

Indicators for
Measuring
Progress in
Advancing
Classroom
Technology



ALABAMA
TECHNOLOGY PLAN

2007 - 2012

K-12

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“In this world of rapid change, where information is expanding exponentially and increasing in complexity, learning is a survival skill. Mastering the basics—reading, writing, and arithmetic—is as important as ever, but is no longer enough. Today’s students need to learn more than previous generations. They need to know how to find and use new information, to make informed decisions about complicated issues, and to collaborate as part of a team. Since the pace of change shows no signs of slowing in the future, students also need to learn how to learn.”

~ The George Lucas Educational Foundation¹

¹ (1997) *Live & Learn*, The George Lucas Educational Foundation, pp. 14.

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Dee Bennett, Special Education/Psychometrics
Troy City Schools

Gloria Bush
Coordinator of Instructional Technology and
Microcomputer Services
Mobile County Schools

Pam Fossett, Director
Education Policy and Practice

Randy Fulmer
Alabama SuperComputer Authority

Saundra Gwinn, Title I Director
Montgomery Public Schools

Vickie Hale, Drafting Design Technology
Florence High School
Florence City Schools

Lisa Hathcock, Library Media Specialist
Weaver Elementary School
Calhoun County Schools

Lillian Jefferson, Education Specialist
Montgomery County Schools

Alesa Judd, Technology Coordinator
Bibb County Schools

Rich McAdams, Jr.
Board Member, District 1
Madison County Schools

Leonita Nelson, Curriculum Specialist
McKee Jr. High School
Montgomery County Schools

Denise Oliver
Alabama SuperComputer Authority

Allan Pizzato, Executive Director
Alabama Public Television

Susan Poling, Technology Coordinator
Shelby County Schools

Marilyn Staffo
Coordinator of Faculty Development
Office of Information Technology
The University of Alabama

Rita Thomas, Assistant Principal
Hillcrest High School
Tuscaloosa County Schools

Stacey Weaver, Technology Coordinator
Pell City Schools

Technology Initiatives Staff

Catrinna Barber
Jerome Browning
Misty Comfort
Martha Donaldson
Ginger Eastman
Donna Fuller
Cindy Ham

Cheri Hayes
Mary (Meg) Lowry
Don Marchant
Carolyn Mosley
Shannon Parks
Earlene Patton
Hannis Roberts

The Purpose of This Plan

The state of Alabama has made great strides toward obtaining technology resources for schools over the past decade. In order to continue the transformation to a technology-literate society, the term “learner” must be redefined to incorporate all people who are a part of the school environment. The term “learner,” as referred to in this document, includes teachers, students, administrators, support staff, parents, and the community at large. Rapid changes in technology necessitate that we move to a more collaborative structure for learning.

As Alabama enters the new millennium, we must integrate new technologies into learning environments wherever students are actively engaged in dynamic, vibrant learning activities with other “learners.” The entire school will be included in this process. It is with this idea in mind that the *IMPACT (Indicators for Measuring Progress in Advancing Classroom Technology)* document was created as a planning guide for schools and districts.

The foundation of the *IMPACT* document is based on three basic principles: When learning can be observed, it can be measured. When learning can be measured, it can be improved. When learning can be improved, students benefit from the best of what education has to offer. Alabama’s students deserve the best.

The purpose of the *IMPACT* document is to make recommendations for all stakeholders’ effective use and integration of technology in the classroom and to provide guidelines for the creation of a unified technological infrastructure that supports 21st century learning. It also seeks to foster the development and the implementation of instructional and pedagogical professional development in technological and digital learning. Administrators and teachers can then have access to information that will enable them to make data-driven decisions and improve student learning. Although the recommendations and benchmarks in this document contain the essential conditions necessary to use technology such as funding, support, and training, the primary focus of *IMPACT* is to promote collaborative, student-generated, and meaningful learning.

Technology in Support of Teaching and Learning

The impact that technology has had on global, societal, political, and economic environments over the past 15 years has cemented its place in education. It is widely recognized that thriving in the world today requires the ability to think critically, analyze information from various sources, write or present well-reasoned arguments, and develop solutions to interdisciplinary problems. Integrated effectively, technology presents not only opportunities to develop these essential skills, but provides a means for enhancing the learning process as a whole.

Decades of research into the effects of teaching with technology demonstrate that when appropriately applied, educational technology can enhance learning and achievement over traditional teaching methods.² A consistent theme in this research is that the benefits of educational technology cannot be separated from other variables that impact learning in the larger instructional context. Specifically, much of the research on technology use in schools confirms that introducing technology into the learning environment can make classrooms more student-centered, encourage cooperative learning, and stimulate increased teacher/student interaction. Researchers have documented a shift away from lectures and other teacher-centered forms of delivery to lessons that are more collaborative and project-oriented. In these environments, with technology as the catalyst, teachers become facilitators in project-oriented classrooms, with students increasingly assuming the role of directors of their own learning.

As such, the use of technology in inquiry-based learning can also be seen to provide students with opportunities to develop skills considered valuable in the workplace. According to the 2004 National Education Technology Plan, “We have clearly reached a turning point. All over this country, we see evidence of a new excitement in education, a new determination, a hunger for change. The technology that has so dramatically changed the world outside our schools is now changing the learning and teaching environment within them. Sometimes this is driven by the students themselves, born and comfortable in the age of the Internet.”³ The use of a wide range of technologies in schools can thus support and prepare students for work settings of the future.

“Today’s education system faces irrelevance unless we bridge the gap between how students live and how they learn. Schools are struggling to keep pace with the astonishing rate of change in students’ lives outside of schools. Students will spend their adult lives in a multitasking, multifaceted, technology-driven, diverse, vibrant world—and they must arrive equipped to do so.”⁴

Both the National Education Technology Plan and Learning for the 21st Century clearly support much more than the mastery of specific technology tools and instead drive the application of educational technology in an open-ended manner for the development of a wide range of valuable skills, attitudes, and dispositions. Technology is a powerful tool for exploration, communication, and collaboration, and it is exactly these 21st century skills that lie at the heart of the Alabama *IMPACT* Technology Plan.

² http://www.ed.gov/rschstat/eval/tech/techconf00/mccombs_paper.html

³ <http://www.NationalEdTechPlan.org>

⁴ <http://www.21stcenturyskills.org>

Alabama's Vision for Educational Technology

It is the vision of Alabama's educators and leaders to leverage the unique powers of technology to provide challenging, stimulating learning opportunities for students throughout the state. We believe that seamless integration and equitable access to the most up-to-date tools and applications into the teaching and learning process will benefit students by equipping them with the knowledge, skills, and dispositions essential to success in 21st century life and work. As educators continue to create learning environments that offer access to a wealth of resources and enrichment opportunities, students will, in turn, be better prepared to become successful adults and herald in the next generation of great pioneers, inventors, and leaders.

In order to accomplish this vision, Alabama's policymakers, school leaders, and teachers must all assume a role in achieving the goals and objectives outlined in the following plan.

The Four Goals of IMPACT 2007-2012

Alabama *IMPACT* provides a set of goals, objectives, progress indicators, and targets for integrating technology across the curriculum. Data collection methods are tied to each objective and are provided to help schools and districts assess their progress toward meeting the indicators established in this document.

The overarching vision of *IMPACT* is to leverage the unique powers of technology to provide challenging, stimulating learning opportunities for students throughout the state. This vision is further articulated into four component goals. These goals are intended to support the vision and provide a framework for the design of local school and school system technology plans. Further, the goals and objectives exist as the framework for assessing the state of Alabama's progress of advancing classroom technology across the state. Data collected on the status of this progress is reported to the U.S. Department of Education as part of federal reports⁵. Data collected during the first year (Spring 2007) of this plan will form the baseline data for subsequent *IMPACT* progress reports over the remaining years of the plan. Once this baseline data has been established, the ALSDE will establish targets for measured growth beyond the baseline. These targets will be reported in subsequent annual updates to the *IMPACT* document.

The four goals for Alabama *IMPACT* are:

- Goal 1:** All Alabama students, teachers, and administrators⁶ will effectively use technology as an integrated tool for teaching, leading, and learning to master local, state, and national standards.
- Goal 2:** All Alabama students, teachers, and administrators will benefit from a broad range of educational opportunities and resources through the use of technology.
- Goal 3:** All Alabama teachers and administrators benefit from high-quality, research-based professional development and supports necessary to achieve local, state, and national standards and courses of study.
- Goal 4:** All Alabama students, teachers, and administrators will have access to the appropriate technology resources and infrastructure necessary to support teaching, leading, and learning.

⁵ See the **Evaluation** section of this plan for information on data collection.

⁶ Please see the **Glossary** of this plan in the **Appendix** for the working definition of these groups as used throughout this plan.

GOAL 1: TECHNOLOGY INTEGRATION AND MASTERY OF STANDARDS

All Alabama students, teachers, and administrators will effectively use technology as an integrated tool for teaching, leading, and learning to master local, state, and national standards.

Objective	Indicator ⁷	ALSDE Data Collection ⁸
1.1 Students meet the Technology Literacy Content Standards found in Alabama's Technology Course of Study.	The percentage of students who: <ul style="list-style-type: none"> At eighth grade demonstrate mastery of the technology course of study skills At twelfth grade meet the minimum technology graduation requirements 	<ul style="list-style-type: none"> Monitoring process District Technology Survey
1.2 Students regularly make use of current and emerging technology in the learning process.	The percentage of students who: <ul style="list-style-type: none"> Make use of real-world applications of technology Apply technology to inquiry-based projects Learn and use skills necessary for participation in the global community 	<ul style="list-style-type: none"> Monitoring process District Technology Survey
1.3 Teachers meet local, state, and national technology standards (see AL State Technology Standards in the Appendix of this document).	The percentage of teachers who participate in technology professional development and can score at the "Proficient" level as measured by the teacher self-assessment tool	<ul style="list-style-type: none"> District Technology Survey Teacher self-assessment skills tool

⁷ Beyond the first year of this plan, specific annual targets will be created. These targets will be percentage increases over the baseline established via data collection in the first year.

⁸ This column shows the mandatory data reported back to ALSDE via the results of the annual District Technology Survey and annual district plans. Additional data will be collected by districts in response to the locally created performance indicators, and this data will only be reported to ALSDE in aggregate. See the **Evaluation** section of this plan for more information.

Objective	Indicator	ALSDE Data Collection
1.4 Teachers effectively and equitably map instructional technologies to specific content standards and levels of student learning.	The percentages of teachers who: <ul style="list-style-type: none"> • Develop and implement a classroom management plan to ensure equitable and effective student access to available technology resources • Demonstrate the ability to select and use appropriate technology tools and resources • Select and use technology, media, bulletin boards, models, and/or displays • Develop the lesson; use technology when appropriate • Use technology that is directly related to the purposes and objectives of the lesson and the skills/concepts to be mastered • Plan creative and innovative activities appropriate to objectives, including the use of technology 	<ul style="list-style-type: none"> • Monitoring process • District Technology Survey
1.5 Teachers appropriately and regularly assign learning activities that integrate the use of technology tools.	The percentage of teachers who: <ul style="list-style-type: none"> • Facilitate students' individual use of technologies for communication • Facilitate students' collaborative use of technologies for communication • Create student activities that reflect the ways technology is used in the world outside of school • Facilitate technology-enriched activities that incorporate inquiry-based learning 	<ul style="list-style-type: none"> • Monitoring process • District Technology Survey
1.6 Teachers model the appropriate use of technology tools and resources.	The percentage of teachers who appropriately and routinely use technology tools within the context of the teaching and learning environment.	<ul style="list-style-type: none"> • Monitoring process • District Technology Survey
1.7 Teachers use technology to gather and analyze data for improving student achievement.	<ul style="list-style-type: none"> • Percentage of teachers who use technology to monitor student progress • Percentage of teachers who use technology to inform instruction 	<ul style="list-style-type: none"> • Monitoring process • District Technology Survey

Objective	Indicator	ALSDE Data Collection
1.8 Educators use technology to communicate with stakeholders at the local, district, and state level.	<ul style="list-style-type: none"> Percentage of teachers who use technology for communication (students, parents, teachers, school, community) Percentage of administrators who use technology for communication (students, parents, teachers, school, community, district, and state) 	<ul style="list-style-type: none"> Monitoring process District Technology Survey
1.9 Administrators meet local, state, and national standards (see AL State Technology Standards for Administrators in the Appendix of this document).	<p>The percentage of administrators who:</p> <ul style="list-style-type: none"> Participate in technology professional development Develop and communicate a shared vision through the comprehensive integration of technology Develop and implement an approved technology plan Develop and communicate a shared vision for the appropriate and equitable selection of technology resources 	<ul style="list-style-type: none"> Approved local technology plan Technology inventory District Technology Survey
1.10 Administrators use technology to gather and analyze data to assess instructional effectiveness and monitor student achievement.	<ul style="list-style-type: none"> Percentage of administrators who use technology to assess instructional effectiveness Percentage of administrators who use technology to monitor student achievement 	<ul style="list-style-type: none"> Monitoring process District Technology Survey

GOAL 2: EXPANDING OPPORTUNITIES THROUGH TECHNOLOGY

All Alabama students, teachers, and administrators will benefit from a broad range of educational opportunities and resources through the use of technology.

Objective	Indicator ⁹	ALSDE Data Collection ¹⁰
2.1 Educators will foster and nurture an environment that supports innovative uses of technology.	<ul style="list-style-type: none"> Percentage of administrators who foster and actively support a positive environment for technology Percentage of districts planning for, piloting, and implementing innovative technologies 	<ul style="list-style-type: none"> Review of annual district and school technology plans
2.2 Technology resources are provided to support the learning and technology needs of the school and community.	<ul style="list-style-type: none"> Percentage of students who utilize state, district, and/or school Web-based resources outside the school day Percentage of teachers who: <ul style="list-style-type: none"> Utilize state, district, and/or school Web-based resources outside the traditional school day Use Web-based resources in instructional planning Use stand-alone resources in instructional planning Use district or school network resources in instructional planning Use Web-based resources in instructional planning Percentage of administrators who utilize state, district, and/or school Web-based resources outside the traditional school day Percentage of community members who utilize state, district, and/or school Web-based resources outside the traditional school day 	<ul style="list-style-type: none"> Monitoring process District Technology Survey Reports from annual district technology plans

⁹ Beyond the first year of this plan, specific annual targets will be created. These targets will be percentage increases over the baseline established via data collection in the first year.

¹⁰ This column shows the mandatory data reported back to ALSDE via the results of the annual District Technology Survey and annual district plans. Additional data will be collected by districts in response to the locally created performance indicators, and this data will only be reported to ALSDE in aggregate. See the **Evaluation** section of this plan for more information.

Objective	Indicator	ALSDE Data Collection
2.3 Distance learning opportunities are provided to enhance learning and access to curriculum content.	<ul style="list-style-type: none"> • Percentage of districts providing students with distance learning opportunities • Percentage of students <ul style="list-style-type: none"> ◦ Enrolled in distance learning courses ◦ Participating in virtual field trips • Percentage of teachers using distance learning technologies • Percentage of teachers trained in distance learning 	<ul style="list-style-type: none"> • Monitoring process • District Technology Survey • Reports from annual district technology plan updates • Reports from state ACCESS Distance Learning enrollments and training

GOAL 3: TECHNOLOGY PROFESSIONAL DEVELOPMENT

All Alabama teachers and administrators benefit from high-quality, research-based professional development and supports necessary to achieve local, state, and national standards and courses of study.

Objective	Indicator ¹¹	ALSDE Data Collection ¹²
3.1 Teachers, administrators and school staff are provided high-quality, research-based, job-embedded, technology professional development that is aligned with local, state, and national standards and course of study content standards.	<ul style="list-style-type: none"> Professional development is high-quality; fulfills local, state, and national standards and course of study content standards Percentage of teachers who participate in technology professional development programs that fulfill local, state, and national standards and course of study content standards Percentage of administrators who participate in technology professional development programs that fulfill local, state, and national standards and course of study content standards 	<ul style="list-style-type: none"> Local technology plan updates and the professional development reporting – separated according to teacher versus administrator participation – to include topics with specific references to each technology standard that the professional development addresses contained in these annual updates Monitoring process District Technology Survey Reports from professional development software
3.2 Teachers and administrators are provided with adequate resources (such as release time, compensation, reimbursement, materials, etc.) to enable their participation in professional development opportunities within the district and off-site.	<ul style="list-style-type: none"> Percentage of teachers who have been provided adequate resources to participate in professional development Percentage of administrators who have been provided adequate resources to participate in professional development 	<ul style="list-style-type: none"> Local technology plan updates and the professional development reporting – separated according to teacher versus administrator participation - contained in these annual updates Monitoring process District Technology Survey

¹¹ Beyond the first year of this plan, specific annual targets will be created. These targets will be percentage increases over the baseline established via data collection in the first year.

¹² This column shows the mandatory data reported back to ALSDE via the results of the annual District Technology Survey and annual district plans. Additional data will be collected by districts in response to the locally created performance indicators, and this data will only be reported to ALSDE in aggregate. See the **Evaluation** section of this plan for more information.

Objective	Indicator	ALSDE Data Collection
3.3 Administrators use a variety of evaluation data to make decisions related to technology professional development.	<ul style="list-style-type: none"> • Percentage of school leaders who use evaluation data to inform decisions related to technology professional development • Percentage of teachers who report that technology professional development meets their needs 	<ul style="list-style-type: none"> • Monitoring process • District Technology Survey • Reports from local plan evaluation protocol (via annual plan updates), such as focus groups, local surveys, etc., tied to locally produced performance indicators • Reports from professional development software

GOAL 4: TECHNOLOGY INFRASTRUCTURE

All Alabama students, teachers, and administrators will have access to the appropriate technology resources and infrastructure necessary to support teaching, leading, and learning.

Objective	Indicator ¹³	ALSDE Data Collection ¹⁴
4.1 Instructional spaces, library media centers, and administrative offices have sufficient network bandwidth to support the learning, communication, and administrative goals of the district.	<ul style="list-style-type: none">• Percentage of instructional spaces that have sufficient network bandwidth as determined by local technology infrastructure audits and as reported in annual local technology plan updates• Percentage of library media centers that have sufficient network bandwidth as determined by local technology infrastructure audits and as reported in annual local technology plan updates• Percentage of administrative offices that have sufficient network bandwidth as determined by local technology infrastructure audits and as reported in annual local technology plan updates	<ul style="list-style-type: none">• Reports from district capital plan• Reports from annual district technology plan• Monitoring process

¹³ Beyond the first year of this plan, specific annual targets will be created. These targets will be percentage increases over the baseline established via data collection in the first year.

¹⁴ This column shows the mandatory data reported back to ALSDE via the results of the annual District Technology Survey and annual district plans. Additional data will be collected by districts in response to the locally created performance indicators, and this data will only be reported to ALSDE in aggregate. See the **Evaluation** section of this plan for more information.

Objective	Indicator	ALSDE Data Collection
4.2 Districts have implemented the required Internet security tools to enable teachers, administrators, and students convenient, useful, and safe access to the Internet.	<ul style="list-style-type: none"> • Percentage of students demonstrating Internet security tools • Percentage of teachers demonstrating Internet security tools • Percentage of administrators demonstrating Internet security tools 	<ul style="list-style-type: none"> • Reports from annual district technology plan • Monitoring process
4.3 Schools will have a sufficient number of Internet-enabled computers and the infrastructure necessary to support learning, communication, and administrative goals of the district.	<ul style="list-style-type: none"> • The ratio of students to Internet-enabled computers and administrators to Internet-enabled computers. • The ratio of students to computers and administrators to computers. 	<ul style="list-style-type: none"> • Reports from annual district technology plan • Reports from district capital plan • Monitoring process
4.4 Schools will have a sufficient ratio of technology tools available to support the learning, communication, and administrative goals of the district.	The ratio of students to: <ul style="list-style-type: none"> • Digital cameras • Scanners • Printers • Digital projectors or TV displays 	<ul style="list-style-type: none"> • Reports from annual district technology plan • Monitoring process
4.5 District technology budgets represent at least 5% of each district's total budget.	Percentage of district technology budgets that are at least 5% of the total district budget and that include allocations for professional development, hardware, software, retrofitting, support, replacement costs, and connectivity	<ul style="list-style-type: none"> • Reports from annual district technology plan • Monitoring process
4.6 The district provides a sufficient ratio of technical staff to support student, teacher, and administrator technology use.	The ratio of full-time technical support person to computers as documented on annual district technology plan updates	<ul style="list-style-type: none"> • Reports from annual district technology plan • Monitoring process

Objective	Indicator	ALSDE Data Collection
4.7 The district provides a sufficient ratio of persons to support teachers and administrators in their efforts to achieve technology competency and to integrate technology into the curriculum.	The ratio of instructional technology integration staff to teachers and administrators as documented on annual district technology plan updates	<ul style="list-style-type: none"> • Reports from annual district technology plan • Monitoring process
4.8 Districts and schools will create and maintain Web sites as vehicles for communicating to parents and the community, and extending school resources to students outside of the school day.	<ul style="list-style-type: none"> • Evidence of maintained and updated district Web site • Percentage of schools that have actively used Web sites (as part of district Web sites) that are designed to communicate to parents, the community, and student users 	<ul style="list-style-type: none"> • Reports from annual district technology plan • Monitoring process

State Strategies for Technology Implementation

In order to realize our vision, it is necessary that the state of Alabama work toward ensuring fair and equitable access to technology throughout the schools and districts of this state. Embedded in this responsibility is the charge to provide all educators with ongoing opportunities for high-quality professional development focused on the use of technology to improve teaching and learning. Not only must educators be equipped with the tools of the 21st century, but they must be trained in their effective use in order to maximize the potential for attainment of the highest standards of learning.

The state also has a role in developing benchmarks and the mechanisms necessary for local leaders to assess progress on goals related to student and teacher technology proficiency and student achievement. Thus, the state will take a leadership role in providing access to current technology-related research and maintaining this knowledge in a database of information for use by educators. Through the mechanism of technology planning, the state will work with districts to foster the environments and conditions necessary for technology to be a meaningful part of the teaching and learning environment.

The following strategies are those specific actions that the ALSDE will pursue to support *IMPACT*'s four goals. Each of these strategies is described in greater detail in the **Appendix** of this plan.

State Strategies—Technology Integration and Mastery of Standards (Goal 1)

1. Provide leadership and coordination to ensure that Local Education Agencies (LEAs) implement K-12 technology in Technology Course of Study content standards in all Alabama public schools and incorporate these standards in the implementation of all Alabama content area Courses of Study.
2. Develop and promote State Board of Education-approved instructional technology leadership and teacher endorsement, and/or certification credential guidelines.
3. Develop methods for teachers and administrators to aid districts in implementing standards, i.e., assist packet, inventory to measure standards.
4. Expand Alabama Learning Exchange (ALEX) to include the following:
 - Maintain and expand the online searchable database of the Alabama Courses of Study content standards.
 - Maintain and expand the online bank of lesson plans aligned to state standards.
 - Develop a repository of best practices demonstrating the teacher and administrator technology standards and 21st century skills.
 - Build additional resources linked to courses of study that model methods to incorporate into curriculum real-world applications of technology that enhance

- higher-order thinking skills that include productivity, communication, problem-solving, and decision-making skills.
- Provide current research and best practices in effective models of technology integration throughout the school program.
 - Establish Web-based communities linking educators to share ideas on issues of immediate concern such as connecting higher education faculty and other outside experts to K-12 educators in need of assistance.
5. Support statewide initiatives such as Alabama Math, Science, and Technology Initiative (AMSTI), Alabama Reading Initiative (ARI), Leadership Congress, Teacher Quality, and Accountability Roundtable through Technology Initiatives programs, such as Technology in Motion, ACCESS Distance Learning, MarcoPolo, Alabama Virtual Library (AVL), and ALEX.
 6. Collaborate with other ALSDE sections to provide technical assistance to LEAs, especially high-need areas, in collecting and analyzing data.
 7. Expand opportunities for students to explore emerging technologies related to 21st century skills through advanced technology courses.
 8. Provide technical assistance and guidance to increase/enhance communication with/among stakeholders at the LEA and state level through the use of technology.

State Strategies—Expanding Opportunities Through Technology (Goal 2)

1. Provide access to technology resources for all students and teachers and administrators through technology-based programs such as Alabama Virtual Library (AVL), Alabama Learning Exchange (ALEX), MarcoPolo, APTPlus, eLearning for Educators, Technology in Motion, and Alabama ACCESS Distance Learning.
2. Provide opportunities such as the Alabama Educational Technology Conference (AETC) for educators to explore innovative use of technologies.
3. Provide all students access to distance learning opportunities according to the ACCESS Distance Learning Plan.
4. Provide technical support for the use of advanced technology incorporated into the curricula to develop and enhance information literacy, information retrieval, and critical-thinking skills of students through access to library media centers and library media programs.
5. Expand partnerships with professional organizations, i.e., Math, Science, Early Childhood, Library Media, Music, Health, Counselors, Principals, and Special Education, to promote infusion of technology integration throughout the K-12 curriculum.
6. Pursue business partnerships to recognize/reward technology-literate teachers working in rural/urban districts.
7. Promote technology resources for the community, parents, and educators through video presentations, brochures, and flyers.

State Strategies—Technology Professional Development (Goal 3)

1. Provide leadership, coordination, and monitoring to ensure that LEAs implement professional development standards (Alabama Technology Standards for Teachers and Administrators) that incorporate effective use of technology.
2. Provide support and coordination for the Technology in Motion (TiM) program to train teachers and administrators, especially in high-need areas, to use technology to improve learning and prepare students for 21st century skills.
3. Identify, disseminate, model, and conduct best practices for integrating technology tools and solutions within content areas.
4. Collaborate with higher education to improve pre-service K-20 education as well as strengthen in-service education in the use of advanced technology.
5. Provide a method for measuring the quality and follow-up impact of professional development offerings, e.g., follow-up surveys, inventories, and questionnaires.
6. Develop and disseminate a variety of methods and formats for providing high-quality professional development, such as online, face-to-face, professional learning groups, etc.
7. Monitor that LEAs follow state and federal guidelines for expenditures of professional development technology funds.
8. Coordinate and provide technology professional development to support schools that do not meet Adequate Yearly Progress (AYP) to help teachers and administrators identify technology as a strategy to improve performance.
9. Support statewide implementation of professional development software for registration, approvals, and reporting of professional development offerings and reporting of professional development offerings by districts, regional in-service centers, and the ALSDE.
10. Continue a partnership with Alabama Public Television to offer professional development modules through an online platform to teachers and administrative staff through the eLearning for Educators plan that includes ARI, AMSTI, and TiM.
11. Participate in national organizations and initiatives in order to reflect national trends and standards in implementing 21st century skills.

State Strategies—Technology Infrastructure (Goal 4)

1. Collect and report infrastructure data on school, system, and state report cards.
2. Collect data and provide to the public an annual technology report.
3. Research, develop, and implement tools to measure infrastructure.
4. Connect every public school and system in Alabama to a statewide broadband intranet to include ACCESS Distance Learning and state data collection with a minimum of 10 meg to all central office and high schools and 3 meg to all other schools.

5. Provide technical assistance and guidance to districts and schools for technology planning.
6. Provide technical assistance and guidance to districts to apply for technology and library media funds that include local, state, federal, and other funding sources.
7. Research and submit applications for federal, state, private, and other technology availability funding sources.
8. Promote total cost of ownership budgeting for technology by districts.
9. Provide state guidelines and funds for district technology coordinator position.
10. Request additional state funds to support the Education Ruler (Technology Availability).
11. Provide assistance to districts for cost-effective information technology procurement such as administering and providing oversight to the Technology Joint Purchasing Law.
12. Work in collaboration with other state initiatives to provide technical assistance to districts and schools on current Internet security tools and Internet safety practices.
13. Require and monitor that the school and district technology needs are addressed by district capital plans.
14. Provide technical assistance to districts in Web site development and maintenance.
15. Assist schools and local education agencies with planning technology need to meet emergency preparedness.
16. Provide technical assistance, guidance, and professional development to districts in E-Rate procurement guidelines.
17. Monitor that schools and districts spend state technology instructional funds only for technology purchases.
18. Update the online technology planning tool to include annual reporting of technology inventory and automatic results of district technology survey.

Evaluating the IMPACT Plan

In keeping with one of the central tenets of *IMPACT*—that measurement supports improvement—the Alabama State Technology Plan includes a systemic, rigorous, and highly formative evaluation process aimed at continual improvement in our schools. The evaluation process called for within the *IMPACT* Plan operates both statewide and locally, and works to coordinate the efforts of educators at all levels.

Through this plan, the ALSDE will apply a uniform data collection process across the state, using a District Technology Survey tool specifically mapped to the *IMPACT* goals and objectives. Aggregated annually at the state level, information collected in this manner will create a uniform dataset to be used to determine the state’s progress toward meeting its target benchmarks. An annual report of this progress at the statewide level will be submitted to the U.S. Department of Education as part of federal reports.

At the local level, the state will support an assessment process in which districts identify unique benchmark indicators to measure progress toward successful implementation of their *local* technology plans. This evaluation approach is grounded in the understanding that for real change and improvement to occur at the district level, local educators must engage in meaningful reflection on the impact of technology *within the context of their unique educational needs and aspirations*. Assessment of this type must be aligned with the goals and objectives of the state plan, and incorporate broad measures such as the statewide survey data as just one facet of a much richer process of local indicator development, data collection, and structured reflection on technology’s value within individual schools and classrooms.

As shown in the tables on the following pages, much of the data collected locally will be of a highly qualitative nature and will include teacher/student/parent interviews, assessment of student and teacher work, and local classroom observations of the variety of ways that technology is impacting student learning. As such, the local technology evaluation process will be considerably more comprehensive and more closely aligned with much broader systemwide reform goals than a simple inventory or survey of technology infrastructure and skills. Local technology planning and evaluation will become a process that engages a broad community of district stakeholders representing a wide range of educational priorities.

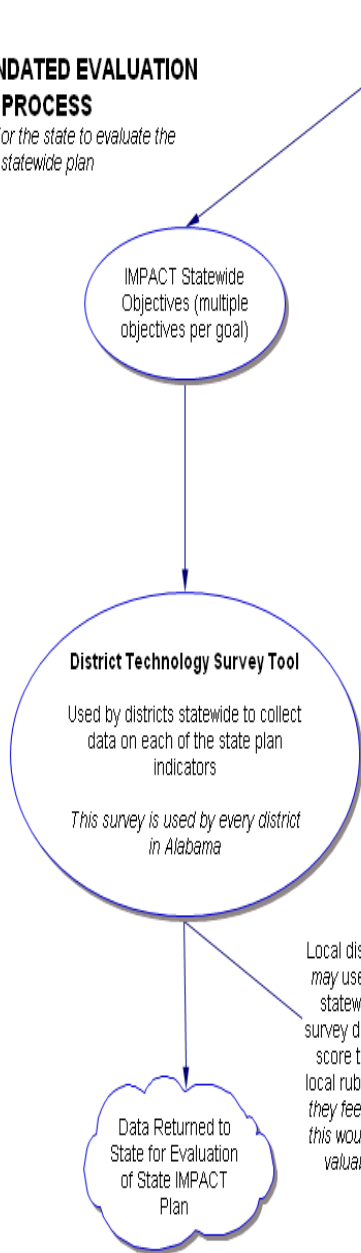
Finally, our state plan is designed to allow local evaluation to feed its own unique perspective on local progress back to the state. The ALSDE currently requires local districts to complete statewide technology surveys and inventories, and to supply this quantitative data back on an annual basis. Over time, the state will also engage districts in the structured, authentic, approach to local indicator development and evaluation

described above. In support of this process, Alabama will provide training and guidance to districts around the development of these local evaluation plans. It is the intention of the *IMPACT* Plan that all districts will implement their local evaluation procedures by 2012, with some districts starting this work as soon as the 2007 school year.

The interaction between state and local evaluations as well as data collection procedures is shown schematically on the following page. Data derived from local measures serves to inform and shape strategies for continuous improvement both locally and at the state level. Also, to assist districts in conceptualizing how locally collected data (beyond the statewide District Technology Survey) maps to *IMPACT* goals and objectives, we have provided a table showing examples of locally collected data aligned with these goals and objectives.

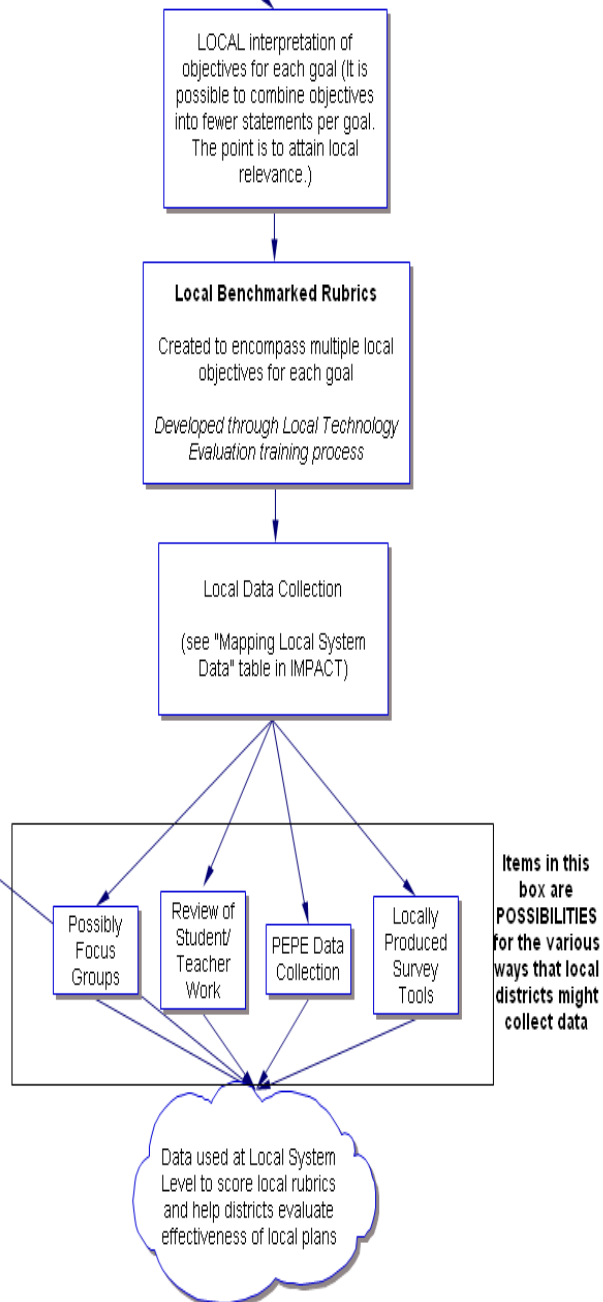
STATE-MANDATED EVALUATION PROCESS

Purpose = For the state to evaluate the statewide plan



VOLUNTARY LOCAL EVALUATION PROCESS

Purpose = For the district to evaluate the effectiveness of its local initiatives and plans



Mapping Local System Data to IMPACT Goals and Objectives

Goal 1: All Alabama students, teachers, and administrators will effectively use technology as an integrated tool for teaching, leading, and learning to master local, state, and national standards.

Objective	Data Sources for Local Evaluation ¹⁵
1.1 Students meet the Technology Literacy Content Standards found in Alabama's Technology Course of Study.	<ul style="list-style-type: none">• School schedules include technology-specific courses and/or units• Number of students completing technology-specific courses• Locally developed student technology skill assessments• Samples of student work• Teacher/student/administrator focus groups and interviews• Classroom/student observations
1.2 Students regularly make use of current and emerging technology in the learning process.	<ul style="list-style-type: none">• Locally developed student technology skill assessments• Samples of student work• Teacher/student/administrator focus groups and interviews• Classroom observations• Review of teacher lesson/daily plans• Computer lab usage logs• Equipment (e.g., projectors, laptop cart) check-out logs• Reports from professional development software
1.3 Teachers meet local, state, and national technology standards (see AL State Technology Standards in the Appendix of this document).	<ul style="list-style-type: none">• PDP plan• Samples of teacher/student work• Locally developed teacher technology skill assessments• Teacher/student/administrator focus groups and interviews
1.4 Teachers effectively and equitably map instructional technologies to specific content standards and levels of student learning.	<ul style="list-style-type: none">• PEPE 1.2.2, 1.3.1, 1.3.4, 2.3.8• Samples of teacher/student work• Teacher/student/administrator focus groups and interviews• Review of teacher lesson/daily plans• Computer lab usage logs• Equipment (e.g., projectors, laptop cart) check-out logs

¹⁵ This column indicates a variety of data elements that districts might collect—in addition to the ALSDE required data—to substantiate their own progress in meeting the identified objective. Much of this local data would be used to substantiate progress toward meeting *locally produced* indicators. These locally produced indicators are part of the district technology process as described in the **Evaluation** section of this plan. Local consideration data is voluntary, and its mention in this plan is simply to provide additional guidance to districts.

Objective	Data Sources for Local Evaluation
1.5 Teachers appropriately and regularly assign learning activities that integrate the use of technology tools.	<ul style="list-style-type: none"> • PEPE 2.3.9 • Locally developed teacher technology skill assessments • Samples of teacher/student work • Teacher/student/administrator focus groups and interviews • Review of teacher lesson/daily plans • Computer lab usage logs • Equipment (e.g., projectors, laptop cart) check-out logs
1.6 Teachers model the appropriate use of technology tools and resources.	<ul style="list-style-type: none"> • PEPE classroom observations • Teacher/student/administrator focus groups and interviews • Samples of teacher/student work • Review of teacher lesson/daily plans
1.7 Teachers use technology to gather and analyze data for improving student achievement.	<ul style="list-style-type: none"> • Administrative software use • AYP • Locally developed teacher technology skill assessments • Teacher/administrator focus groups and interviews
1.8 Educators use technology to communicate with stakeholders at the local, district, and state level.	<ul style="list-style-type: none"> • Web pages of teachers, schools, districts • IVC or Web casting conference logs • E-mail reports • District Technology Survey • Locally developed teacher technology skill assessments • Teacher/student/parent/community/administrator focus groups and interviews
1.9 Administrators meet local, state, and national standards (see AL State Technology Standards for Administrators in the Appendix of this document).	<ul style="list-style-type: none"> • PDP plan • Local technology committee minutes and/or reports • Locally developed teacher technology skill assessments • Samples of teacher/student work • Administrator focus groups and interviews • Reports from professional development software
1.10 Administrators use technology to gather and analyze data to assess instructional effectiveness and monitor student achievement.	<ul style="list-style-type: none"> • PEPE for administrators • AYP • Locally developed administrator technology skill assessments • Administrator focus groups and interviews • Administrative software use • Presentations/meetings using data

Goal 2: All Alabama students, teachers, and administrators will benefit from a broad range of educational opportunities and resources through the use of technology.

Objective	Data Sources for Local Evaluation ¹⁶
2.1 Educators will foster and nurture an environment that supports innovative uses of technology.	<ul style="list-style-type: none"> • Alabama Educational Technology Conference (AETC) attendance • Teacher/student/administrator focus groups and interviews • Review of teacher lesson/daily plans • Classroom observation • Samples of teacher/student work
2.2 Technology resources are provided to support the learning and technology needs of the school and community.	<ul style="list-style-type: none"> • ALEX account enrollment • Students with AVL home access cards • MarcoPolo professional development • Access to students' records at home • Teacher/student/parent/community/administrator focus groups and interviews
2.3 Distance learning opportunities are provided to enhance learning and access to curriculum content.	<ul style="list-style-type: none"> • Distance learning program usage reports • Appalachian Region Commission (ARC) reports • Teacher/administrator focus groups and interviews

¹⁶ This column indicates a variety of data elements that districts might collect—in addition to the ALSDE required data—to substantiate their own progress in meeting the identified objective. Much of this local data would be used to substantiate progress toward meeting *locally produced* indicators. These locally produced indicators are part of the district technology process as described in the **Evaluation** section of this plan. Local consideration data is voluntary, and its mention in this plan is simply to provide additional guidance to districts.

Goal 3: All Alabama teachers and administrators benefit from high-quality, research-based professional development and supports necessary to achieve local, state, and national standards and courses of study.

Objective	Data Sources for Local Evaluation ¹⁷
3.1 Teachers, administrators, and school staff are provided high-quality, research-based, job-embedded, technology professional development that is aligned with local, state, and national standards and course of study content standards.	<ul style="list-style-type: none"> • Reports from professional development software • Participant evaluations from local professional development • Local professional development syllabi/course catalogs • Teacher and administrator focus groups and interviews • Review of teacher lesson/daily plans • Classroom observation • Samples of teacher/student work • Computer lab usage logs • Equipment (e.g., projectors, laptop cart) check-out logs
3.2 Teachers and administrators are provided with adequate resources (such as release time, compensation, reimbursement, materials, etc.) to enable their participation in professional development opportunities within the district and off-site.	<ul style="list-style-type: none"> • Local budgets for training, substitutes, and other materials/resources • Teacher and administrator focus groups and interviews
3.3 Administrators use a variety of evaluation data to make decisions related to technology professional development.	<ul style="list-style-type: none"> • Reports from professional development software • Local professional development syllabi/course catalogs • Administrator focus groups and interviews

¹⁷ This column indicates a variety of data elements that districts might collect – in addition to the ALSDE required data—to substantiate their own progress in meeting the identified objective. Much of this local data would be used to substantiate progress toward meeting *locally produced* indicators. These locally produced indicators are part of the district technology process as described in the **Evaluation** section of this plan. Local consideration data is voluntary, and its mention in this plan is simply to provide additional guidance to districts.

Goal 4: All Alabama students, teachers, and administrators will have access to the appropriate technology resources and infrastructure necessary to support teaching, leading, and learning.

Objective	Local Sources for Data Collection
4.1 Instructional spaces, library media centers, and administrative offices have sufficient network bandwidth to support the learning, communication, and administrative goals of the district.	<ul style="list-style-type: none"> • Annual district technology plans • Capital plans • Local network infrastructure audits • Computer lab (and other computer location) usage logs • Classroom and lab observations • Teacher/student/administrator focus groups and interviews
4.2 Districts have implemented the necessary Internet security tools to enable teachers, administrators, and students convenient, useful, and safe access to the Internet.	<ul style="list-style-type: none"> • Annual district technology plans • Teacher/student/administrator focus groups and interviews • Locally created technology usage surveys
4.3 School buildings have the recommended ratios of Internet-enabled computers and the infrastructure necessary to support learning, communication, and administrative goals of the district.	<ul style="list-style-type: none"> • Annual district technology plans • Capital plans • Local infrastructure audits • Purchasing records/budgets • Physical inventory reports
4.4 School buildings will have the recommended ratios of technology tools available to support the learning, communication, and administrative goals of the district.	<ul style="list-style-type: none"> • Annual district technology plans • Local infrastructure audits • Purchasing records/budgets • Physical inventory reports • Equipment (e.g., projectors, laptop cart) check-out logs
4.5 District technology budgets represent at least 5% of each district's total budget.	<ul style="list-style-type: none"> • Annual district technology plans • District-level budget information
4.6 The district provides the recommended ratio of technical staff to support student, teacher, and administrator technology use.	<ul style="list-style-type: none"> • Annual district technology plans • Teacher/student/administrator focus groups and interviews • Analysis of local helpdesk records/data (open tickets, time to close issues, etc.)
4.7 The district provides the recommended ratio of persons to support teachers and administrators in their efforts to achieve technology competency and to integrate technology into the curriculum.	<ul style="list-style-type: none"> • Annual district technology plans • Teacher/student/administrator focus groups and interviews • Review of teacher lesson/daily plans • Equipment (e.g., projectors, laptop cart) check-out logs • Computer lab usage logs

Objective	Local Sources for Data Collection
4.8 Schools create and maintain Web sites as vehicles for communicating to parents and the community and extending school resources to students outside of the school day.	<ul style="list-style-type: none"> • Annual district technology plans • Teacher/parent/community/administrator focus groups and interviews
4.9 Districts establish and maintain school-community partnerships that focus on educational technology.	<ul style="list-style-type: none"> • Annual district technology plans • Teacher/parent/community/administrator focus groups and interviews

Local Technology Planning

*“While planning is a key to successful technology implementation and integration, planning for technology is not an end in itself. It is a process that strategically moves from vision to reality—from planning into practice.”*¹⁸

Planning for the effective integration of technology into the curriculum and administrative functions helps to ensure that all money is spent wisely and that students will realize the full benefits of the investments. It is via the *School System Technology Plan* that the goals and objectives of the state plan are fully articulated. The local plan is where planning becomes practice.

Local districts will create technology plans aligned with the goals and objectives of IMPACT. These local plans will be submitted annually to the state for approval. Once approved, these local plans will be the basis for the district’s E-Rate application. Local technology plans are intended to support progress toward meeting statewide goals as well as locally significant objectives for technology use and integration.

¹⁸ Sun, J., with Heath, M., Byrom, E., Phlegar, J., and Dimock, K. (2000). *Planning into Practice*. Durham, NC: SouthEast and Islands Regional Technology in Education Consortium (SEIR*TEC).

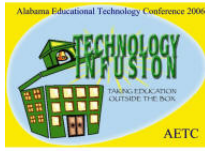
School and District Technology Plans

Developing the Plan/Update	
District	
<ul style="list-style-type: none"> The Local Education Agency (District) will be responsible for developing a written district technology plan in cooperation with representative stakeholders. Assistance will be provided by the ALSDE Office of Technology Initiatives, upon request. <i>(Note: For Accountability purposes, districts are required to keep documentation of technology plan meeting agendas, minutes, sign-in sheets, and other evidence of planning meetings.)</i> 	
<ul style="list-style-type: none"> The district plan must include all the items listed in the state's annually published guidelines, as well as any additional items set forth in course of study requirements, standards adopted by the ALSDE, statewide initiatives, and codes or legislation related to administrative and/or instructional technology. 	
<ul style="list-style-type: none"> The district plan must contain a local evaluation component that includes locally relevant evaluation questions and a process for data collection. Each district will identify the data collection strategies that will be used to establish progress in meeting the district's goals. This data collection must include, but need not be limited to, the same survey instrument as required for reporting data annually back to the ALSDE. 	
School	
<ul style="list-style-type: none"> The district will be responsible for ensuring that each school develops a written school technology plan in cooperation with representative stakeholders. 	
<ul style="list-style-type: none"> It is recommended that schools include at least the same components (as appropriate) in their plans as required in the district plan. 	
Filing/Submitting the Plan/Update	
District	
<ul style="list-style-type: none"> Both the superintendent and technology coordinator must sign the district technology plan. 	
<ul style="list-style-type: none"> The annual district technology plan must be submitted by the specified deadline to the ALSDE through an online process. 	
<ul style="list-style-type: none"> The district technology plan must be submitted in the prescribed format. 	
School	
<ul style="list-style-type: none"> Schools must have on file in the school office their current technology plan and yearly updates. 	
<ul style="list-style-type: none"> Schools shall submit yearly a copy of their technology plan to the district technology coordinator by the deadline specified by the district. 	
Approval Process	
District	
<ul style="list-style-type: none"> District superintendents will be notified by letter upon approval of the district technology plan by the Technology Initiatives office. 	
<ul style="list-style-type: none"> If a plan is deficient, the district will be notified and the Technology Initiatives office will provide technical assistance in correcting deficits. 	
School	
<ul style="list-style-type: none"> The district technology coordinator is responsible for designing an approval process for each school. The same or similar approval process required by the SDE for district technology plans/updates is recommended. 	

Technology Initiatives Fact Sheet

Alabama Department of Education

Alabama Educational Technology Conference (AETC)



AETC is a technology conference dedicated to the professional development of educators. The conference features nationally known and home-grown experts that deliver presentations and hands-on workshops on current topics in the use of instructional technology. Additionally, the conference hosts one of the largest vendor shows in Alabama, featuring state-of-the-art hardware and software for education.

AETC website: www.aetcc.com

Alabama Learning Exchange (ALEX)

ALEX is the free state educational Web portal designed to provide the best, high-quality resources and one-stop shopping for Alabama's teachers, principals, and students. Over 2,000 panel-reviewed lesson plans linked to Alabama's most recent Courses of Study are available for all teachers to download today and use in their classrooms immediately. This nationally recognized Web portal contains a wealth of additional resources to enhance learning in every content area—all digital, all online, all completely Alabama's. ALEX website: www.alex.state.al.us



Alabama Connecting Classrooms, Educators, & Students Statewide (ACCESS)



ACCESS is a statewide distance learning initiative that provides high-quality classroom courses and teachers via technology. Full implementation of ACCESS in the Fall of 2006 will ensure Alabama students, especially those in smaller, rural schools, will have the ability to take advanced level courses and electives that might not otherwise be

available to them. ACCESS website: www.accessdl.state.al.us

Technology in Motion (TiM)

Technology in Motion (TiM) is a statewide initiative that provides high-quality technology integration professional development for all K-12 public schools. This program serves every teacher and administrator across the state through continuous school-based, hands-on, professional development opportunities. Our TiM curriculum specialists provide on-going support that enhances teachers' professional growth in effective teaching practices, the creation of technology-rich learning environments, and project-based learning. TiM website: <http://technologyinmotion.state.al.us/>



eLearning Alabama



eLearning Alabama is Alabama's implementation of the E-Learning for Educators Initiative, a project funded through a federal Ready to Teach grant and multi-state collaboration between nine state education agencies and associated public broadcast stations. eLearning Alabama partners are Alabama State Department of Education (Technology in Motion) and Alabama Public Television. eLearning uses a Web-based model to provide effective professional development that leads to gains in teachers' content knowledge, improvements in their teaching practices, and increases in the achievement of their students. <http://elearning.alsde.edu/>

APTPLUS

Alabama Public Television offers every school and teacher in the state FREE access to APTPLUS, an online, multimedia resource of K-12 core curriculum content and professional development through video-on-demand. Teachers and school administrators also can enroll in a password-protected section of the service, which is supported by 100% of Alabama's school districts, at www.APTPLUS.org.



Alabama Virtual Library (AVL)



The Alabama Virtual Library provides all students, teachers, and citizens of the State of Alabama with online access to essential library and information resources. It is primarily a group of online databases that have magazine, journal, and newspaper articles for research. Through the AVL, an equitable core of information sources are available to every student and citizen in Alabama, raising the level of excellence in schools and communities across the

state. AVL website: www.avl.lib.al.us

homeworkalabama.org

Homework help became a reality August 1, 2005, for students in fourth through twelfth grades and college intro courses when the Alabama Public Library Service purchased the service for the state. Going to the site, www.homeworkalabama.org, allows students to get free live homework help from qualified tutors. The service is available seven days a week from 3 p.m. to midnight in the subjects of math, science, social studies, and English. Students can connect to a tutor through any computer with Internet access, including computers at their local public library or at home. Students must type in their zip code to use the free service. All sessions are recorded and monitored by Tutor.com.



Alabama Science in Motion (ASIM)

The Alabama Science in Motion (ASIM) Program, the secondary science component of AMSTI, is a statewide network of resources designed to provide public high schools with the equipment, professional development for teachers, and classroom support needed to run effective science laboratory programs. ASIM equipment includes modern scientific instrumentation and electronic data collection technologies (computers, programmable calculators, handheld devices, and various sensors) used in laboratory activities that target Alabama Science Course of Study content standards. During each of the last three years ASIM has positively impacted science education



for over 500 teachers and 50,000 students. ASIM website: www.amsti.org

Alabama Math, Science, and Technology Initiative (AMSTI)

AMSTI is the Alabama Department of Education's statewide initiative to improve math and science teaching. It utilizes research-based best practices while incorporating technology into hands-on, mind-engaging activities to help students develop the knowledge and skills necessary for success in the work force and postsecondary studies. AMSTI website: www.amsti.org



Appendix

Glossary of Terms

The following is a list of terms relevant at the time this plan was written. Definitions are also supplied to clarify the meaning of the terms:

Terms	Definition
Activities	Actions undertaken to accomplish planning objectives.
Administrator	District staff that serve any number of administrative, not exclusively instructional, functions. This staff category includes principals, technology coordinators, superintendents, and business office staff.
Benchmarks	Specific, observable, measurable actions or behaviors used to gauge progress towards meeting the objectives and the goal.
Community	The environment within which a school or district exists. Typically, this includes parents, local businesses, civic organizations, and other individuals who may or may not have students in the district but who are proximal to the district.
District	Local Education Agency (LEA) or a local school system
Goal	The broad, categorical, description of the final outcome desired.
Indicator	A description of the conditions for success that relate to a particular objective. Generally a simple statement of what you could expect to see or measure that demonstrates success in reaching an objective.
Inquiry-Based	A questioning process that can be developed in students. (The Cyclopedia Education Dictionary (1998).
Learner-Centered	Learner-centered education places the student at the center of education. It begins with understanding the educational contexts from which a student comes. It continues with the instructor evaluating the student's progress towards learning objectives. By helping the student acquire the basic skills to learn, it ultimately provides a basis for learning throughout life. It therefore places the responsibility for learning on the student, while the instructor assumes responsibility for facilitating the student's education. This approach strives to be individualistic, flexible, competency-based, varied in methodology, and not always constrained by time or place. (Arizona Faculties Council, http://www.abor.asu.edu/4_special_programs/lce/afc-defined_lce.htm)

Map	To align or correlate
Objectives	Broad actions intended to fulfill the goal.
Professional Development	Also known as staff development, this term refers to experiences...that help teachers and administrators build knowledge and skills. (ASCD Lexicon of Learning http://www.ascd.org/portal/site/ascd/menuitem.4247f922ca8c9ecc8c2a9410d3108a0c/
Real-World Applications/ Activities	Learning about and testing real-life situations...usually involving teamwork, problem solving skills and the ability to organize and prioritize the tasks needed to complete the project. The goal is to produce a high-quality solution to a real problem that is worthy of examination. May be referred to as authentic learning. (The Language of Learning: A Guide to Education Terms, 1997)
Sources of Evidence/Data Collection Methods	Physical items, such as plans, reports, observations, etc., that enable the researcher to document fulfillment of objectives.
Stakeholders	Any person, business, or organization that participates in or has an interest in (is affected by) the plan and its outcomes. Includes, but is not limited to; students, teachers, non-certificated staff, administrators, parents, community members, business owners, citizens.
Strategies	Steps or actions that will be taken to accomplish the objective.
Teachers	Includes classroom teachers, special education teachers, library media specialists, art teachers, music teachers, physical education teachers, reading teachers, career technical teachers and all other instructional staff and/or staff with regular student contact.
Technology Literacy	Learning how to use technology intelligently, creatively, and ethically to accomplish intellectual pursuits. (A Policymakers' Guide to 21 st Century Skills)

Essential Conditions

The Essential Conditions are necessary in order for the vision to be realized. The principal is responsible for providing schoolwide leadership for technology.¹⁹

Shared Vision	There is proactive leadership and administrative support from the entire system.
Access	Educators have access to current technologies.
Professional Development	Educators have consistent access to professional development in support of technology use in teaching and learning.
Technical Assistance	Educators have technical assistance for maintaining and using the technology.
Content Standards and Curriculum Resources	Educators are knowledgeable in their subject matter and current in the content standards and teaching methodologies in their discipline.
Student-Centered Teaching	Teaching in all settings encompasses student-centered approaches to learning.
Assessment	There is continuous assessment of the effectiveness of technology for learning.
Community Support	The community and school partners provide expertise, support, and resources.
Support Policies	School and university policies, financing, and reward structures are in place to support technology in learning.

¹⁹ (2000). *National Education Standards for Teachers*, International Society for Technology In Education, ISTE.

Alabama State Technology Standards for Teachers and Administrators

Alabama State Technology Standards for Teachers	
i.	Identify and evaluate technology resources and technical assistance, (i.e., those available online and on site within a school and district setting).
ii.	Assess advantages and limitations of current and emerging technologies, and online/software content to facilitate teaching and student learning.
iii.	Develop and implement a classroom management plan to ensure equitable and effective student access to available technology resources.
iv.	Model safe, responsible, legal, and ethical use of technology and implement school and district acceptable-use policies including fair-use and copyright guidelines and Internet user protection policies.
v.	Design, implement, and assess learner-centered lessons and units that use appropriate and effective practices in teaching and learning with technology.
vi.	Use technology tools (including, but not limited to, spreadsheets, Web page development, digital video, the Internet, and email) for instruction, student assessment, management, reporting purposes, and communication with parents/guardians of students.
vii.	Facilitate students' individual and collaborative use of technologies (including, but not limited to, spreadsheets, Web page development, digital video, the Internet, and email) to locate, collect, create, produce, communicate, and present information.
viii.	Design, manage, and facilitate learning experiences incorporating technologies that are responsive to diversity of learners, learning styles and special needs of all students (e.g., assistive technologies for students with special needs).
ix.	Evaluate students' technology proficiency and students' technology-based products within curricular areas.
x.	Use technology to enhance professional growth (e.g., through accessing Web-based information, online collaboration with other educators and experts, and online professional courses).

Alabama State Technology Standards for Administrators	
i.	Describe mechanisms for creating a shared vision for the comprehensive integration of technology, communicating that vision, and facilitating a process that fosters and nurtures a culture to achieve the vision.
ii.	Develop a technology plan including resource alignment (e.g., funding, staff and time, hardware/software, total cost of ownership) and demonstrate leadership skills necessary to integrate technology to support effective learning and administration.
iii.	Facilitate the selection and use of technologies appropriate for curriculum areas, instructional strategies, and student-centered learning environments to maximize learning and teaching to meet the individual needs of all learners.
iv.	Apply and model technology applications and professional practices that demonstrate: knowledge of available technologies; existing Alabama and national technology standards for students, teachers, and administrators; related trends and issues; current research; and professional development resources in order to enhance professional practices of educational leaders, increase job-related technology use, and improve the productivity of self and other school personnel.
v.	Use technology to facilitate effective assessment and evaluation, including: <ul style="list-style-type: none"> • The collection, analysis, and interpretation of data and communication of findings to improve instructional practice and student learning. • The use of assessment of staff knowledge, skills, and performance in using technology to facilitate quality professional development and guide personnel decisions. • The use of technology to assess and evaluate managerial and operational systems. • Assessment and evaluation of, using multiple methods, appropriate uses of technology resources for learning, communication, and productivity.
vi.	Demonstrate responsible decision-making that reflects understanding of social, legal, and ethical issues related to technology.

Bibliography – Articles and Resources

Integrating Technology

Technology: A Catalyst for Teaching and Learning in the Classroom

<http://www.ncrel.org/sdrs/areas/issues/methods/technlgy/te600.htm>

A Synthesis of New Research on K-12 Online Learning

<http://www.ncrel.org/tech/synthesis/index.html>

Transforming Learning Through Technology

<http://www.mff.org/publications/publications.taf?page=266>

The Impact of Education Technology on Student Achievement: What the Most Current Research Has to Say

<http://mff.org/publications/publications.taf?page=161>

Learning for the 21st Century: A Report and MILE Guide for 21st Century Skills

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

Toward a New Golden Age in American Education: How the Internet, the Law and Today's Students are Revolutionizing Expectations

<http://www.NationalEdTechPlan.org>

Technology Planning, Assessment, and Evaluation

Center for Applied Research in Educational Technology

<http://caret.iste.org/>

National Center for Technology Planning

<http://www.nctp.com/>

Developing a School or District Technology Plan

<http://www.ncrel.org/sdrs/areas/issues/methods/technlgy/te300.htm>

Technology Planning for K-12 Education

<http://www.tcet.unt.edu/tek-plan.htm>

An Educator's Guide to Evaluating the Use of Technology in Schools and Classrooms

<http://www.ed.gov/about/offices/list/os/technology/evaluation.html>

Evaluating the Impact of Technology on Teaching and Learning

<http://www.sun-associates.com/eval/sample.html>

National Educational Technology Standards

http://cnets.iste.org/teachers/t_stands.html

TeAchnology: Online Evaluation Resources for Teachers (including rubrics)

http://www.teach-nology.com/teachers/educational_technology/evaluation/



Alabama Department of Education **July 2006**
Joseph B. Morton, State Superintendent of Education