requires the skill of print literacy, much of the information we encounter now takes other forms, such as graph materials or moving images, or appears in databases or on websites. Literacy in this new century encompasses a broad spectrum of technology and critical thinking skills, as well as the willingness to view the process of learning in new and different ways.

The person who is information literate accesses information efficiently and effectively, evaluates information critically and competently, and uses information accurately and creatively. How a person who is information literate acquires the knowledge and skills in the information age is entirely different than the way in which a learner acquired knowledge and skills in the past. Kansas Library Media Standards include standards and benchmarks for information literacy[1].

The Kansas State Department of Education recognizes the appropriate use of educational technology contributes to student information literacy. Since1996, the Kansas State Department of Education has funded the Technology Assistance for Kansas Educators (TAKE) Team, developed the Kansas Academy for Leadership in Technology (KAL-Tech) program for superintendents and principals, and formed the Kansas Technology Advisory Board (KTAB) that brings K-12 stakeholders together in a common forum on technology in education. KSTL (the Kansas Student Technology Leaders organization) and many high-quality teacher professional development programs have evolved from the Technology Literacy Challenge Fund. In addition, KSDE has endorsed KAN-ED, a statewide network that will provide for interactive learning among and between schools across Kansas.

Beginning in 2002, the reauthorization of ESEA commonly known as the *No Child Left Behind* Act addresses technology integration under Title II, Part D. The Kansas State Department of Education submitted the State Consolidated Plan and it was approved by the U.S. Department of Education in July 2002. This Kansas State Technology Plan is also required by the legislation, and was approved by the Kansas State Board of Education in December 2002.

The Kansas State Technology Plan will exist virtually on the KSDE web site at www.taken.org and is subject to review and revision by a committee appointed by the TAKE Team and the Kansas Technology Advisory Board (KTAB) every six months beginning July 1, 2003. This document will remain dynamic, and the reader's input and reaction to this plan is encouraged. Any formal changes must be approved by KSBE. Please e-mail comments or questions to statetechplan@ksde.org.

Organization of the Plan

The goals of the Kansas State Technology Plan are organized in three broad sections:

- Learning and Teaching (with three goals),
- Equity and Access (with three goals), and
- Evaluation and Accountability (with three goals)

Each section begins with background information to help the reader understand the current status and how the area contributes to K-12 public education in Kansas. The plan then outlines objectives and tasks needed to reach each goal. Expected outcomes are related to increasing student achievement and increasing access to teaching resources and technology tools.

[1] Kansas Library Media Standards can be reviewed at: http://www.ksde.org/outcomes/library.html

Learning and Teaching

Strategies to Improve Academic Achievement

The ability to learn quickly and process change has never been more significant than today. Workplaces in the current knowledge-based economy require problem solving and critical thinking skills of all employees. How can schools best prepare students for the current and future demands of the workplace?

Aligning curriculum to high standards is the first step. Kansas Curriculum Standards are regularly reviewed and updated by state curriculum advisory committees. The Kansas Curriculum Standards include: mathematics; language arts including listening, viewing, speaking, reading and writing; science; social studies; fine arts; foreign languages; and library media. These standards target higher order skills such as critical thinking, diverse communication skills, problem solving, reasoning, and decision-making. School site councils composed of local families, community members, and educators provide guidance in curriculum adoption. Process outcomes that are particularly relevant to the integration of educational technology include a focus on instructional leadership. Particular attention is paid to teaching and learning that results in improved student performance and demonstration of teachers' skills in effective instructional strategies.

Technology can also play a significant role in promoting the development of higher-order thinking skills. Kansas schools need to make good use of available technologies to help develop the technology literacy skills needed by learners at all levels. The National Education Technology Standards -- NETS[2] standards for students and NETS[3] standards for teachers, and the Technology Standards for School Administrators (TSSA)[4] -- blended with Kansas curriculum standards, will lend guidance as to how these skills can be developed and integrated into the existing school improvement plans and technology plans for each school.

Recommendations to help Kansas move forward with improved academic achievement can be found in Learning and Teaching Goal I.

Professional Development

The role of schools and learning communities is to equip graduates with critical thinking and problem solving skills. How can Kansas best prepare teachers to meet these demands? A thoughtful approach to professional development statewide is needed. With federal and state dollars in limited supply, Kansas needs to target training approaches that lead to effective instructional practice.

One step each district takes is the involvement of teachers in the development of the local technology plan. Through participation in local school improvement teams, teacher input regarding teacher preparation, continuing professional development, and implementation of assessment and curricular materials are embedded in the technology plan. This comprehensive involvement and

[2] http://cnets.iste.org/index2.html
[3] http://cnets.iste.org/index3.html
[4] http://cnets.iste.org/tssa/

support has provided a strong basis for sharing information, identifying needs, and developing a collaborative agenda to assure that educational technologies become integrated in the learning environments of Kansas.

A second step involves teacher accountability. Kansas has long been committed to comprehensive educational reform and continues to move public education in the state toward more measurable accountability. The Kansas reform initiative was implemented first through Quality Performance Accreditation (QPA) at the K-12 grade levels, and is now being enhanced with a redesigned system of teacher licensure that links teacher preparation programs to learning performance in K-12 classrooms. The K-12 QPA standards and assessments that have been developed to improve student achievement are being coordinated with the recently redesigned standards and assessments now required for licensure of teachers and administrators.

A third area to consider is the use of federal dollars, specifically Title II, Part D of the No Child Left Behind Act, Enhancing Education Through Technology (EETT). The 2002 competition will provide funds for Kansas elementary schools adopting the Technology-Rich Classroom model, based on the Missouri eMINTS program. This program has achieved national attention from the U.S. Department of Education and provides strong evidence about the effectiveness of technology on instructional practices (see http://emints.more.net for more information). Awardees will experience intensive professional development leading to implementation of this model and the collection of data that support the integration of educational technology with the explicit goal of improved student learning in core content areas.

In the second area of the 2002 grant competition, middle and junior high schools will establish Student Technology Leadership programs. Kansas Schools have developed a technology rich student leadership model, the Kansas Student Technology Leaders program, modeled on the success established through Generation www.Y. The Generation www.Y program is recognized by the United States Department of Education as an exemplary program for the quality of its professional development model for the integration of technology into the curriculum through partnerships of teachers and students (see http://www.genyes.org for more information).

Recommendations to help Kansas move forward in the area of teacher professional development can be found in Learning and Teaching Goal II.

Technology Leadership

Central to any proposal for technology integration and planning is instructional leadership. Infusing the core concepts of instructional technology in learning environments as well as raising the expectations for students, teaching staff, and administration will ultimately be an outgrowth of building-level and district-level leadership. As the Kansas Academy for Leadership in Technology (KAL-TECH) continues to grow, there will be an increasingly larger circle of authentic leadership among superintendents, principals and other school leaders. These leaders will cultivate a better understanding of technology integration throughout the full spectrum of education.

Recommendations to help Kansas move forward with the development of educational technology leaders can be found in Learning and Teaching Goal III.

The integration of technology will be used to support student achievement of rigorous academic standards. To realize the full potential of integrating converging technologies, the following goals must be met:

Learning and Teaching Goal I: All students and teachers use technology applications that are appropriate to their learning styles and activities.

Learning and Teaching Goal II: Highly qualified teachers, who are skilled in technology integration and the use of effective instructional practices and are supported by ongoing professional development regardless of geographic location, teach all students.

Learning and Teaching Goal III: All school leaders engage in ongoing development of the leadership skills necessary for a technology rich environment.

<table>
<tr><th colspan="2">Learning and Teaching GOAL I: All students and teachers use technology applications that are appropriate to their learning styles and activities.</th></tr>
<tr><td colspan="2"><u>Objective 1.1</u> To develop models of technology use in Kansas classrooms that are appropriate to all learning styles and help students reach rigorous academic standards.</td></tr>
<tr><td>Task 1.1a Through the use of EETT funds, KSDE will work with LEAs in Kansas to continue to improve the model of students assisting teachers in the integration of technology by establishing Student Technology Leadership programs.</td><td>Outcome 1.1a In the first year, up to 20 new Student Technology Leadership programs will be established in Kansas middle and junior high schools.</td></tr>
<tr><td>Task 1.1b Data from the Student Technology Leaders program will include pre and post collections from two academic assessments, the local and state assessment, in a core content area and pre and post collections of technology skills assessments for students and teachers.</td><td>Outcome 1.1b Data from the student Technology Leaders programs schools will be shared via the web site, www.taken.org, and used to make decisions about and expand the program to other schools and grade levels.</td></tr>
<tr><td colspan="2"><u>Objective 1.2</u> KSDE will blend the Student and Teacher ISTE standards into the academic standards, benchmarks, and indicators for content areas. These standards, benchmarks, and indicators will be used by schools in school improvement plans and technology plans.</td></tr>
<tr><td>Task 1.2a During the regular review cycle of Kansas standards, benchmarks, and indicators in each content area, KSDE will infuse appropriate ISTE standards at all levels. *</td><td>Outcome 1.2a All new standard documents will include ISTE standards as an integral part of each content area.</td></tr>
<tr><td>Task 1.2b Future state assessments will reflect a measurement of technology proficiency within the content areas. **</td><td>Outcome 1.2b Scoring of state assessment content areas will reflect a technology proficiency score.</td></tr>
</table>

** ESEA 2002 Title II Part D Section 2402 (b) :2) (A) To assist every student in crossing the digital divide by ensuring that every student is technologically literate by the time the student finishes the eighth grade.*

*** Other objectives, tasks and outcomes will be developed as part of the ongoing review process.*

Learning and Teaching GOAL II: Highly qualified teachers, who are skilled in technology integration and the use of effective instructional practices and are supported by ongoing professional development regardless of geographic location, teach all students.	
Objective 1.1 To develop technology rich classrooms across the state in which faculty and administrators work with instructional technology and data to improve instruction.	
Task 1.1a Through the use of EETT funds, KSDE will work with LEAs in Kansas to develop technology rich classrooms where teachers and students engage in problem and project based learning using advanced technologies to improve learning.	**Outcome 1.1a** In the first year, from 16 - 22 technology rich classrooms in grades 4 and 5 will be developed.
Task 1.1b Data from the technology rich classrooms will include pre and post collections from two academic assessments, the local and state assessment, in a core content area.	**Outcome 1.1b** Data collected from the technology rich classrooms will be compared to data from all schools from local, regional, and state schools and the results will be reported.
Objective 1.2 To distribute knowledge and information about best practices and promising approaches to teaching with educational technology applications among teachers in Kansas.	
Task 1.2a Teachers in the technology rich classrooms will participate in 100 hours of ongoing, intensive professional development each year of the project.	**Outcome 1.2a** Teachers will learn and practice strategies for teaching and learning in the technology rich classrooms. An outside evaluator will observe and report results on an ongoing basis. All results will be publicly available on the web site, www.taken.org.
Task 1.2b Best practices and innovative approaches to teaching with technology applications will be posted on the KSDE website. These best practices and innovative approaches will be matched to Kansas academic standards, benchmarks, and indicators.	**Outcome 1.2b** Video clips of classroom practice with student evaluation and feedback will be included with these best practices and innovative approaches to teaching with technology applications.

Task 1.2c KSDE will continue to support the Curricular Standards Database. This web accessible database provides support materials for all curricular areas linked to Kansas Standards, Benchmarks, and Indicators.	**Outcome 1.2c** The support material will be web accessible and will include the following resources and support materials: 1) resources – • exemplify the Kansas curricular standards; • link with the QPA/school improvement process; and, • provide technical assistance for how all content areas can support all of the assessed areas 2) support materials - • pre-kindergarten and K-12 teachers and administrators; • parents and other family members of the student; • faculty and students in higher education; and, • state department consultants and team leaders that to deliver technical assistance to the field.

Learning and Teaching GOAL III: All school leaders engage in ongoing development of the leadership skills necessary for a technology rich environment.	
Objective 1.1 To support and expand the KAL-Tech (Kansas Academy for Leadership in Technology) program of professional development for school administrators.	
Task 1.1a KSDE will through the TAKE Team, continue to vigorously promote the KAL-Tech Academy.	**Outcome 1.1a** Eighty percent of school principals and superintendents will attend the KAL-Tech Academy and apply their learning to their school environments.
Task 1.1b Through the TAKE Team, KSDE will support the expansion of the KAL-Tech Academy to other school leaders and institutions of higher education and seek funding for this expansion to occur.	**Outcome 1.1b** Faculty of higher education institutions that prepare school leaders, assistant superintendents and principals, members of boards of education, technology coordinators and curriculum coordinators will be included in the KAL-Tech Academy.
Objective 1.2 To distribute knowledge and information about best practices and promising approaches to leadership in educational technology applications among school leaders in Kansas.	
Task 1.2a Data will be collected on an ongoing basis through the use of TAGLIT and other data collection tools.	**Outcome 1.2a** An outside evaluator will observe and report results on an ongoing basis. All results will be publicly available on the web site, www.taken.org.
Task 1.2b Best practices of leadership in a technology rich environment and lessons learned through the KAL-Tech Academy will be collected and posted to the web site, www.taken.org.	**Outcome 1.2b** Video clips of these best practices along with faculty and student evaluation and feedback will be included with these best practices.

Equity and Access

According to the National Association of State Boards of Education (NASBE), "e-learning can help students visualize and comprehend difficult-to-understand concepts through such methods as simulations and opportunities to engage in real-world problem-solving" (NASBE, 2001).

"As we enter the 21st century, every citizen of Kansas should benefit from the global digital revolution in information technology."
- The KAN-ED Vision Statement.

Innovative teaching and learning using the tools that empower and enliven events in and out of classrooms should be encouraged. Telecommunications infrastructure, and the ability to use it to best advantage, is one of many challenges that Kansas schools face in this first decade of the 21st century.

Innovative Delivery Strategies

In a 2001 survey, the Kansas State Department of Education found that all school districts in Kansas had at least one connection to the Internet, however, the bandwidth for that connection varied considerably as responses from 286 school districts indicate. Of all respondents, only 73 school districts (26 percent) reported having T1 (1.5 megabits per second) connections to the Internet.

In order to respond to this disparity of access, particularly in rural areas, the Kansas State Department of Education supports the full implementation of KAN-ED, the statewide backbone. In May 2002, the Kansas House and Senate established a funding mechanism (SB 614) to support public access to the Internet through a high speed network. When deployed, this high speed network will integrate access to web-based learning support, distanced learning activities, and other e-learning tools such as full duplex, interactive audio and data rich digital media resources supporting exemplary educational programming. See the KAN-ED web site for more details (http://www.kan-ed.org).

Recommendations to help Kansas ensure equity and access to delivery systems can be found in Equity and Access Goal IV.

Technical Assistance

Technical assistance is available to every Kansas school district through the Technology Assistance for Kansas Educators (TAKE) Team. The TAKE Team web site (http://www.taken.org) provides current information to Kansas schools on all technology related topics, and is the point of service location for Kansas technology initiatives. TAKE has established four projects designed to bring assistance to classrooms and school districts: Technology Planning, Student Leadership, Professional Development, and Administrative Leadership.

Recommendations to help Kansas ensure equity and access to technology assistance can be found in Equity and Access Goal V.

Hardware and Software

While Kansas schools as a whole have made progress in acquiring the necessary hardware and software to enhance learning and teaching, these acquisitions must be maintained and updated as technology continues to advance. On a comparative basis, Kansas schools vary widely according to the hardware, software and training available to students and teachers (2001 KSDE Technology Survey).

Through the certified district technology planning process, hardware, software, and training issues are being monitored at the local level. KSDE continually supports and assists schools to ensure equitable access in order to maintain a student-to-computer (multimedia, Internet accessible, appropriate curricula software) ratio that meets or exceeds the national average.

Recommendations to help Kansas ensure equity and access to technology assistance can be found in Equity and Access Goal VI.

The integration of technology will be used to support student achievement of rigorous academic standards. To realize the full potential of integrating converging technologies, the following goals must be met:

Equity and Access GOAL IV: All Kansas LEAs will have access to broad-band, high speed networks in order to improve learning and instruction for all students.

Equity and Access GOAL V: All Kansas LEAs will have access to high quality technical assistance via TAKE, HPR*TEC, Education Service Centers, etc. to support research, development and implementation activities linked to certified technology plans.

Equity and Access GOAL VI: All Kansas LEAs will have a student-to-computer (multimedia and Internet Accessible) ratio that meets or exceeds the national average.

Equity and Access GOAL IV: All Kansas LEAs will have access to broad-band, high speed networks in order to improve learning and instruction for all students.	
Objective 1.1 KSDE will support the implementation of KAN-ED, which will provide a high-speed, managed, network that can provide access to high quality data, video and voice connections.	
Task 1.1 KSDE will organize committees of stakeholders to assist LEA's in the development and implementation of their local plans to install the necessary technology resources to take advantage of the high speed access through KAN-ED.	**Outcome 1.1** The total number of participating LEA's will reach 80% by the end of Year One.
Objective 2.1 KSDE will explore, encourage and support initiatives to insure that all schools, in particular underserved or high-need areas, have access to high-speed networks.	
Task 2.1a KSDE will advocate with state oversight agencies to promote lower telecommunication tariffs for LEAs.	**Outcome2.1a** Services are delivered and costs are managed so that schools gain access, add value, and take full advantage of the high speed network.
Task 2.1b The high speed network will be broadly accessible to all education stakeholders in the state.	**Outcome 2.1b** The schools and districts connect with the network and use the Internet and other state of the art educational technology resources to improve academic achievement.

Equity and Access GOAL V: All Kansas LEAs will have access to high quality technical assistance via TAKE, HPR*TEC, Education Service Centers, etc. to support research, development and implementation activities linked to certified technology plans.	
Objective 1.1 KSDE will provide technical assistance resources to schools to support local technology plan initiatives.	
Task 1.1 TAKE will support the integration of technology into school curricula by providing professional development for students, teachers and administrators.	**Outcome 1.1** KSTL (Kansas Student Technology Leaders) and KAL-Tech (Kansas Academy for Leadership in Technology) will continue and expand to meet the changing needs of Kansas schools.
Task 1.2 TAKE administers and supports the TLCF and Enhancing Education Through Technology (EETT) grant programs.	**Outcome 1.2** RFPs and grant awards will be available for all eligible LEAs that met federal and state requirements.
Task 1.3 TAKE will administer the technology planning approval process.	**Outcome 1.3** Each LEA will have a certified technology plan and these plans will be reviewed on a three-year rotation.
Task 1.4 TAKE will coordinate efforts of support agencies across the state working on technology issues affecting K-12 schools.	**Outcome 1.4** KTAB (Kansas Technology Advisory Board) will continue to serve in an advisory capacity to TAKE and KSDE.
Task 1.5 Through CICS and TAKE, KSDE will maintain web based data collection, access to resource materials, and provide information dissemination services to all Kansas schools.	**Outcome 1.5** Current information is updated and posted on the KSDE web site.

Equity and Access GOAL VI: All Kansas LEAs will have a student-to-computer (multimedia and Internet Accessible) ratio that meets or exceeds the national average.	
Objective 1.1 KSDE will explore, encourage and support initiatives to ensure that all schools, in particular those in underserved or high-need areas, have access to funding opportunities to acquire and effectively use up-to-date computer equipment.	
Task 1.1a KSDE will provide technical assistance in seeking out and applying for private and public funding for technology initiatives for high-need LEAs.	**Outcome 1.1a** Ninety percent or more of Kansas LEAs will have a student-to-computer ratio (multimedia and Internet Accessible) that meets or exceeds the national average by 2006.

Evaluation and Accountability

Evaluation Plan

Program evaluation activities will provide a basis for continuous improvement toward meeting the goals and objectives addressed in the KSDE Technology Plan. The degree of involvement of stakeholders in the process of revising and writing standards, selecting and validating assessments, and implementing leadership components ensures continuous feedback toward meeting student achievement goals.

Independent evaluation will result in annual project reports for each of the years supported by the 'Enhancing Education Through Technology' State Grant. The reports will be delivered to the Kansas State Board of Education and will be used to establish future policies and focus resources to improve student achievement.

The purposes of this evaluation plan are:

- To evaluate the implementation of the new Enhancing Education through Technology (EETT) state grant program.
- To provide a profile of the implementation and use of educational technology in elementary and secondary schools in Kansas, with an emphasis on the role of the new EETT state grant program in such implementation and use.
- To build on national scale studies to provide trend data on the implementation and use of educational technology in elementary and secondary schools in the U.S., with an emphasis on the role of the new EETT state grant program.
- To document inequities associated with hardware, software, and connectivity to serve as a foundation to address access issues.

The opportunity for Kansas to share and compare research findings and data with other states will contribute to a useful national dialogue. Progress reports and evaluation studies will be disseminated via the KSDE website and through meetings in the field for school leadership and technology personnel. Nationally, findings will be reported to the Department of Education and disseminated through TAKE Team participation in national meetings and conferences.

Recommendations to help Kansas with evaluation processes can be found in Evaluation and Accountability Goal VII.

Non-supplant Assurance

The State Grant for 'Enhancing Education Through Technology' will support planning, research, KSDE agency staffing for planning, directing, evaluating, oversight, and clerical support.

The Kansas State Department of Education offices are located near the state capitol in downtown Topeka. Office space is provided to staff at KSDE on an in-kind contribution basis. KSDE provides accessible facilities and meets federal and state regulations and building codes. All KSDE and grant-sponsored training activities occur in accessible locations as mandated by federal and state regulations. Services including interpreters, brailing, or other assistance are provided as needed at training sessions and meetings.

KSDE has its own computer network system and provides access to the internet and electronic mail. KSDE is also linked to a statewide interactive video network and has limited desktop conferencing capabilities. A management information system for education service resources and data collection is operational, and enrollment counts from local education agencies are reported electronically. An overview of KSDE programs and all accountability reports from schools are available at http://www.ksde.org/ for review.

Recommendations to help Kansas provide assurances to meet federal requirements can be found in Evaluation and Accountability Goal VIII.

Data-Based Decision Making

KSDE recognizes that the full impact of the integration of technology into curriculum and instruction cannot occur without access to information. In its Strategic Directions, the leadership team of KSDE has provided for the development of web-accessible KSDE data systems to enable data-based decision-making at all levels of K-12 education. The implementation of KAN-ED, the statewide network, will enable KSDE to develop and deliver high quality data collection systems that will be accessible to all Kansas schools regardless of geographic location.

Recommendations to help Kansas provide for data-based decision making at all Kansas schools are found in Evaluation and Accountability Goal IX.

The integration of technology will be used to support student achievement of rigorous academic standards. To realize the full potential of integrating converging technologies, the following goals associated with evaluation and assurance must be met:

Evaluation and Accountability Goal VII: Through ongoing evaluation, KSDE will measure the impact of technology integration on student learning outcomes as measured by state and local assessments.

Evaluation and Accountability GOAL VIII: Through department/division team leaders, KSDE reviews and adjusts policies and procedures to be in full compliance regarding non-supplant assurances with all federal regulations governing K-12 education.

Evaluation and Accountability Goal IX: Through collaboration of CICS with all department/division team leaders, KSDE will deliver accessible data systems to enable data-based decision making at all Kansas schools regardless of geographic location.

Evaluation and Accountability Goal VII: Through ongoing evaluation, KSDE will measure the impact of technology integration on student learning outcomes as measured by state and local assessments.	
Objective 1.1 Through partnerships with the HPR*TEC (High Plains Regional Technology in Education Consortium), ongoing assessment instruments will be developed to monitor the student learning impact of all projects funded through Enhancing Education Through Technology Grants.	
Task 1.1a Design and implement an effective evaluation plan that can provide assistance for federal reporting procedures.	**Outcome 1.1a** Delivery of a plan that contains scientifically-based research involving the quantitative and qualitative collection and analysis of data focusing on achievement and instructional data as well as the equity and access data.
Task 1.1b Ongoing assessments of the Technology Rich Classroom projects will include onsite visits and classroom observations as well as evaluation of classroom activities and ongoing evaluation of state and local academic assessments.	**Outcome 1.1b** The results of all assessments will be shared in a variety of venues, including online at www.taken.org, at public meetings at KSDE, at conferences including the annual Kansas Professional Development Conference, the annual Virtual Learning Symposium, and the annual Technology Conference, and in a white paper report.

Evaluation and Accountability GOAL VIII: Through department/division team leaders, KSDE reviews and adjusts policies and procedures to be in full compliance regarding non-supplant assurances with all federal regulations governing K-12 education.	
Objective 1.1 KSDE will comply with all federal requirements for administering, distributing, reporting, and evaluating the components of ESEA/"No Child Left Behind" Title II Part D.	
Task 1.1a Submit the Kansas Consolidated Plan to DOE – the technology plan emphasizes the components associated with Title II, Part D.	**Outcome 1.1a** Receive approval of the Kansas Consolidated Plan from DOE.
Task 1.1b Design, implement and administer grant application process for all K-12 technology activities funded through ESEA Title II, Part D.	**Task 1.1b** RFP, application, selection, dissemination activities will be directed through KSDE.

Evaluation and Accountability GOAL IX: Through collaboration of CICS with all department/division team leaders, KSDE will deliver accessible data systems to enable data-based decision making at all Kansas schools regardless of geographic location.	
Objective 1.1 KSDE will, through collaboration of CICS with all KSDE department/division team leaders, coordinate all data collection services to ensure equal access to assessment, financial, attendance, and other pertinent data that will enable quality data-driven decision making processes at all Kansas Schools.	
Task 1.1a KSDE will foster and enable collaborative efforts between all departments/divisions to design data collection web-based services that fill the needs of all Kansas schools.	**Outcome 1.1a** CICS will oversee the design and development of web-based data collection and dissemination.
Task 1.1b Through KAN-ED, all schools will implement quality data collection and submission through web-based services at KSDE.	**Task 1.1b** All schools will implement high quality data-based decision making processes and have access to needed information through KSDE web-based data services.

Summary

As educators, changing the world is something we know we can accomplish. In the 21st Century, technology will continue to play an even more integral part in bringing the world to our learners. The vision of learning that makes information literacy a central function can only be possible if technology is fully integrated. Educators can engage learners with more challenging curriculum and broaden the scope of instructional practices that lead to improved student learning. These schools systems provide and seek excellent technical support for incorporating technology in the learning environment. Expanding professional development is necessary and must include sustained approaches that extend to include new pedagogical knowledge and practices emerging with broad spectrum e-learning. These new learning environments need high quality, well organized, digital content ready for classroom use and the Kansas State Department of Education is certain that investing in information systems that improve efficiencies and operations, and expanding research and assessment will insure accountability and continuous improvement for all schools.

Resources

"An Educator's Guide to Evaluating the Use of Technology in Schools and Classrooms," U.S. Department of Education, Office of Educational Research and Improvement, 1998.

"Any Time, Any Place, Any Path, Any Pace: Taking the Lead on e-Learning Policy," National Association of State Boards of Education (NASBE), 2001.

"Connecting the Bits: A reference for using technology in teaching and learning in K-12 schools," The National Foundation for the Improvement of Education. Available online at http://www.nfie.org/

"Creating Practical Evaluation Templates for Measuring the Impact of Instructional Technology," North Central Regional Educational Laboratory, July 2002. Available online at http://www.ncrel.org

"e-Learning: Putting a World Class Education at the Fingertips of all Children," The National Educational Technology Plan, U.S. Department of Education, December 2000.

"E-Rate and the Digital Divide: A Preliminary Analysis From the Integrated Studies of Educational Technology," U.S. Department of Education, Planning and Evaluation Service, 2000.

"Factors Influencing the Effective Use of Technology for Teaching and Learning," SEIR*TEC@SERVE, Durham, NC, 2001. Available online at http://www.seirtec.org/

"Forum on Technology in Education: Envisioning the Future," U.S. Department of Education, Office of Educational Technology, 1999.

Fulton, Kathleen. "Learning in a Digital Age: Insights Into the Issues - The Skills Students Need for Technological Fluency," Milken Family Foundation, 1997.

"Generation www.Y Exemplary Program," Report. Available online at http://www.genyes.org/genwwwy/

Jukes, Ian and Ted McCain. "New Visions for Teaching & Learning in the 21st Century," The InfoSavvy Group and Cystar, 2001.

KAN-ED Act, Kansas Information Highway for Schools, Libraries, and Hospitals. Available online at http://www.kan-ed.org

Kansas Curricular Standards, Kansas State department of Education. Available online at http://www.ksde.org

Kansas Library Media Standards, Kansas State Department of Education, 2000. Available online at http://www.ksde.org/outcomes/library.html

Kansas Technology Plan, Kansas State Department of Education, 1997.

Kansas State Board of Education, Board Goals, adopted April 2001. Available online at http://www.ksde.org

Kansas State Department of Education Technology Survey, 2001.

Kearsley, Greg and Ben Shneiderman. "Engagement Theory: A framework for technology-based teaching and learning." Available online at http://home.sprynet.com/~gkearsley/engage.htm

Kimble, Carol. "The Impact of Technology on Learning, Making Sense of the Research," Mid-Continent Regional Educational Laboratory Policy Brief, May 1999.
Lewis, Theodore. "Research in Technology Education – Some Areas of Need," *Journal of Technology Education*, Vol. 10 No. 2, Spring 1999.

McNabb, Mary J. et.al. "Technology Connections for School Improvement Planners' Handbook," North Central Regional Educational Laboratory, 1999.

"National Educational Technology Standard for Students," International Society for Technology in Education, 1998. http://www.iste.org/standards/index.html

"National Educational Technology Standard for Teachers," International Society for Technology in Education, 2000. http://www.iste.org/standards/index.html

Schacter, John. "The Impact of Educational Technology on Student Achievement," Milken Exchange on Education Technology, 1999. Available online from http://web.mff.org/pubform.taf

"Technology Standards for School Administrators," Technology Standards for School Administrators (TSSA) Collaborative, 2000. Available at http://cnets.iste.org/tssa/

"The Power of the Internet for Learning: Moving from Promise to Practice. Report of the Web-Based Education Commission to the President and the Congress of the United States," U.S. Department of Education, December 2000. Available online at http://www.ed.gov/technology

"The Road Ahead Evaluation," report submitted to the National Foundation for the Improvement of Education by ISTE - the International Society for Technology in Education, 1998. Available on NFIE's web site, http://www.nfie.org/

Thornburg, David. "Renaissance 2000," Thornburg Center 2000. Available online at http://www.tcpd.org

Tinker, Robert. "Ice Machines, Steamboats, and Education: Structural Change and Educational Technologies." The Concord Consortium. Available online at http://www.concord.org

Trilling, Bernie and Paul Hood. "Learning, Technology, and Education Reform in the Knowledge Age." Originally published in *Educational Technology*, May/June 1999. Available online at http://www.wested.org

"21st Century Literacy in a Convergent Media World," Bertelsmann Foundation and AOL Time Warner Foundation, March 2002. Available online at http://21stcenturyliteracy.org/white/

Wetzel, Keith and Helen Padgett. "Integration of Technology Observation Instrument." available online at http://www.west.asu.edu/pt3

"When Can You Start?" Information Technology Association of America, April 2001.