

Understanding the No Child Left Behind Act of 2001

# Technology Integration

quick  
key  
3

NCREL



# The No Child Left Behind Act of 2001

*As a reauthorization of the Elementary and Secondary Education Act (ESEA), Congress passed the No Child Left Behind Act of 2001. Signed into law by President Bush in January 2002, the legislation brings many significant changes to schools nationwide.*

The purpose of this brochure is to assist policymakers, administrators, and educators in understanding the fundamentals of how the No Child Left Behind (NCLB) Act of 2001 translates into their own technology integration initiatives. Throughout this document, the significant technology elements of the NCLB Act are highlighted. These technology elements are aligned to the goals of the NCLB Act, Title II, Part D—Enhancing Education Through Technology. In addition, sample technology literacy standards are offered for reference; answers to questions about statewide implementation of NCLB-related programs are mentioned; and document resources in alignment with the NCLB Act are listed.

# NCLB Goals for Enhancing Education Through Technology.

The specific NCLB goals for Title II, Part D—Enhancing Education Through Technology are as follows:

1. Primary Goal - The primary goal of this part is to improve student academic achievement through the use of technology in elementary schools and secondary schools.
2. Additional Goals - The additional goals of this part are the following:
  - 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, regardless of the student's race, ethnicity, gender, family income, geographic location, or disability.
  - b. To encourage the effective integration of technology resources and systems with teacher training and curriculum development to establish research-based instructional methods that can be widely implemented as best practices by State educational agencies and local educational agencies.

## REFERENCES

No Child Left Behind Act of 2001, Pub. L. No. 107-110, 115 Stat. 1425 (2002). Retrieved October 31, 2002, from <http://www.ed.gov/legislation/ESEA02/>

## RESOURCES

**North Central Regional Educational Laboratory (NCREL)** offers a Web site on NCLB issues at [www.ncrel.org/policy/curve/overview.htm](http://www.ncrel.org/policy/curve/overview.htm).

**North Central Regional Educational Laboratory (NCREL)** has a collection of Quick Keys for NCLB issues including reading, mathematics and science. These can be accessed from the main Web site at [www.ncrel.org](http://www.ncrel.org).

**U.S. Department of Education** provides a copy of the No Child Left Behind Act at [www.ed.gov/legislation/ESEA02/](http://www.ed.gov/legislation/ESEA02/).

*Guidance on Enhancing Education Through Technology (Ed Tech ) Program* section of the bill (ESEA, Title II, Part D, Subpart 1) is available on the **U.S. Department of Education** Web site at [www.ed.gov/offices/OESE/esea/edtechguidance.doc](http://www.ed.gov/offices/OESE/esea/edtechguidance.doc).

**Northeast & the Islands Regional Technology in Education Consortium (NEIRTEC)** has planning briefs called *Technology Briefs for No Child Left Behind Act Planners*. The consortium's main Web site is at [www.neirtec.org](http://www.neirtec.org).

**U.S. Department of Education** provides a shortened version of the NCLB Act titled *No Child Left Behind: A Desktop Reference* at [www.ed.gov/offices/OESE/reference.pdf](http://www.ed.gov/offices/OESE/reference.pdf).

# Key Concepts: Improving Student Achievement

In Title II, Part D, Goal 1 of the NCLB Act, the emphasis is on the improvement of student achievement in academics with the use of technology in elementary and secondary schools. This focus is laid out in several ways:

## Technology Integration Initiatives

An essential part of effective technology use in schools is building a technology infrastructure. Building this capacity includes integrating technology into the classroom, library media center, administrative office, and district office. This infrastructure enables the integration of technology into the curriculum and provides information to the public. These types of initiatives should emphasize public-private partnerships and may extend outside the school to include the 21st Century Community Learning Centers.



## Building Access

The issue of accessibility to technology and information is crucial in the NCLB Act. The development of electronic networks enabling communication between educators and the public includes access to student data. This also provides access to students in geographically isolated areas, and to the parents and families of all students. In addition, educators may utilize these networks to provide the public with student achievement evaluation results through the use of electronic assessment methods.

## Accessibility

This bill stresses the importance of providing technology integration and literacy for all students, including students with disabilities, racial and ethnic minorities, low-income students, migrant populations, or individuals for whom English is a second language.

## Parental Involvement

A special mention in the act is the provision of training and accessibility for parents, so they may support the academic achievement of their children. This special mention focuses on providing electronic access to student data for parents and families, and in turn promoting family involvement in students' education.

## REFERENCES

Council of the Great City Schools. (2002). *Initial analysis of ESEA reauthorization, education technology*. Washington, DC: Author.

No Child Left Behind Act of 2001, Pub. L. No. 107-110, 115 Stat. 1425 (2002). Retrieved October 31, 2002, from <http://www.ed.gov/legislation/ESEA02/>

## RESOURCES

**Council for Exceptional Children** offers papers on NCLB for exceptional students titled "No Child Left Behind" and Its Implications for Special Education at [www.cec.sped.org](http://www.cec.sped.org).

**Homework Tips for Parents** has information to help parents support their child's academic success at [www.nclb.gov/parents/homework/](http://www.nclb.gov/parents/homework/).

**No Child Left Behind Policy Brief: School and District Leadership** has information covering accessibility through technology infrastructure at [www.ecs.org/clearinghouse/34/62/3462.pdf](http://www.ecs.org/clearinghouse/34/62/3462.pdf).

# Key Concepts: Technology Integration Into the Curriculum

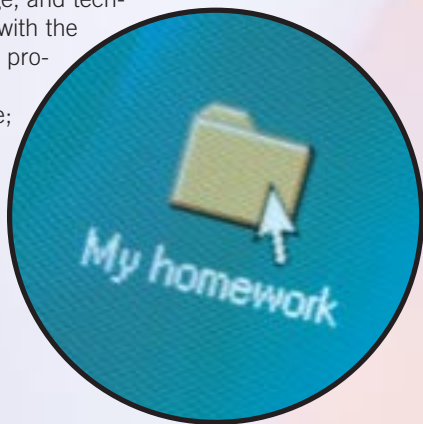
In Title II, Part D, Goal 2(b) of the NCLB Act, the emphasis is on the effective integration of technology into the professional development of teachers, principals, and other school staff. It is further stressed that the training for instructional staff should establish research-based methods that can be replicated as best practices.

## Professional Development

The state educational and local education agencies should provide professional development so that all educational staff may integrate technology effectively into their jobs. The staff is comprised of inservice and preservice teachers, paraprofessionals, library media specialists, and administrators. This integration includes using technology efficiently, infusion into the curriculum, and supporting technology literacy skill development. The training must establish the use of scientifically based research on instructional methods and must be of a continuous nature with access to courses via electronic media.

## Technology Curriculum Integration

The integration of technology into all teaching content areas must have a foundation in scientifically based research on best practices. The content areas include language arts, mathematics, science, social science, foreign language, English as a second language, and technology literacy. The primary programs will be reading literacy with the Reading First program and mathematics and science. Other programs are also included such as the early learning program Ready-to-Learn Television; the civics program We the People; and the project on Hawaiian, Alaskan, and Massachusetts cultural heritage and trading ties.



## REFERENCES

Council of the Great City Schools. (2002). *Initial analysis of ESEA reauthorization, education technology*. Washington, DC: Author.

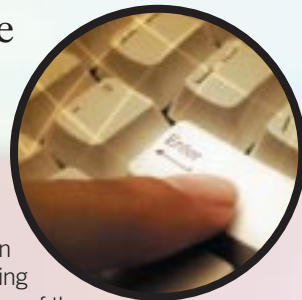
U.S. Department of Education. (2002). *No Child Left Behind Act of 2001*. Retrieved October 31, 2002, from <http://www.ed.gov/legislation/ESEA02/>

## RESOURCES

The **enGauge** Web site houses the enGauge framework that supports technology integration efforts at [www.ncrel.org/engauge/](http://www.ncrel.org/engauge/).

**Wisconsin Department of Public Instruction** provides a book titled *Technology Literacy Standards Matrix*. The department's main Web site is at [www.dpi.state.wi.us](http://www.dpi.state.wi.us).

# Key Concepts: Improving Students' Use of Technology in Grades K-8



Title II, Part D, Goal 2(a) of the NCLB Act states that by eighth grade each student must be technologically literate. The sample of technology literacy standards below suggests the proficiencies necessary for a student to be considered technologically literate. These standards were developed by the U.S. Department of Education and the International Society for Technology in Education. The proficiencies in each grade build upon previous ones, enabling the students to reach technological literacy by the eighth grade. A major focus of the technology literacy standards is their integration into each content area within each grade level.

## 1. Basic Operations and Concepts

Demonstrate an understanding of the use and purpose of a variety of technology devices and learning resources.

## 2. Productivity Tools

Ability to use technology productivity tools for creative purposes and for content-specific use to support learning and research.

## 3. Social, Ethical, and Human Issues in Dealing with Technology

Demonstrate an understanding of social, ethical, and human issues dealing with technology, such as working independently or collaboratively with others and understanding changes in information technologies and their effect legally, ethically, and socially.

## 4. Technology Communications Tools

Ability to use technology communications tools to gather information, communicate with others, and create products either independently or collaboratively.

## 5. Technology Research Tools

Demonstrate the use of technology research tools for problem solving and illustration of ideas in order to accomplish a variety of activities.

## 6. Technology Problem-Solving and Decision-Making Tools

Use technology problem-solving and decision-making tools to demonstrate an understanding of technology tools and their application to learning, and to evaluate electronic sources.

## REFERENCES

International Society for Technology in Education. (2000) *National educational technology standards for students: Connecting curriculum and technology*. Eugene, OR: Author.

No Child Left Behind Act of 2001, Pub. L. No. 107-110, 115 Stat. 1425 (2002). Retrieved October 31, 2002, from <http://www.ed.gov/legislation/ESEA02/>

## RESOURCES

**International Society for Technology in Education** offers a book on technology standards titled *National Educational Technology Standards for Students: Connecting Curriculum and Technology*. The society's main Web site is at [www.iste.org](http://www.iste.org).

**International Technology Education Association** has a book on technology standards titled *Standards for Technological Literacy: Content for the Study of Technology*. The association's main Web site is at [www.iteawww.org](http://www.iteawww.org).

# Answers to Key Questions

## **What are some of the integration activities that teachers, paraprofessionals, and school library/media specialists are expected to model?**

The delivery of instruction must include scientifically based research supported by replicable best practices that include innovative strategies in technology integration. These strategies incorporate technology to enhance the lesson, for example, in an elementary history lesson, using predetermined Web sites in a scavenger hunt so that students will discover information about a historical figure or event. The integration into the curriculum must include changes in the delivery methods educators are currently using, in particular their use and integration of distance-learning resources.

## **What types of funding issues are involved with this legislation?**

According to the Office of the Under Secretary, U.S. Department of Education (2002):

The Education Technology State Grants Program awards formula grants to states. States may use up to 5 percent of their Education Technology State Grants Program funds for state-level activities. States must distribute half of the remaining funds by formula to school districts based on each district's share of funds under Part A of Title I and the other half to high-need districts or partnerships including high-need districts on a competitive basis. Under the Education Technology State Grants Program, high-need districts are those that (1) are high-poverty and (2) serve at least one low-performing school or have a substantial need for technology. (p. 86)

The Education Technology State Grants Program allocates supplemental funds for technology integration into schools. These funds should not be used to supplant state and local funding. The education technology state grants are considered flexible, that is, the state education agency has the ability to transfer up to 50 percent of the nonadministrative state funds from other designated funds, such as State Technology Grants, Teacher and Principal Training, Safe and Drug-Free Schools, or Parental Choice-Innovative Programs, to Title I.

## **What will the State Education Agency and Local Education Agencies be held accountable for and how will that be evaluated?**

The U.S. Department of Education will conduct an independent, long-term study on the conditions and practices under which educational technology is effective in increasing student academic achievement. As an aspect of this study, the Department of Education will also review the conditions and practices that enable teachers to integrate technology effectively into curricula and instruction.

In addition, no later than 12 months after the enactment of the NCLB Act, the Department of Education will produce a national long-range technology plan accessible to the public based on "the nation's progress."

## REFERENCES

- Council of the Great City Schools. (2002). *Initial analysis of ESEA reauthorization, education technology*. Washington, DC: Author.
- No Child Left Behind Act of 2001, Pub. L. No. 107-110, 115 Stat. 1425 (2002). Retrieved October 31, 2002, from <http://www.ed.gov/legislation/ESEA02/>
- Office of the Under Secretary, U.S. Department of Education (2002). *No Child Left Behind: A desktop reference*. Washington, DC: Author. Retrieved October 31, 2002, from <http://www.ed.gov/offices/OESE/reference.pdf>

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