

2009

***Focus on Technology
Integration in
America's Schools***



**STATE EDUCATIONAL TECHNOLOGY
DIRECTORS ASSOCIATION**

*A report from all 50 states and DC regarding
NCLB's Title II, Part D Enhancing Education
Through Technology (EETT) Program*



March 2009

The State Educational Technology Directors Association (SETDA) (www.setda.org) is the principal non-profit educational association for state technology directors.

Metiri Group (www.metiri.com) is a national consulting firm located in Los Angeles, California, which specializes in systems thinking, evaluation, and research related to educational technology.

Suggested Citation:

Metiri Group. (2009). *National Trends Report: Enhancing Education Through Technology (EETT) Round 6, Fiscal Year 2007*. The State Educational Technology Directors Association (SETDA). Washington, DC. Available online at www.setda.org.

Contents

- Message to the Reader i**
- Executive Summary 1**
- Introduction 3**
 - The No Child Left Behind, Title II, Part D Program 3
- Section I: NCLB Title IID Trends 7**
 - Trend 1. Integrating Technology Leads to Positive Academic Results 7
 - Trend 2. Virtual Learning Options Increase for Students and Educators 9
 - Trend 3. Enhanced Capacity Building and Professional Learning Opportunities Ready
Educators for Effective Technology Integration 11
 - Trend 4. State-Coordinated Research Is on the Rise 13
 - Trend 5. States Report Increases in Students' Technology Literacy 15
- Section II: Competitive Grant Program..... 17**
 - Facts and Figures 17
- Section III: Formula Grant Program 26**
 - Facts and Figures 26
- Glossary of Strategies 32**

Message to the Reader

For six years, the State Educational Technology Directors Association (SETDA) has conducted a national survey examining the states' implementation of the technology sections of the No Child Left Behind, Title II, Part D (NCLB IID) Act. This year's report summarizes survey data from state education agency (SEA) technology directors from the 50 states and the District of Columbia.

The research questions examined in the report include:

- How are grant recipients across the nation structuring their state programs to meet NCLB IID goals?
- What administrative structures are used by states to guide and support local education agencies (LEAs) in structuring programs to achieve the NCLB IID goals?
- Is there evidence that the implementation of the NCLB IID program has advanced the goals and purposes as outlined in federal law?

The purpose of this report is to inform federal, state, and local policymakers on trends related to SEA and LEA implementation of programs funded through NCLB IID. In addition to this report, SETDA is providing individual states and the District of Columbia with a comprehensive state profile based on the state's survey data. In past years, that profile has proven to be a rich source of data to inform a state's progress in meeting NCLB IID goals.

SETDA expresses its sincere appreciation to the state technology directors who completed the survey.

The Data Collection Committee

Stuart Ciske, Wisconsin
Committee Co-Chair

Leonard Sweeney, Pennsylvania
Committee Co-Chair

Melinda Maddox, Alabama

Cathy Poplin, Arizona

Nan Williams, Arizona

Jamey Baiter, Illinois

Marlene Johnson, Maryland

Dennis Kunces, Maine

Jeff Mao, Maine

Connie Louie, Massachusetts

Deborah Sutton, Missouri

Amy Munro, Pennsylvania

Teh-Yuan Wan, New York

Melanie Honeycutt, North Carolina

Dee Appleby, South Carolina

Kelly Griffin, Texas

Karen Kahan, Texas

Brenda Williams, West Virginia

SETDA Staff Members

Mary Ann Wolf
Executive Director

Christine Fox
Director of Professional Development and Research

Executive Summary

The State Educational Technology Directors Association (SETDA) is pleased to release its sixth annual report on the *Enhancing Education Through Technology* (EETT) program, a component of the No Child Left Behind, Title II, Part D (NCLB IID) Act.

The purposes of the NCLB IID program are to: (1) improve academic achievement through technology, (2) assist every student in crossing the digital divide, and (3) integrate technology into teacher training and curriculum development resulting in research-based instruction.

This year’s report presents a national perspective on the NCLB IID program for fiscal year (FY) 2007, as well as emergent trends based on data from the past six years. The report is based on surveys completed in the fall 2008 by state technology directors from the 50 states and the District of Columbia.

Originally, the structure of the NCLB IID program required that states award 50% of their funds available to LEAs through a formula allocation, and the remaining 50% through competitive grants. Congress began allowing the states to award up to 100% of their NCLB IID funds through competitive grants beginning in FY 05. To date, 16 states have exercised that option with 12 establishing the percentage of competitive grants at 100% and 4 others establishing that percentage between 50 and 100%.

In alignment with the purposes of the federal grant program, states focused competitive priorities for NCLB IID grant awards on: professional development of teachers in educational technology, the integration of technology into the core K-12 academic areas, technology literacy of students, technologies, and developing experts.

NCLB IID Fast Facts: FY 07	
SEAs surveyed:	All 50 states and the District of Columbia
Funds awarded through formula grants:	\$119.2 million
Funds awarded through competitive grants:	\$135 million
Total NCLB funding:	\$254.2 million
Formula grants awarded:	11,351
Competitive grants awarded:	1,047
Number of states that award competitive grants only:	12
Top priorities among LEA grants:	Mathematics, Reading/Language Arts, and Science

NOTE: National totals are limited to the 50 states and the District of Columbia. They do not include data from outlying areas.

The primary emphasis of formula grants has been on the purchase of technology, due in part to the large number of small grants. The formula grants provide states a process for allocating technology funds equitably to high-need school districts using an established process. The competitive grant program, on the other hand, provides an opportunity for the states to award substantive grants to high-need LEAs or partnerships that include a high-need LEA.

Collectively, the 51 SEAs awarded 1,047 competitive grants and 11,351 formula grants in Round 6 (FY 07), totaling \$135 million and \$119.2 million, respectively. As shown in Table 1, the total funding for EETT has declined over the years, from nearly \$600 million in FY 02 down to its current level of \$254.2 million in FY 07.

Table 1. NCLB IID funding: FY 02-07 (Dollar amounts in millions)

Round 1 FY 02	Round 2 FY 03	Round 3 FY 04	Round 4 FY 05	Round 5 FY 06	Round 6 FY 07	Change, Round 3 to Round 4	Change, Round 4 to Round 5	Change, Round 5 to Round 6
In millions						Percent change		
\$595.2	\$620.2	\$636.5	\$463.4	\$254.1	\$254.2	-27%	-45%	0.04%

NOTE: National totals do not include data from outlying areas.

SOURCE: U.S. Department of Education. *Fiscal Year 2001-2009 State Tables for the U.S. Department of Education*. Retrieved November 1, 2008, from <http://www.ed.gov/about/overview/budget/statetables/index.html>.

This report includes five key trends drawn from the state-submitted survey data for Round 6 (FY 07).

Trend 1. Integrating Technology Leads to Positive Academic Results

Most state directors reported that the integration of technology through NCLB IID projects has resulted in positive academic results. Evidence of such findings was based on various evaluation and research models including some two-group empirical studies.

Trend 2. Virtual Learning Options Increase for Students and Educators

In Round 6 (FY 07), NCLB IID funds were used to support virtual, online learning as a potential solution to the challenges of providing all students and educators with access to high-quality, relevant, state-of-the-art learning opportunities.

Trend 3. Enhanced Capacity Building and Professional Learning Opportunities Ready Educators for Effective Technology Integration

Capacity building was a key element of most NCLB IID competitive grants. Such work aligns policies, investments, and practices in support of effective technology use.

Trend 4. State-Coordinated Research Is on the Rise

Policy trends among SEAs related to NCLB IID research indicated that an increasing number of states require grantees participate in research studies orchestrated by the SEA (versus requiring independent research by the grantees).

Trend 5. States Report Increases in Students' Technology Literacy

States continued to report gains in student technology literacy. While the attainment of technology literacy by all eighth grade students is a stated goal of the NCLB IID program, the definition of the term, and the assessment of eighth-grade literacy are left up to the individual states.

Overall, the data collected for this report indicate a strong track record of state focus on NCLB IID grantee use of emergent technologies to improve academic achievement, increase students' technology literacy, and establish effective instructional methods that leverage digital innovations. While the severe funding cuts to the program in FY 05 and FY 06 have limited the range of impact, the SEA policies and leadership continue to advance the NCLB IID legislative intents.

Introduction

The No Child Left Behind, Title II, Part D Program

Through the *Enhancing Education Through Technology* (EETT) program, in Title IID of the No Child Left Behind (NCLB) Act of 2001, the U.S. Department of Education provides educational technology grants to state educational agencies (SEAs).

The primary goal of the EETT program is to improve student academic achievement using technology in schools. Specifically, this program aims to assist every student in crossing the digital divide by ensuring that every student is technologically literate by the end of eighth grade. Additionally, the program encourages the effective integration of technology with teacher training and curriculum development to establish successful research-based instructional methods.

NCLB Title II, Part D goals

- (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 education agencies.

SOURCE: U.S. Department of Education. *Enhancing Education Through Technology Act of 2001*. Retrieved November 8, 2008 from. <http://www.ed.gov/policy/elsec/leg/esea02/pg34.html#sec2401>.

NCLB IID allocations are based on each state's proportionate share of funding as determined by formulas in Part A of NCLB, Title I. Each state then establishes a grant program for disseminating the funds to eligible LEAs either through a competitive grant program, or through a combination of formula grants (based on established Title I allocations) and competitive grants.

Consistent with other federal programs, it is the responsibility of each state to collect, analyze, and report to the U.S. Department of Education its progress in meeting NCLB IID goals.

Formula vs. Competitive grants

Formula grant

A noncompetitive grant that is typically awarded based on a formula, and it is sometimes called an entitlement.

Competitive grant

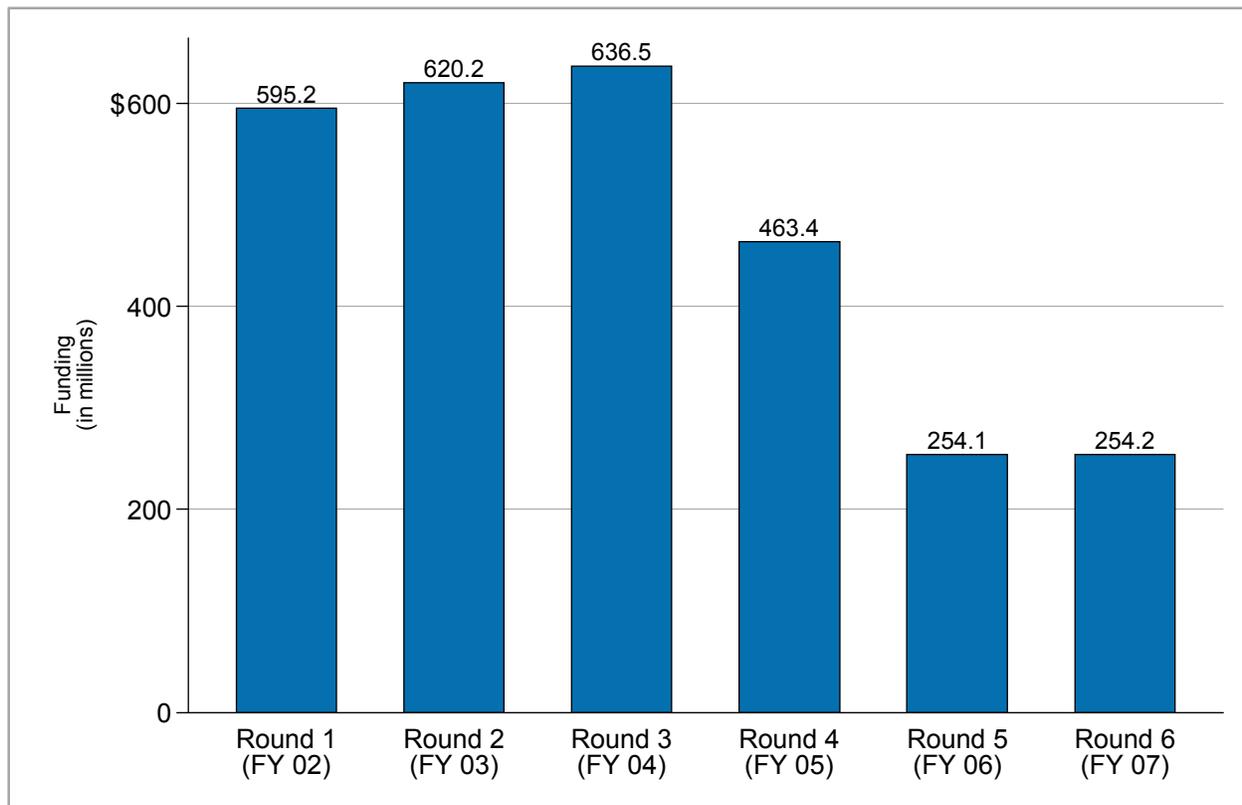
A grant that is awarded based on requests for funding for fixed or known periods of time, for specific projects. Usually, the applicant must specify what will be done within a specific time frame and what costs will be incurred to carry out these activities based on federal guidelines.

SOURCE: Brewer, E., and Achilles, C. (1998). *Finding Funding: Grant Writing From Start to Finish*. Thousand Oaks, CA: Corwin Press.

Funding

The annual federal allocation for NCLB IID has steadily declined since FY 04. In the first few years of the program, national allocations were in the range of \$600 million annually. The allocation decreased significantly in Round 4 (FY 05) to \$463.4 million, and then again in Round 5 (FY 06) to \$254.2 million (see Figure 1).

Figure 1. Federal NCLB IID national allocations (in millions) by year



NOTE: Detail may not sum to totals because of rounding. National totals are limited to the 50 states and the District of Columbia. They do not include data from outlying areas.

SOURCE: U.S. Department of Education. *Fiscal Year 2001-2009 State Tables for the U.S. Department of Education*. Retrieved November 1, 2008 from <http://www.ed.gov/about/overview/budget/statetables/index.html>.

The Trends Report

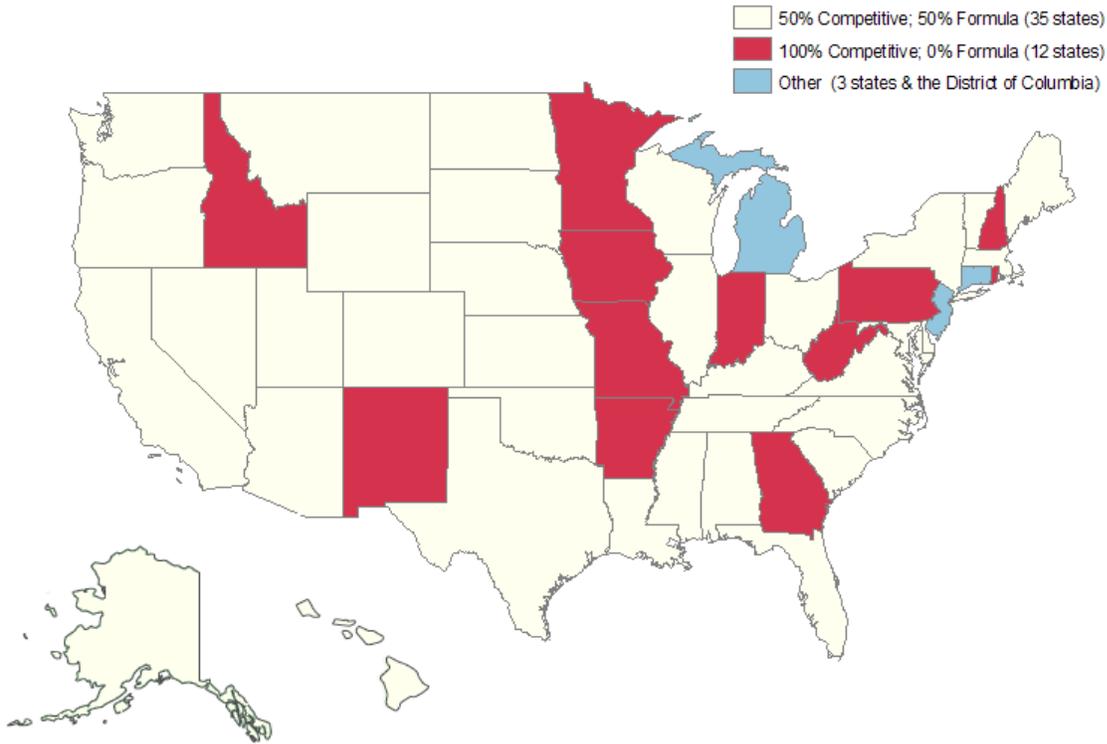
The findings from this report represent survey data on the NCLB IID program for Round 6 (FY 07). The survey data were collected from a single respondent, in most cases the state technology director, who represent the SEAs in each of 50 states and the District of Columbia.

According to the SEA technology directors, collectively, states administered approximately \$254 million in NCLB IID funding in Round 6 (FY 07). This included:

- 1,047 competitive grants awarded to LEAs representing all 50 states and the District of Columbia for a total of \$135 million, and
- 11,351 formula grants awarded to LEAs in 38 states and the District of Columbia for a total of \$119.2 million.

Of the 51 states represented, 3 states and the District of Columbia awarded more than 50%, but less than 100%, of their total funds through competitive grants, while 12 states allocated all of their available funds through competitive provisions. Overall, the majority of states (35) continued to split funds evenly between competitive grants and formula grants as shown in Figure 2.

Figure 2. EETT funding distribution structure, by state: Round 6 (FY 07)



This report is organized into three major sections: Section I provides summaries of the top five national trends identified in Round 6 (FY 07), followed by Sections II and III, which focus respectively on the dual funding mechanisms of EETT, the competitive grant program and the formula grant program.

The following page provides trend data on the total NCLB IID funding allocated to each state from FY 05 through FY 07 (see Table 2).

Methodology

For the past six years, SETDA commissioned the Metiri Group to analyze the survey data and write an annual National Trends Report. The report draws on data from SETDA's annual online surveys of state technology directors and provides information on the implementation of Round 6 funding (FY 07) in the context of the NCLB IID goals and purposes.

The data collection process for Round 6 (FY 07) began on August 11, 2008, with an invitation emailed to all 51 state technology directors. Follow-up correspondence was conducted via a series of emails and phone calls, culminating in an overall response rate of 100% prior to its close on October 16, 2008.

After data collection, the data were cleaned and edited by Metiri Group. SETDA served as the liaison with individual states whenever verification or clarification of responses was necessary. Following the data cleaning, Metiri Group provided a series of drafts for review by SETDA personnel. The report was subsequently finalized and published in March 2009.

Table 2. NCLB funding (in millions) for educational technology state grants: Rounds 4-6

State	Round 3 FY 04	Round 4 FY 05	Round 5 FY 06	Round 6 FY 07	State	Round 3 FY 04	Round 4 FY 05	Round 5 FY 06	Round 6 FY 07
Alabama	\$9.9	\$7.3	\$4.1	\$3.9	Montana	\$3.3	\$2.4	\$1.3	\$1.3
Alaska	3.3	2.4	1.3	1.3	Nebraska	3.3	2.4	1.3	1.3
Arizona	12.2	9.3	5.3	5.3	Nevada	3.5	2.6	1.6	1.6
Arkansas	6.1	4.6	2.5	2.4	New Hampshire	3.3	2.4	1.3	1.3
California	93.3	65.7	35	32.8	New Jersey	13.5	9.8	5.3	5.0
Colorado	5.9	4.5	2.6	2.5	New Mexico	6.2	4.0	2.3	2.0
Connecticut	5.5	3.8	1.9	2.2	New York	65.7	45.3	24.6	24.6
Delaware	3.3	2.4	1.3	1.3	North Carolina	14.4	10.8	6.0	6.1
District of Columbia	3.3	2.4	1.3	1.3	North Dakota	3.3	2.4	1.3	1.3
Florida	30.9	22.9	13.4	11.7	Ohio	21.0	14.2	8.4	9.1
Georgia	20.2	15.2	8.4	8.3	Oklahoma	7.4	5.1	2.8	2.5
Hawaii	3.3	2.4	1.3	1.3	Oregon	7.0	4.6	2.7	2.4
Idaho	3.3	2.4	1.3	1.3	Pennsylvania	22.2	17.7	9.9	10.5
Illinois	27.6	19.9	11	12	Rhode Island	3.3	2.4	1.3	1.3
Indiana	8.6	6.4	3.8	4.7	South Carolina	8.8	6.7	3.7	3.8
Iowa	3.3	2.4	1.3	1.4	South Dakota	3.3	2.4	1.3	1.3
Kansas	4.2	2.9	1.6	1.8	Tennessee	10.7	7.6	4.2	4.2
Kentucky	8.9	7	3.7	3.7	Texas	59.4	44.1	24.1	23.4
Louisiana	14.3	10.4	5.7	5.6	Utah	3.3	2.4	1.3	1.3
Maine	3.3	2.4	1.3	1.3	Vermont	3.3	2.4	1.3	1.3
Maryland	8.8	6.4	3.5	3.8	Virginia	10.3	8.1	4.2	4.1
Massachusetts	11.1	8.3	3.9	4.2	Washington	9.0	6.6	3.6	3.7
Michigan	21	15.9	8.6	9.3	West Virginia	5.0	3.9	2.0	1.7
Minnesota	5	3.9	2.2	2.3	Wisconsin	8.4	5.9	3.1	4.1
Mississippi	8.3	6.1	3.4	3.5	Wyoming	3.3	2.4	1.3	1.3
Missouri	9.5	7.3	3.8	4.1	National total	\$636.5	\$463.4	\$254.1	\$254.2

NOTE: Detail may not sum to totals because of rounding. National totals are limited to the 50 states and the District of Columbia. They do not include data from outlying areas.

SOURCE: U.S. Department of Education. *Fiscal Year 2001-2009 State Tables for the U.S. Department of Education*. Retrieved November 1, 2008 from <http://www.ed.gov/about/overview/budget/statetables/index.html>.

Section I: NCLB Title IID Trends

Trend

1

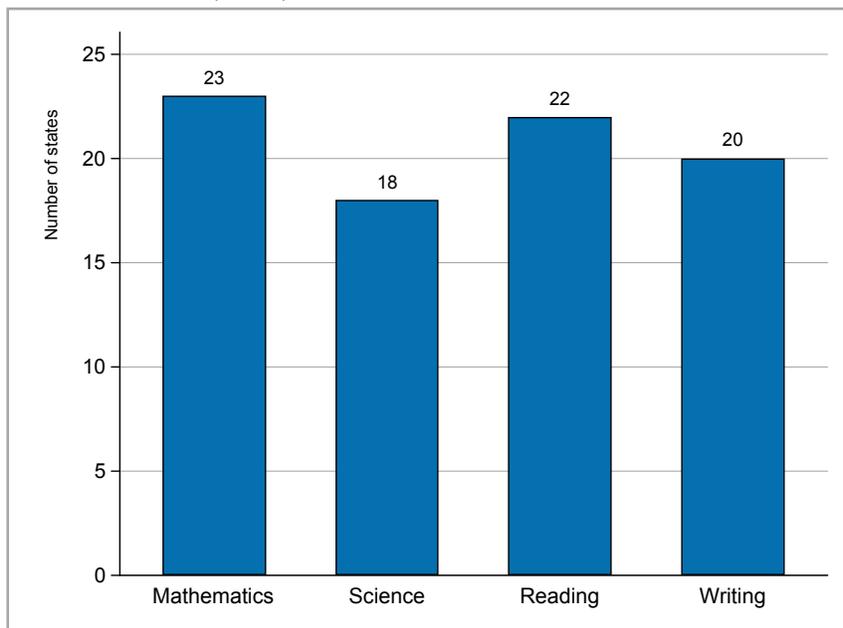
Trend 1. Integrating Technology Leads to Positive Academic Results

Most state directors reported that the integration of technology through NCLB IID projects has resulted in positive academic results. Evidence of such findings was based on various evaluation and research models including some two-group empirical studies.

The number of states focusing on the integration of technology into specific academic content areas has remained relatively strong despite the significant cuts in NCLB IID funding over the last few years. Figure 3 below shows the number of states focusing on specific core academic subjects in Round 6 (FY 07). These numbers have been relatively stable over the past few years.

Integrating technology into our schools has been one of many state-, district-, and school-level reform efforts underway in Washington, DC. LEAs are becoming more comfortable integrating technology into the curriculum, and are using innovative strategies to ensure that students are able to use technology successfully both in the classroom and in their everyday lives.
-State Technology Director, District of Columbia

Figure 3. Number of states' competitive grants programs emphasizing academic content in Round 6 (FY 07)



NOTE: N=50 states and the District of Columbia.

Several states reported learning gains attributable to competitive grant projects. One of the examples presented on the following page describes the implementation of the “Instructional Technology Enhanced Environment” (ITEE) grant at Georgia’s Claxton High School, which allowed the grade 11 content teachers to collaborate during a common planning period, resulting in reported gains in both math and science scores.

Arkansas

Project Title	Technology Integration in the Elementary Classroom Project
Project Description	Teachers at Paris Elementary School (grades K-4) were provided technology (interactive whiteboards, LCD projectors, desktop and notebook computers, document cameras, etc.) and professional development in the use of the technology. The teachers fully integrated the technology into curriculum and instruction. One of the major goals of the project was the use of technology to increase the level of student engagement. It was certainly a contributing factor in the significant increases in student achievement.
Project Results	Benchmark scores for students in grades 3 and 4 showed a significant increase in literacy with students in grade 3 increasing from 67% to 83% proficient and above and 4th grade increasing from 47% to 69%. In math, student scores in grade 3 increased from 76% to 89% proficient and above, while grade 4 proficient and above increased from 64% to 81%.

Georgia

Project Title	Instructional Technology Enhanced Environment (ITEE) Grant
Project Description	The Title IID FY 07 Instructional Technology Enhanced Environment (ITEE) grant teachers at Georgia's Claxton High School, grade 11, represent all four academic core content areas: English/Language Arts, Science, Social Science, and Mathematics. This collaboration involves all academic departments working together on common units that incorporate technology. All of the implementing teachers teach the same group of students, eleventh graders, who take the graduation tests for the first time. Through best practice and research-based instructional activities, the grant team hopes to provide students engaging tasks, activities, and assignments in the four main content areas. Through collaboration, examination of data and ongoing evaluation, the teachers will improve their own skills and become model instructors for others to emulate.
Project Results	Significant gains were made in all areas with the greatest gains in math and science with a 15% and 16% increase, respectively.

Maryland

Project Title	Technologically Enhanced Classrooms Project
Project Description	In Kent County School District in Maryland, the percent of schools making AYP increased by 25% over one school year following implementation of Technologically Enhanced Classrooms. The program focused on training teachers to integrate an interactive whiteboard, classroom response system, and document camera into every facet of daily instruction. Teachers apply for and are selected to receive intensive training on technology standards, formative assessment, technology integration, and student learning styles for a full school year. Teachers are then outfitted with the aforementioned technology to use during instruction, with the expectation that it be used with, and by, students every day. http://www.kent.k12.md.us
Project Results	In the 2006-07 school year, 3 out of the 8 Kent County schools missed AYP. By the end of the 2007-08 school year, only one school did not meet AYP. To improve student achievement, the county increased the number of Technologically Enhanced Classrooms that have been furnished with interactive whiteboards, classroom response systems, and document cameras.

Trend

2

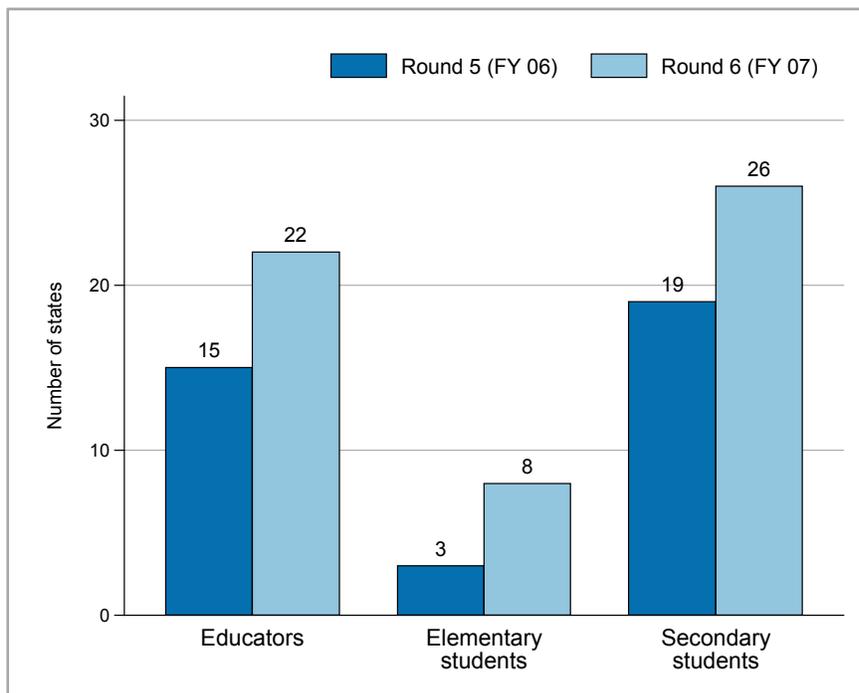
Trend 2. Virtual Learning Options Increase for Students and Educators

In Round 6 (FY 07), NCLB IID funds were used to support virtual, online learning as a potential solution to the challenges of providing all students and educators with access to high-quality, relevant, state-of-the-art learning opportunities.

Virtual learning is a term often used interchangeably with distance learning, online learning, e-learning, or Web-based learning. In some states, NCLB IID awardees are tapping into this digital innovation to support student learning and/or to support professional development and online learning communities for educators. In some cases, this is in response to the challenges inherent in serving students and educators in rural and remote geographies or dense, urban locales where students and educators are place-bound. In others, it is in recognition of the opportunity to bring increased relevancy and real-world applications into learning, and the opportunity for collaboration and communication never before possible.

As shown in Figure 4, the number of states that reported providing online programs for elementary-level students increased from 3 states in Round 5 (FY 06) to 8 states in Round 6 (FY 07), and for secondary-level students, from 19 states in Round 5 (FY 06) to 26 states in Round 6 (FY 07).

Figure 4. Number of states with programs that provide online learning directly to students and/or educators: Rounds 5 and 6



NOTE: N=50 states and the District of Columbia for Rounds 5 and 6.

Many SEAs and LEAs are recognizing the value of continuous involvement by educators in learning communities, which provide expertise, resources, exchanges of ideas, and opportunities for professional discourse on key issues facing today's educators. For example, 22 states reported that their state operated programs provided online learning directly to educators in Round 6 (FY 07), which is up from 15 states in Round 5 (FY 06) (see Figure 4).

Next are some examples of NCLB IID virtual learning projects that serve students and educators.

Alabama

Project Title	Collaborative Distance Learning
Project Description	Through EETT formula funds, Collaborative Distance Learning, Huntsville City Schools, in Alabama increased and enhanced distance learning opportunities allowing the district to provide a more comprehensive curriculum, share resources and experiences across cultures, and offer enriched collaborative experiences. Huntsville City Schools provided distance-learning capability in all 48 schools and centers with interactive video conferencing (IVC), online courses, and social networking and collaboration using webcams. In 2007-08, the district conducted 108 distance learning virtual fieldtrips to 2,364 participants and 14 high school classes were offered to students via IVC and online course work.
Project Results	According to the state technology survey: educators fostering and nurturing an environment that supports innovative uses of technology increased from 22% in FY 07 to 25% in FY 08. Distance learning opportunities, provided to enhance learning and access to curriculum content, increased from 17% in FY 04 to 100% in FY 08.

Massachusetts

Project Title	Partnership for Online Professional Development
Project Description	The Partnership for Online Professional Development (POPD) is a 16-month, Title IID grant-funded pilot program for Brockton, Cambridge, Community Day, Easthampton, New Bedford, Northampton, Springfield, and Winchendon Schools in Massachusetts. The program is designed to improve teaching practices, promote student learning, and provide capacity-building solutions with Massachusetts's teacher portal, MassONE, and other innovative practices. Courses are taught using Moodle, an open-source course management system. Eight districts were awarded competitive grants to work with curriculum specialists and online learning experts, in cooperation with the Department, to develop and teach these courses. The courses focus on improving student learning of the Massachusetts Curriculum Frameworks and K-12 Instructional Technology Standards. Approximately 500 teachers benefited in this program. This is a professional development program for teachers. http://www.doe.mass.edu/edtech/grants/fy08/popd.html
Project Results	The evaluation report (http://www.doe.mass.edu/edtech/grants/fy08/POPDRreport.pdf) indicates that teachers have gained substantial content knowledge after the professional development. Participating teachers had indicated they would use the newly acquired skills and knowledge to teach their students in their classrooms.

Vermont

Project Title	Learning Network of Vermont (LNV)
Project Description	The Learning Network of Vermont (Essex Caledonia Supervisory Union) is a statewide videoconferencing project funded by Title IID. It is built on infrastructure from a past initiative, the Interactive Learning Network, and utilizes IP protocols to connect schools around the state via videoconferencing. This year it included the acquisition of fee-based content that is supported by Title II funds and allows schools to bring high quality content into school classrooms. There are 40 schools currently connected and conferencing for meetings, state events, and classroom-to-classroom connections. http://www.learn.vermont.gov/
Project Results	Long-term results are anticipated.

Trend

3

Trend 3. Enhanced Capacity Building and Professional Learning Opportunities Ready Educators for Effective Technology Integration

Capacity building was a key element of most NCLB IID competitive grants. Such work aligns policies, investments, and practices in support of effective technology use.

A common theme throughout the six years of SEAs' descriptions of projects is the prevalence of capacity building. Capacity building refers to efforts that result in systematic changes in policies, practices, and professional learning that increase or enhance a school's ability to use technology effectively in teaching and learning. Such capacity building includes shifting classroom practices, documenting and disseminating evidence-based practices, professional learning, and research and development of learning structures such as online resources and course offerings.

School structures impacted by capacity building are interdependent. While shifting one structure may result in minor or temporary change, aligning an entire district or school's policies, practices, culture, and funding to specified goals will have a multiplier effect on outcomes and sustainability.

Defining Capacity Building

Capacity building is defined as actions that lead to an increase in the collective power of a group to improve student achievement, especially by raising the bar and closing the gap for all students.

Capacity building synergizes three things: new skills and dispositions; enhanced and focused resources; new and focused motivation or commitment.

SOURCE: Fullan, M. (2005, Winter). *The Tri Level Solution, School/District/State Synergy*. Education Analyst - Society for the Advancement of Excellence in Education.

Project Inspire is a comprehensive credit online professional development program funded by EETT-Formula and designed by the Advanced Technology Research Branch to assist teachers in integrating technology in teaching, learning and the curriculum. There are three levels of certification that teachers can work toward at their own pace to achieve mastery of the technology and integration skills necessary in the 21st century. In total, 1,536 teachers have completed the program and 258 are enrolled.

-State Technology Director, Hawaii

Funding toward staff training goes hand in hand with the acquisition of equipment. This acquisition of technology along with sustained professional development has encouraged the effective integration of technology to facilitate student achievement and technology literacy across the state.

-State Technology Director, South Carolina

In the following examples, capacity building serves to “stage” the school system in ways that ensure students will be well served through the use of technology.

Arizona

Project Title	The Northern Arizona Technology Integration Coaching Consortium (NATICC)
Project Description	The Northern Arizona Technology Integration Coaching Consortium (NATICC) in Flagstaff Unified School District, Arizona, provides technology hardware to schools in order to develop technology-enhanced model classrooms (TEMC). The consortium trains TEMC teachers in the use of the new equipment and to become technology peer coaches. The program also trains the TEMC teachers to serve as peer coaches for one to three of their colleagues. Coaches also help colleagues develop the necessary technology skills and instructional strategies needed to integrate technology into teaching and learning. http://www.fusd1.com/org/naticc/
Project Results	During year one of this two-year grant, students in classes directly impacted by this grant demonstrated an average of 17% growth in reading and 18% growth in math, as determined by pre- and post-district benchmark assessment scores. Students also demonstrated an average of 15% growth in technology literacy, as determined by pre- and post-TechLiteracy Assessment scores.

Louisiana

Project Title	Handheld Technologies in the Curriculum Project
Project Description	Handheld Technologies in the Curriculum Project in Webster Parish Schools, Louisiana, focused on two public schools and one nonpublic school implementing Palm Handhelds in a one-to-one initiative for administrators, eighth grade teachers, and students. All district administrators received handhelds and “walk-around” training to implement use of them. Additional instructional technologies included digital cameras and web cams for classroom integration activities. Both public schools involved in the grant reflect growth in school improvement scores. http://www.webster.k12.la.us/
Project Results	Target site students, teachers, and administrators reflect growth in technology proficiency as measured by the Louisiana Technology Proficiency Self-Assessment. Excellent nonpublic participation indicated.

Missouri

Project Title	Missouri’s Competitive Title IID - eMINTS Grant
Project Description	As part of Missouri’s Competitive Title II D-eMINTS Grant, 17 upper elementary teachers and 281 students at Eldon R-I School District (Grades 5 - 6) are engaged in learning communities where questioning, cooperative learning, and community building are common. Technology and inquiry-based learning are integrated in communication arts and mathematics, bringing new life to curriculum and making instruction more consistent across classrooms. Teachers share strategies, lessons, and activities with other faculty, and students engage in daily lessons that focus on higher-order thinking and taking ownership for their own learning.
Project Results	In year 1 of the project, the district reports a 50% increase in the depth of knowledge levels reached in eMINTS classrooms, a 13% increase in active student engagement, a 31% increase in technology integration, and a 79% increase in teacher technology literacy skills.

Trend

4

Trend 4. State-Coordinated Research Is on the Rise

Policy trends among SEAs related to NCLB IID research indicated that an increasing number of states require grantees participate in research studies orchestrated by the SEA (versus requiring independent research by the grantees).

The No Child Left Behind legislation calls for “evidence-based” practices, requiring that SEAs and LEAs use trustworthy research to advance high quality teaching and higher student achievement. Since the inception of the NCLB IID program, some SEAs have encouraged or required LEA grantees to conduct their own research, some have required that LEA grantees use evidence-based practices, while others have required that LEA grantees participate in research studies designed by the SEA or other research institutions or groups.

Florida LEAs receiving EETT formula funding are expected to incorporate research-based and validated technology skill measurement instruments into project activities as well as their local technology plan. This program expectation has resulted in over 70,000 Florida teachers having completed a web-based Inventory of Teacher Technology Skills (ITTS). Pilot testing of a Student Tool for Technology Literacy (ST2L) has recently been completed and LEAs now have access to that innovative tool. Developing a workable system to help teachers and administrators evaluate student technology literacy has been a long-term program objective.

-State Technology Director, Florida

Overall, the number of states that encourage grant recipients to conduct their own research studies remained relatively constant during Rounds 4, 5, and 6 at 17 states, 19 states, and 15 states, respectively. However, as the NCLB IID funding decreased sharply in FY 05 and FY 06, there was a parallel decrease in the number of states requiring LEA grantees to conduct their own research and a marked increase in the number of states requiring that grantees participate in established research protocols (see Table 3).

Table 3: Trends in funding and research requirements of LEAs: Rounds 4-6 (Dollar amounts in millions)

	Round 4 FY 05	Round 5 FY 06	Round 6 FY 07	Percent change, Round 4 to Round 6
Total NCLB funding (in millions)	\$463.4	\$254.1	\$254.2	-45%
Number of states requiring LEA grantees to conduct research	9	3	4	-56%
Number of states requiring that LEA grantees participate in established research protocols	10	12	16	+60%

These correlations suggest that some states did recognize that the decrease in funding to LEAs would not support the cost of individual research projects, but could still support LEA participation in research projects designed and conducted by outside researchers on behalf of the LEAs.

Descriptions of grant projects requiring research from West Virginia and Texas are included below. To offset the costs, both states were able to secure outside funding from the U.S. Department of Education. This helped build the capacity of Texas and West Virginia SEAs and LEAs to use technology effectively. Such models are now continued and sustainable within the ongoing NCLB IID programs. These models suggest that research orchestrated by the states can have a lasting impact on supporting the goals of NCLB.

Texas	
Project Title	TIP-Technology Immersion Pilot Project
Project Description	As part of the TIP- Technology Immersion Pilot Project at Stephen F. Austin Middle School in Bryan, Texas, there is a “1-Vision” for student success; one laptop for each student, or a 1:1 environment. Students at Stephen F. Austin Middle School have been issued a laptop to provide uninterrupted access to technology and powerful learning resources. The technology is seamlessly blended with curriculum and instruction to enhance student engagement and learning. TIP teachers have learned to seamlessly integrate technology tools into the instructional activities of daily lessons. Some have said they “don’t want to leave Bryan ISD, it would be like teaching with their hands tied behind their back.” These teachers are passionate about providing 21 st Century Learning to cognitively engage their students. http://www.ci.bryanisd.org/1Vision/Welcome.html
Project Results	TAKS (Texas Assessment of Knowledge and Skills) scores have increased steadily for all grades 6-8 in both math and reading over the past two years. Grade 7 average reading scores increased from 62% to 75% and math scores from 51% to 65%. Writing scores have followed the same pattern of increase for the 7th grade.

West Virginia	
Project Title	21 st Century Teaching and Learning
Project Description	The 21 st Century Teaching and Learning project at Mount Hope High School (emphasizing grades 5-8), in rural Fayette County Schools, West Virginia provided teachers with continuous, quality professional development. This program is based on the Technology Model School (TMS) program which research has shown to improve student academic achievement. A full-time Technology Integration Specialist worked with teachers to facilitate acquisition of the 21 st Century skills necessary to address the needs of today’s students. Because the traditional lesson plan is no longer appropriate, the Technology Integration Specialist provided professional development in lesson plan design using research-based strategies and 21 st Century assessment tools. This enabled teachers to meet the newly revised state content standards and provide students high quality lessons. http://boe.faye.k12.wv.us/EETTwebsite/
Project Results	Fourth and fifth grade students in TMS made statistically significant $p < .05$ greater gains (compared to similar students in non-TIS schools) on the state’s Math WESTEST. For more information on the EETT Research study, visit http://wvde.state.wv.us/evaluation/tech_home.htm .

Trend

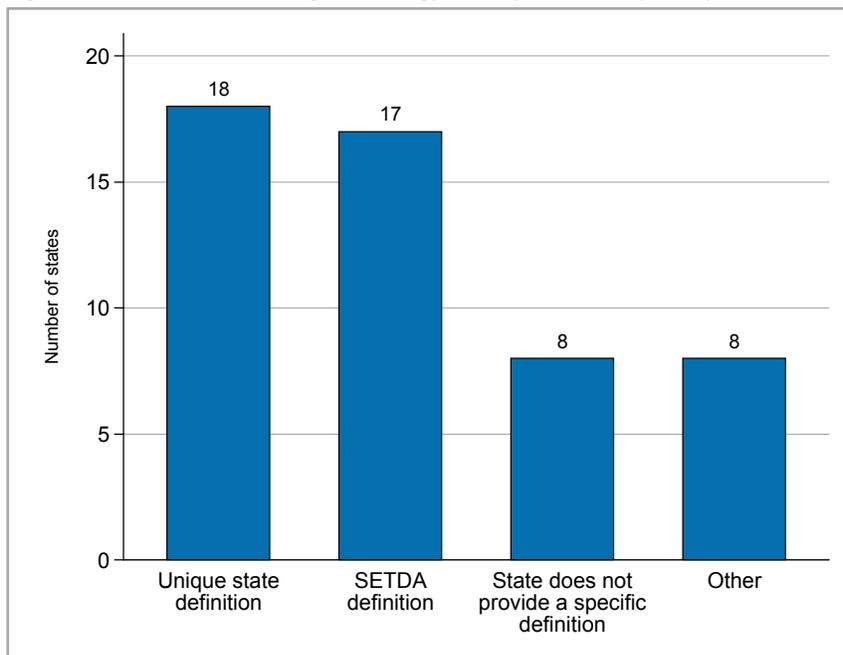
5

Trend 5. States Report Increases in Students' Technology Literacy

States continued to report gains in student technology literacy. While the attainment of technology literacy by all eighth grade students is a stated goal of the NCLB IID program, the definition of the term, and the assessment of eighth-grade literacy are left up to the individual states.

With its focus on testing for proficiency in reading, math, and science, it's easy to forget that NCLB also states that all students should be technology literate by the end of the eighth grade. However, unlike the requirements for the core academic subjects, there are no testing requirements or accountability measures when it comes to ensuring technology literacy. In the Education Week article titled *Tests of Tech Literacy Still Not Widespread Despite NCLB Goals* (January 29, 2008), the author explains that “most states don’t administer separate tech literacy tests statewide because there is no universal definition.”¹

Figure 5. Methods for defining technology literacy: Round 6 (FY 07)



NOTE: N=50 states and the District of Columbia.

As shown in Figure 5, most states either established their own unique state definitions for technology literacy (18 states) or used the SETDA definition (17 states).²

Similarly, state approaches to assessing technology literacy varied considerably from state to state. Assessment strategies ranged from portfolios in South Carolina and surveys in Pennsylvania, to state assessments in Louisiana. Additionally, only 7 states reported testing eighth grade technology literacy at the state level in Round 6 (FY 07).

¹ Cech, S. J. (January 29, 2008). “Tests of Tech Literacy Still Not Widespread Despite NCLB Goals”. *Education Week*. Retrieved November 8, 2008 from <http://www.edweek.org/ew/articles/2008/01/30/21techtests.h27.html?tmp=346287112>.

² For additional information on how SETDA defines technology literacy, see <http://www.setda.org/toolkit/nlitoolkit/TLA/ta01.htm>.

In our latest annual survey, [using the Tiers of Technology Literacy and Fluency rubric], 34.6% of students were in Tier 1 (Personal use and communication), 37.6% in Tier 2 (Access, collect, manage, integrate, and evaluate and information), and 27.8% in Tier 3 (Solve problems and create solutions).

-State Technology Director, Washington

With our statewide middle school laptop program and the help of Title IID funding, over 96% of eighth grade students in Maine who were tested for Technology Literacy have been designated as technology literate by their local school School Administrator Units (SAUs).

-State Technology Director, Maine

Pennsylvania

Project Title	Middle Grades Technology Literacy
Project Description	The Middle Grades Technology Literacy project in the School District of Philadelphia, Pennsylvania, (Grades 6-9) was intended to: Increase technology literacy of students through the integration of digital resources aligned to the Core Curriculum; Build the capacity of teachers to use technology effectively through sound professional development offered through a variety of delivery methods and media; Increase the integration of effective technology use into classroom practice to support the acquisition and mastery of technology literacy skills and 21 st Century learning; Provide schools with middle grades that were not included in the Qualified Zone Academies Bond initiative with the same infusion of technology resources in an effort to create a level of equity across all schools. http://www.phila.k12.pa.us
Project Results	District survey data shows that the inclusion of technology in daily classroom practice, and teacher awareness of digital literacy has increased. Login data confirms the increasing use of digital resources, aligned to the curriculum planning guides. Use by students and teachers has increased significantly with the alignment to our IMS.

South Carolina

Project Title	Tech-tonics Program
Project Description	The Grade 8 Tech-tonics program (Dillon School District One and Florence School District One, South Carolina) is a research-based initiative that seeks to drastically alter science achievement and technology proficiency for eighth graders in two school districts through the use of laptops and an innovative curriculum. The grant's three goals are to improve student achievement on state standardized testing in science, to increase proficiency in technology, and to increase parental and community involvement in student learning. These goals have been achieved through increased professional development, intense and innovative curriculum planning, and the use of diagnostic and portfolio-based assessment.
Project Results	The gains in science and technology proficiency scores are outstanding. Both districts had 3-5 RIT point gains in MAP scores. Average student gains for one academic year are 4 RIT points. Dillon School District increased its percentage of technology proficient students from 34.6% to 55.1%, and Florence School District had an increase from 40.7% to 67% in technology proficiency. http://www.lakeviewschools.com/home.aspx

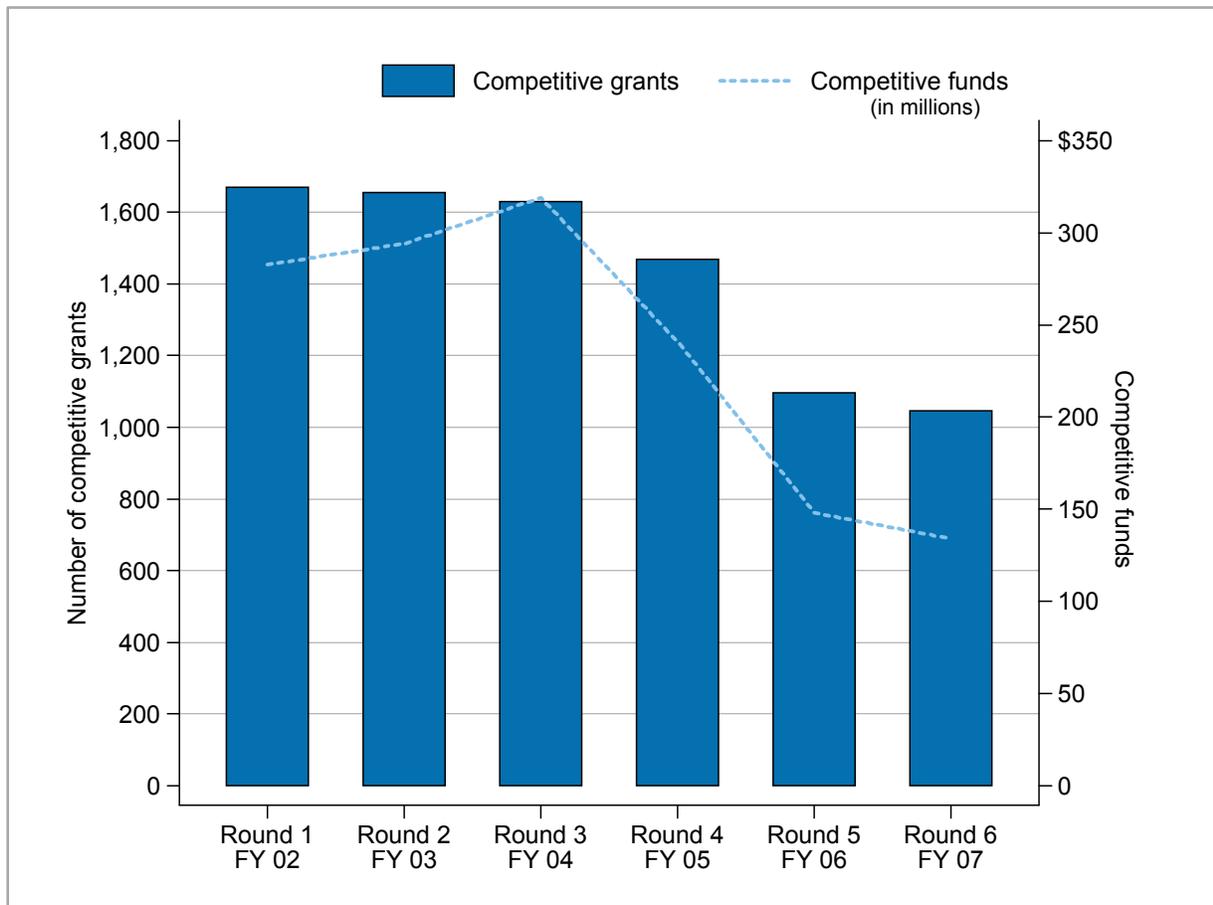
Section II: Competitive Grant Program

Under NCLB IID legislation, each state is required to conduct a competitive grant program through which the state distributes at least 50% of the available funds to LEAs. Most states release Requests for Proposals (RFPs) with program priorities. Eligible LEAs or eligible partnerships then design project proposals, which the states then review and prioritize for the competitive grant awards.

Facts and Figures

In Round 6 (FY 07), states awarded 1,047 competitive grants, totaling approximately \$135 million. Compared to last year (FY 06), this represents both a decrease in the number of competitive grants awarded (1,094 in FY 06 compared to 1,047 this year), and a decrease in the total amount awarded (\$148 million in FY 06 compared to \$135 million this year). The decrease in the number of competitive grants awarded parallels the decrease in the total competitive appropriations as shown in Figure 6.

Figure 6. Trends in competitive funding, and number of competitive grants awarded, by year



As previously noted, Round 6 (FY 07) marked the second year in which the states could opt to allocate 100% of the funds available for grants through the competitive process. (They were previously required to allocate available funds equally through competitive and formula awards.)

Twelve states (Arkansas, Georgia, Idaho, Indiana, Iowa, Minnesota, Missouri, New Hampshire, New Mexico, Pennsylvania, Rhode Island, and West Virginia) took advantage of this opportunity. In addition, the District of Columbia, Connecticut, New Jersey, and Michigan, increased the percentage of competitive funds allocated from 50% in Round 5, to 85%, 70%, 68% and 54% respectively in Round 6 (FY 07) (see Table 4). The other 35 states continued allocating 50% to formula and 50% to competitive awards.

Overall, both the total dollars (\$135 million) and the percentage of the total funds awarded through competitive grants (53%) was less in Round 6 (FY 07) than in Round 5 (FY 06) (see Table 5).

Table 4. Number of states awarding more than 50% of EETT funds through competitive awards: Rounds 5 and 6

	State	Round 5 FY 06	Round 6 FY 07
1	AR	100%	100%
2	GA	100%	100%
3	ID	100%	100%
4	IN	100%	100%
5	IA	100%	100%
6	MO	100%	100%
7	NH	100%	100%
8	NM	100%	100%
9	PA	100%	100%
10	RI	100%	100%
11	WV	100%	100%
12	MN	50%	100%
13	DC	50%	85%
14	CT	50%	70%
15	NJ	50%	68%
16	MI	50%	54%

Table 5. Competitive grant funding: Rounds 1-6 (Dollar amounts in millions)

	Round 1 FY 02	Round 2 FY 03	Round 3 FY 04	Round 4 FY 05	Round 5 FY 06	Round 6 FY 07
Competitive funding (in millions)	\$282.7	\$294.1	\$301.6	\$219.5	\$148.3	\$135
Percent of total appropriated for competitive grants	47%	48%	48%	48%	59%	53%

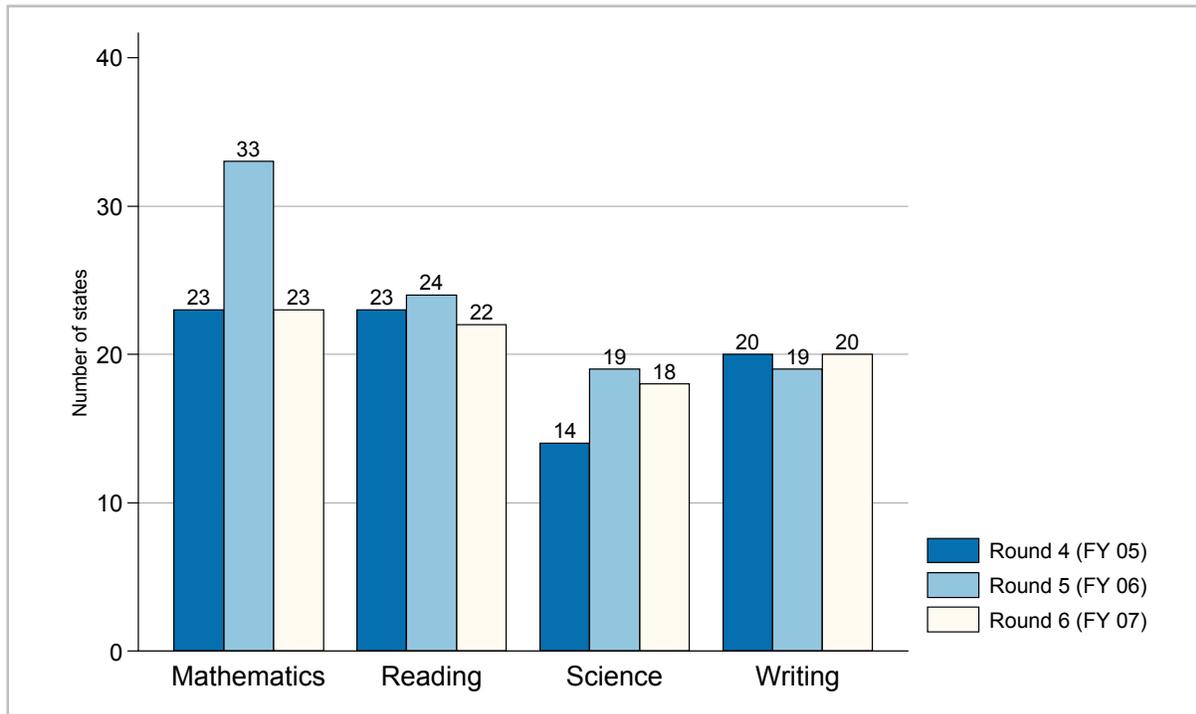
Of the 1,047 competitive grants awarded in Round 6 (FY 07), 348 (33%) were continuation grants.

Focus of Competitive Grants

Thirty-nine of the 50 states and the District of Columbia (76%) set priorities for the competitive RFPs directed toward the NCLB IID goal of increasing academic achievement. Some focused their competitive RFPs on specific academic content areas including Mathematics (23 states), Reading (22 states), Science (18 states), and/or Writing (20 states), while others focused on technology literacy or professional development.

As shown in Figure 7, Mathematics was the only content area that had significant change in emphasis by the states. Compared to Round 5 (FY 06), the number of states with competitive grant priorities that focused on Mathematics was at 23 in Round 4 (FY 05), increased by 10 states to 33 in Round 5 (FY 06), but then shifted back to 23 by Round 6 (FY 07). In Round 6, the emphasis on Writing was the only growth area, albeit by only one additional state from the previous year.

Figure 7. Number of states' competitive grants programs emphasizing academic content: Rounds 4-6



NOTE: Rounds 4, 5, and 6 include all 50 states and the District of Columbia.

Several descriptions of NCLB IID projects that focused on specific content areas are included next. The examples from New Jersey, Ohio, and Oregon are representative of the continued focus on increasing academic achievement through effective uses of technology.

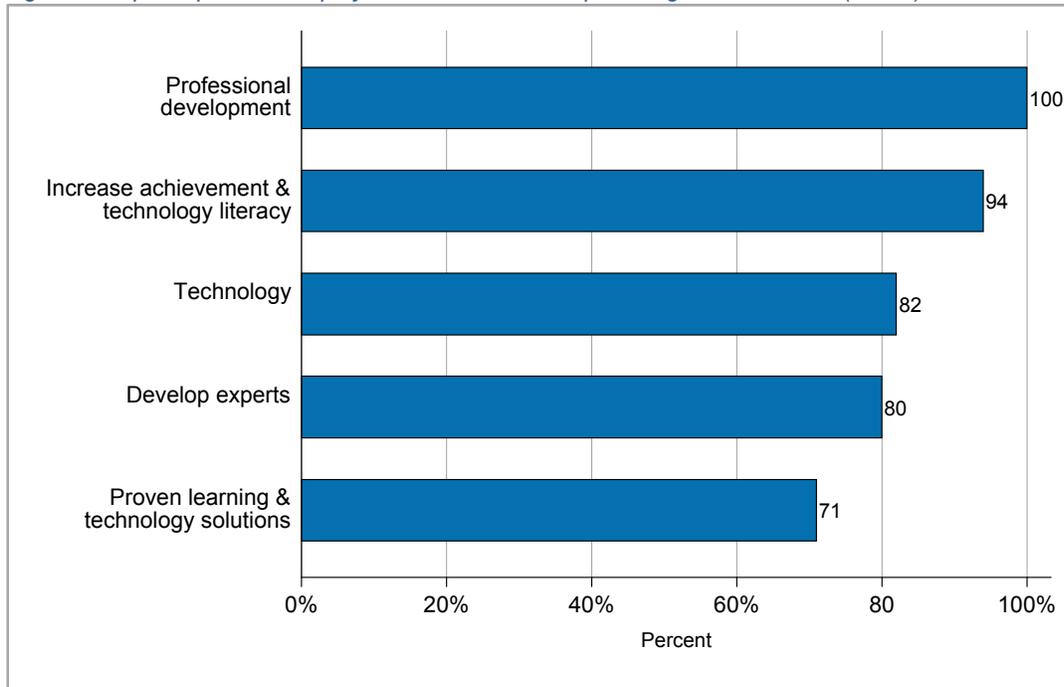
New Jersey	
Project Title	Bridge Project
Project Description	The Alfred C. MacKinnon Middle School in the Wharton Borough School District in New Jersey, received the EETT-funded Math Achievement to Realize Individual eXcellence (MATRIX) grant to implement the seventh grade, special needs math/technology integration “Bridge Project” for 3 years. Students planned and designed the construction of a new bridge connecting New York and New Jersey. Seventh grade special education students won first place for their bridge designs and models during the 2006 National Council of Teachers of Mathematics National Conference. The students competed without the judges’ knowledge of their special math needs. http://mcubed4.tripod.com/
Project Results	Last year the percentage of students scoring in the Grade Eight Proficiency Assessment (GEPA) proficient ranges increased to the highest percentage in the district’s history (74.4%).

Ohio	
Project Title	Summit Academies
Project Description	The EETT program at Summit Academies - Akron Middle, a non-profit, charter school for children with ADHD and Asperger's Disorder, provided smaller classroom environments, a lower pupil-to-teacher ratio, and additional time for individualized instruction—instructional practice was tailored to meet students' needs. The schools seek to promote the use of technology for learning through the integration of technology in math and reading/language arts educational programs along with technology-related professional development using WEB-based technology to improve students reading and mathematics achievement. PD was delivered via: integrating curriculum software and assessment tools, and enhancing greater integration of technology, teacher instructional skill, and lesson development.
Project Results	During academic year 2007-08, reading and mathematics achievement gains were made in grades six through eight. The average net gain for reading was 8.54, language arts was 9.32, and math was 8.00. From observations, it was noticeable that students were excited and adept at using computers.

Oregon	
Project Title	LIVE-C - Learning through Interactive Video Experiences
Project Description	The LIVE-C - Learning through Interactive Video Experiences at Three Rivers School District in Oregon (Grades 1-12) was designed to bring the world to the geographically isolated, culturally limited and high poverty students of Three Rivers School District through the use of mobile interactive video conferencing (MIVC) equipment. Teachers are able to invite in experts from around the world to enter their classrooms as co-teachers, as well as connecting their students to students around the globe. LIVE-C is a simple concept, but powerful because it utilizes the most fundamental aspect of human learning – human interaction. http://www.soesd.k12.or.us/News.asp?NewsID=278 .
Project Results	Fifth grade Reading/Lit Statewide Assessment scores at Fruitdale Elementary rose from 61.4% in 2006-07 of students meeting or exceeding the standard to 95% in 2007/2008. In math, 86.7% of students met or exceeded in 2007-08, up from 63.6% in 2006-07. Gains were also noted at other elementary, middle and high schools.

The NCLB IID federal legislation lists priorities for the states to emphasize in their awards to LEAs. When asked to rank the top five most commonly pursued strategies included in LEA projects funded by competitive grants in Round 6 (FY 07), professional development was the most frequently cited priority, followed by increasing achievement and technology literacy, technology, developing experts, and proven learning and technology solutions (see Figure 8). This represents little change from priorities identified in previous years, which is to be expected, given that these strategies are listed in the federal legislation.

Figure 8. Top five priorities of projects funded with competitive grants: Round 6 (FY 07)



NOTE: N=50 states and the District of Columbia. The full list of priorities in the NCLB IID legislation, in addition to those listed above, includes: increase access, foster communication and outreach with parents, networking and infrastructure, data management/informed decision making, assessment, and information technology courses. For more detailed descriptions of the strategies, please see the Glossary.

The following examples of projects represent the top strategies of projects funded with competitive grants.

California	
Project Title	The Vallejo EETT-C Project
Project Description	The Vallejo EETT-C Project involved Franklin Middle, Solano Middle, Springstowne Middle, and Vallejo Middle Schools. The project focused on the lowest performing students in 6th and 7th grade. While typically these are students who do not engage fully in learning, the different types of technology in this program turned that around. Students loved using technology in a game show/class quiz format for content review. What they didn't realize was that the instant feedback from the teacher on content reinforced their learning of grade-level math.
Project Results	The district saw large gains on CST scores for the target students, the 50 lowest-performing students in each middle school. Approximately 40% moved up one performance band in the first year, essentially accomplishing the two-year objectives the first year.

Nebraska

Project Title	One to One Learning Program
Project Description	Omaha, Nebraska's Public Schools' One to One Learning Program provided fourth and fifth grade students and teachers with laptops and instruction in using the equipment. Instructors provided media rich units for additional access for students. LCD projectors, whiteboards, and student response systems help complement teaching the "digital native" learners. http://www.nde.state.ne.us/federalprograms/titleii
Project Results	The program improved student computer literacy and academic achievement as students received additional help via the one on one laptop initiative.

Virginia

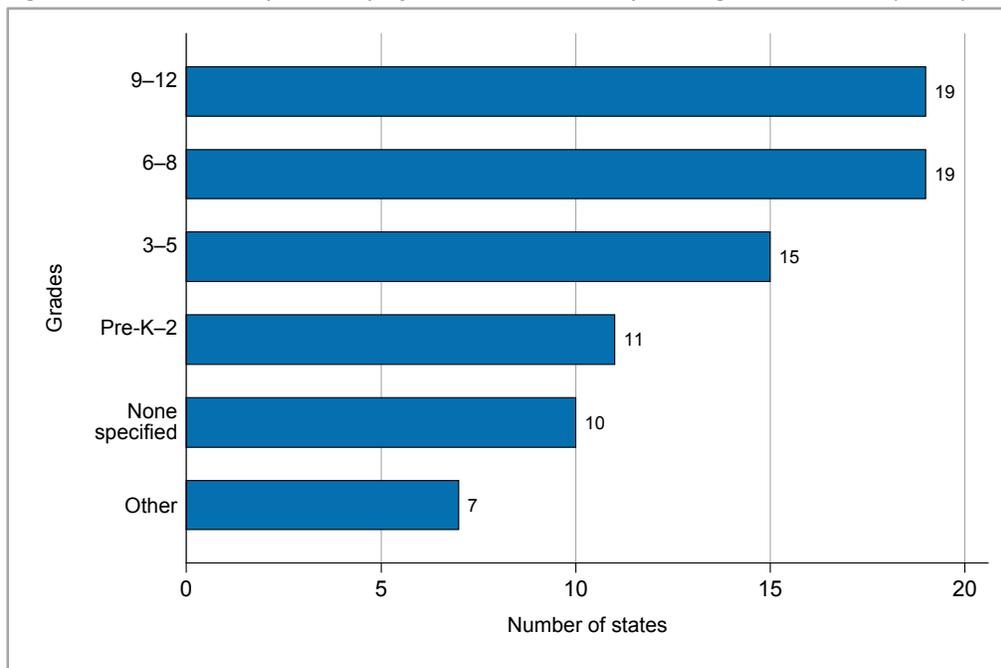
Project Title	The North Tier Technology Consortium
Project Description	The North Tier Technology Consortium, in Virginia, used competitive grant funds in 2007 to provide six-week workshops, online courses, and face-to-face training opportunities in the use of interactive whiteboards to over 400 new attendees. The consortium serves over 500 schools, nearly 40,000 teachers, and more than 5,000 administrators in northern Virginia. The consortium's evaluators used focus group interviews and self-evaluations to collect data on the learning of participants and their growth and change in teacher practice. http://www.mhznetworks.org/northtier/
Project Results	LEA mathematics benchmark scores show Limited English Proficiency students make more connections to prior knowledge and learn abstract content area knowledge when lessons are presented using interactive whiteboards. Interactive whiteboard classes such as: Building Interactive Lessons and Teachers Soar High with Smartboard Integration enable this strategy.

Wisconsin

Project Title	Digital Tools Integration
Project Description	As part of the Digital Tools Integration project, Auburndale, Baraboo, Columbus, Mauston, Montello, Necedah Area, Nekoosa, New Lisbon, and Pardeeville Area Schools, in Wisconsin, collaborated to provide a comprehensive professional development program to: 1. Increase student academic achievement in WI ITLS skills and content curriculum through participation in consortium activities related to the use and integration of new digital tools; 2. Provide opportunities for teachers/library media specialists to develop, implement, and assess technology-rich learning activities; and 3. Foster technology integration leadership teams, in district training and support, and professional collaboration within and between consortium districts.
Project Results	Student achievement increased in reference to student use/mastery of the following tools: interactive white boards, podcasting, blogs, wikis, digital video and handheld computers.

While the majority of states emphasized high school level (grades 9-12) and middle school level (grades 6-8) priorities in their competitive grant processes, states reported awarding funds for all grade levels from Pre-K through high school as shown in Figure 9.

Figure 9. Grade level emphasis in projects funded with competitive grants: Round 6 (FY 07)



NOTE: N=50 states and the District of Columbia.

Research and Evaluation

States were asked to indicate the primary source of research and information used to guide their state's competitive grant priorities. The International Society for Technology in Education Center for Applied Research in Educational Technology (ISTE CARET) site was the most frequently cited source (31 states). This was followed by the Regional Educational Laboratories (26 states), SETDA Technical Assistance Partnership Program (TAPP) (24 states), and What Works Clearinghouse database (18 states). Of the top four sources, three are funded by the U.S. Department of Education or the Institute of Educational Sciences (IES).

Some of the additional sources states reported using to locate research to guide the competitive grant program included:

- Partnership for 21st Century Skills
- eMINTS
- *T.H.E. Journal*
- Consortium for School Networking (CoSN)
- Technology Solutions that Work (TSW)
- Learning and Leading with Technology (ISTE)

States are continuing to encourage and, in some cases, require NCLB IID grantees to conduct or participate in research studies. The number of states that require LEAs to participate in a research protocol established by the state increased from 10 states in Round 4 (FY 05) to 16 in Round 6 (FY 07). At the same time, fewer states are encouraging LEAs to conduct their own research studies (see Table 6).

Table 6. Number of states with various research requirements for competitive grantees: Rounds 4-6

	Round 4 FY 05	Round 5 FY 06	Round 6 FY 07
Number of states that required LEAs to conduct research studies	9	3	4
Number of states that encouraged LEAs to conduct research studies	17	19	15
Number of states that required LEAs to participate in state research protocol	10	12	16

An example of an LEA using funding to conduct a quasi-experimental research is presented below.

Kansas	
Project Title	Technology Rich Classrooms Project
Project Description	The purpose of the Technology Rich Classrooms Project for grades 3 and 4 in Garden City School District, Kansas, is to provide evidence that the immersion of technologies into the learning environment, which is supported by strong, ongoing professional development, can produce positive change in the classroom that results in improved student learning. The goal is to bring about change: change in the way teachers teach, change in the way students learn, and change in the way learning is assessed. http://www.gckschools.com/
Project Results	Garden City has identified students in Technology Rich Classrooms are scoring higher on State Reading and Math Assessments than their counterparts in similar, but traditional classrooms. Using local comparisons, Garden City has compared 4-4th Grade TRC Classes with 4 similar non-TRC classrooms to find students in TRC Classrooms score significantly higher.

Summary

The flexibility of the competitive grant awards for NCLB enable the states to provide substantive, multi-year awards to high-need LEAs or partnerships that have demonstrated commitment and capacity for results through their submission of high quality proposals. The competitive grant process also allows states to set grant priorities that align to the federal NCLB goals and that leverage and scale emerging research findings on highly effective teaching and learning practices for educational technology. Table 7 presents the number of competitive grants awarded and funding amounts by state.

Table 7. Total EETT competitive funding allocations and number of competitive grants awarded by state: Round 6 (FY 07)

State	Total funds awarded for competitive grants	Number of competitive grants awarded	State	Total funds awarded for competitive grants	Number of competitive grants awarded
Alabama	\$1,856,397	15	Montana	\$625,741	—
Alaska	799,460	19	Nebraska	625,741	10
Arizona	2,566,769	7	Nevada	774,846	5
Arkansas	2,307,191	20	New Hampshire	1,251,482	50
California	9,996,425	26	New Jersey	1,600,000	13
Colorado	1,199,800	4	New Mexico	1,993,231	15
Connecticut	1,103,469	10	New York	11,056,331	28
Delaware	625,735	2	North Carolina	4,958,880	21
District of Columbia *	1,105,000	1	North Dakota	235,084	4
Florida	5,127,612	7	Ohio	4,596,707	26
Georgia	8,014,073	106	Oklahoma	1,187,794	16
Hawaii	558,605	10	Oregon	1,427,091	14
Idaho	1,251,482	19	Pennsylvania	8,048,100	55
Illinois	4,901,992	26	Rhode Island	1,200,000	17
Indiana	4,257,680	40	South Carolina	1,747,648	9
Iowa	1,395,741	11	South Dakota	1,236,174	8
Kansas	860,000	15	Tennessee	2,149,113	8
Kentucky	1,774,956	27	Texas	11,300,000	26
Louisiana	2,700,000	20	Utah	625,740	5
Maine	614,809	7	Vermont	625,741	5
Maryland	1,812,029	10	Virginia	1,956,073	8
Massachusetts	3,840,898	36	Washington	1,752,854	187
Michigan	4,781,894	8	West Virginia	1,600,687	10
Minnesota	874,658	9	Wisconsin	1,952,064	20
Mississippi	1,646,256	9	Wyoming	625,741	9
Missouri	3,898,539	14	Total	\$135,024,333	1,047

NOTE: Dash (—) denotes that the necessary information was not available from the survey data.

* Calculated value.

Section III: Formula Grant Program

The formula grants under NCLB IID are noncompetitive awards based on a predetermined formula from Title I. School eligibility is based on U.S. census data that identifies high-poverty, underperforming, and technology-deficient schools.

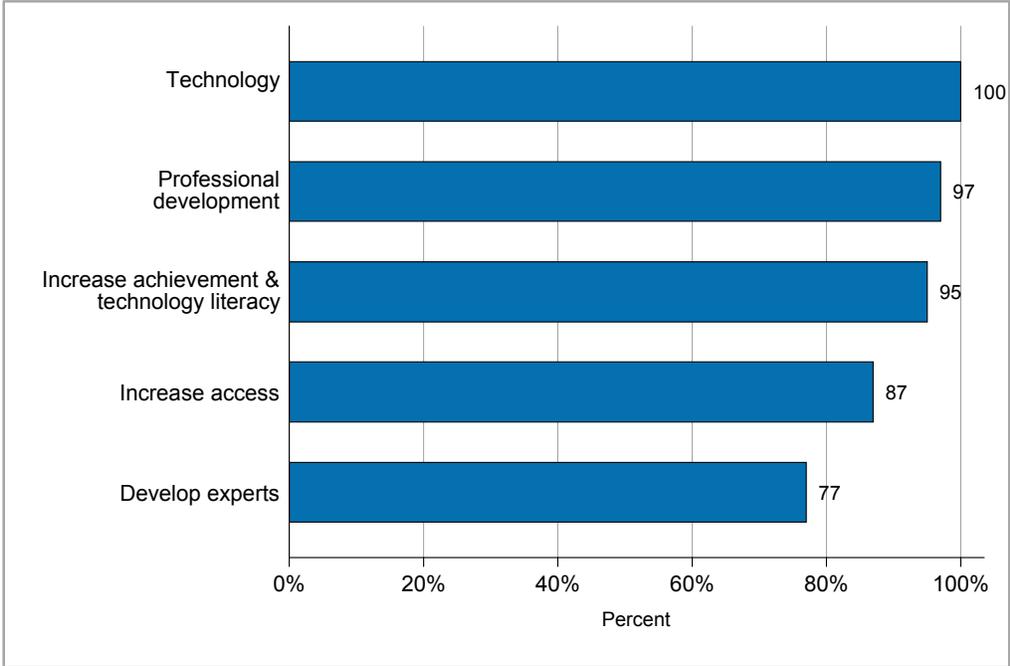
Facts and Figures

As previously mentioned, the U. S. Department of Education’s FY 06 appropriations bill included language overriding the provision that SEAs use 50% of NCLB IID grant funds available to LEAs for formula awards and 50% for competitive awards. In Round 6 (FY 07), approximately \$119.2 million (47%) was awarded through 11,351 formula grants by 38 states and the District of Columbia.

Focus of Formula Grants

Respondents were asked to rank the top five most pursued strategies by LEAs through NCLB IID formula grant awards in Round 6 (FY 07). The most frequently cited priorities for NCLB IID use of formula awards included technology, professional development, increasing achievement and technology literacy, increasing access, and developing experts (see Figure 10).

Figure 10. Top five strategies used in projects funded with formula grants: Round 6 (FY 07)



NOTE: N=38 states and the District of Columbia. The full list of priorities in the NCLB IID legislation, in addition to those listed above, includes: proven learning and technology solutions, foster communication and outreach with parents, networking and infrastructure, data management/informed decision making, assessment, and information technology courses. For more detailed descriptions of the strategies, please see the Glossary.

As Figure 10 indicates, the top two priorities for formula grants were technology and professional development related to technology. The following examples highlight those priorities.

Alaska	
Project Title	The Technology Teacher Leaders (TTL) Program
Project Description	The TTL Program is designed to empower change at the classroom level, and is based on a systemic design approach to be implemented at a district level in alignment with Anchorage School District's Six Year Instructional Plan. The TTL Program provides a supported community of K-12 teachers who become leaders in the area of technology integration and who leverage their skills, knowledge, and understanding to help schools improve student learning. The program has been successfully implemented for six years and involves more than 250 teachers in 84% of the schools. Each TTL school identifies a learning goal that is consistent with the school's academic goal(s), and then considers how technology infused learning could help students achieve this school academic goal. http://www.asdk12.org/depts/itech/TTL04/
Project Results	Several schools involved in the 2007-08 TTL project year used document cameras and access to computers to increase reading and writing skills, and the results are significant. For example: At Romig Middle School, 88% of the students in the TTL participant classrooms increased at least one reading level in the district adopted curriculum, with 52% of those students increasing two or more reading levels during the 2007-08 school year.

Maine	
Project Title	Computer Maintenance Program
Project Description	As part of the Computer Maintenance Program, (Calais School District, Maine) students in grades 9-12 were trained as student technicians. They trained and worked under professional supervision, became proficient in their knowledge and formed the maintenance, repair and help desk for the school system. After receiving training and hands on experiences in computer class, the students became repair technicians after school.
Project Results	Because of this project, a secondary source \$7,000 grant was secured to start an after school computer repair business, which resulted in providing over \$500,000 in upgraded computers and equipment for the school and non-profit community groups.

Maryland	
Project Title	eCoach Program
Project Description	The program focused on training teachers to integrate an interactive whiteboard, classroom response system, and document camera into every facet of daily instruction. Teachers apply for and are selected to receive intensive training on technology standards, formative assessment, technology integration, and student learning styles for a full school year. Teachers are then outfitted with the aforementioned technology to use during instruction, with the expectation that it be used every day. http://www.kent.k12.md.us
Project Results	Overall, 2,564 school system teachers and 34,980 students have directly benefited from the project through 100 eCoaches. Nearly 100% of eCoaches reported that students were more engaged and had a better attitude toward assignments when technology was used. More than 50% of eCoach respondents reported that students had better attendance when technology was used in classrooms.

For many states, the issue influencing their decision whether or not to opt out of formula grants was their determination of whether the size of the formula grants at the reduced funding level would have provided a significant impact.

Through the use of the formula grant program, high poverty and high need LEAs have some funding to use for acquiring and using technology to boost student achievement. Utilizing student management systems has helped teachers and administrators more efficiently diagnose and implement findings for adjusting or changing teaching strategies and concepts.

-State Technology Director, Tennessee

While the majority of states have not exercised the option of using student management systems, several representatives in those states reported concern over the size of the formula grants awarded in their states.

Title II, Part D allocation funds have been instrumental in keeping technology integration for effective teaching and learning in the mixed program development for closing the gaps in academic performance, but the level of funding has been largely insufficient for large-scale and systemic efforts to promote effective technology deployment and integration. More resources and evidence-based promising practices on technology integration for effective learning in core subject areas are needed to engage in systemic transformation through technology.

-State Technology Director, New York

Award Size

The range in formula awards was quite extensive, ranging from \$1 to more than \$8 million. New York City Public Schools received the largest formula grant in Round 6 (FY 07), followed by Los Angeles Unified School District, City of Chicago School District, Detroit City School District, and Dade County School District in Miami (Table 8). These five awards represented 15% of the total amount of funding awarded through formula grants (\$119.2 million).

Table 8. Five largest formula grants awarded to individual LEAs: Round 6 (FY 07) (Dollar amounts in millions)

Local education agency	City	State	Number of schools in district³	Largest award amount (in millions)
New York City Public Schools	New York	NY	1,408	\$8.2
Los Angeles Unified School District	Los Angeles	CA	768	\$3.8
City of Chicago School District	Chicago	IL	633	\$3.3
Detroit City School District	Detroit	MI	235	\$1.3
Dade County School District	Miami	FL	392	\$1.2

³ U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Public Elementary/Secondary School Universe Survey, 2005–06, Version 1a", and "Local Education Agency Universe Survey, 2005–06, Version 1a." Retrieved November 8, 2008 from <http://nces.ed.gov/pubs2008/2008339.pdf>.

Because of the formula grant program, California has decreased the student to computer ratio and expanded broadband access to nearly all of the districts in the state. However, recent funding cuts have slowed progress.

-State Technology Director, California

The percent of formula awards under \$5,000 increased from 70% in Round 5 (FY 06) to 77% in Round 6 (FY 07) (see Table 9). Only 1% of all formula grants awarded in Round 6 (FY 07) was more than \$100,000.

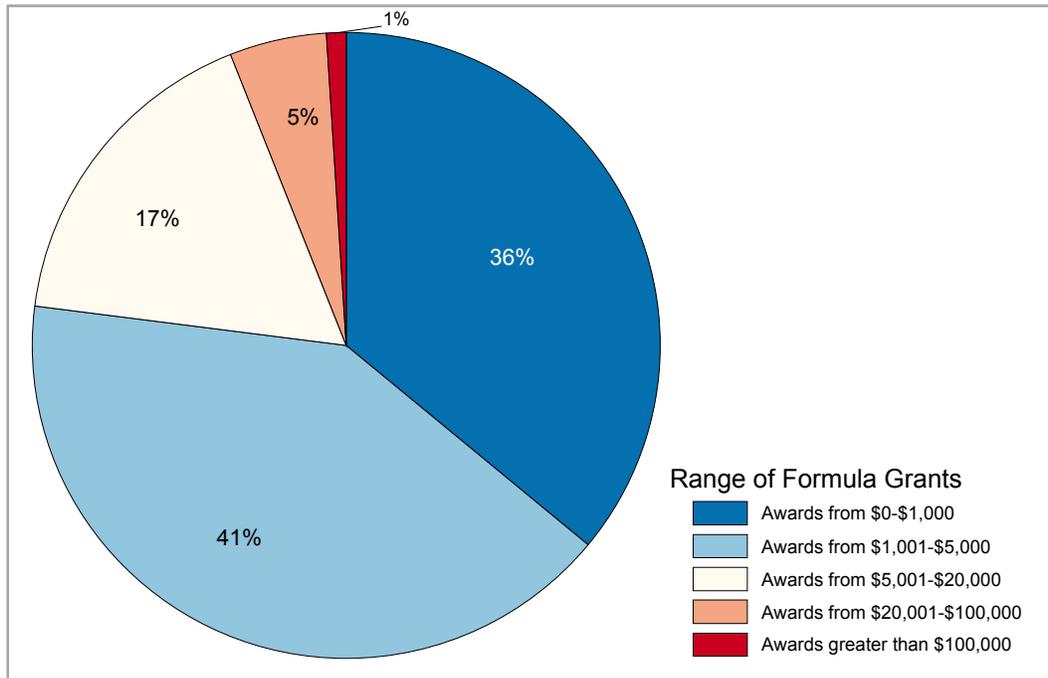
Table 9. Distribution of formula grants: Round 6 (FY 07)

	Awards from \$0-\$1,000	Awards from \$1,001-\$5,000	Awards from \$5,001-\$20,000	Awards from \$20,001-\$100,000	Awards greater than \$100,000	Total
Total number of formula grants awarded	4,060	4,632	1,943	594	122	11,351
Percent of total formula grants awarded	36%	41%	17%	5%	1%	100%

NOTE: N=38 states and the District of Columbia.

This distribution in size of formula grants is also presented graphically in Figure 11.

Figure 11. Percentage of formula grants awarded, by amount of award: Round 6 (FY 07)



NOTE: Detail may not sum to totals because of rounding. Percentages are based on 11,351 formula grants awarded in 38 states and the District of Columbia in Round 6 (FY 07).

Transfers

Under NCLB, states and school districts have the flexibility to “transfer a portion of the funding they receive by formula under certain Federal programs to their allocations under other programs so they can address more effectively their unique needs”.⁴

In Round 6 (FY 07), \$405,973 was transferred out of NCLB Title IID into other Title programs, and a little under \$5 million was transferred into NCLB Title IID from other Title programs, for a net effect of \$4,555,102 (see Table 10 and Table 11). As in past years, the transfers in and out were within 5% of the total dollars awarded.

Table 10. Title program fund transfer: Round 6 (FY 07)

Title Program	Dollars Transferred OUT OF Title IID	Dollars Transferred INTO Title IID	Net Gain/Loss From Transfers
Title I, Part A Improving the Achievement of Disadvantaged Children	-\$205,920		-\$205,920
Title II, Part A Improving Teacher Quality State Grants	-\$41,701	\$4,756,590	\$4,714,889
Title IV, Part A Safe and Drug-Free Schools and Communities	-\$9,600	\$140,479	\$130,879
Title V, Part A State Grants for Innovative Programs	-\$148,752	\$64,006	-\$84,746
Total	-\$405,973	\$4,961,075	\$4,555,102

NOTE: Negative numbers in the total column indicate that more money was moved out of a program than moved into that program.

Table 11. Overall fund transfers between Title programs and NCLB IID: Rounds 1-6

Round	Dollars Transferred OUT OF Title IID	Dollars Transferred INTO Title IID	Net Gain/Loss From Transfers
Round 1 (FY 02)	-\$1,934,431	\$4,257,733	\$2,323,303
Round 2 (FY 03)	-\$3,096,308	\$3,087,476	-\$8,831
Round 3 (FY 04)	-\$2,783,732	\$6,070,630	\$3,286,898
Round 4 (FY 05)	-\$9,663,246	\$8,724,420	-\$938,826
Round 5 (FY 06)	-\$2,934,109	\$3,208,243	\$274,134
Round 6 (FY 07)	-\$405,973	\$4,961,075	\$4,555,102

NOTE: Negative numbers in the last column indicate that more money was moved out of Title IID than moved into it.

⁴ U.S. Department of Education. *State and Local Transferability Act*. Retrieved January 16, 2009 from <http://www.ed.gov/policy/elsec/leg/esea02/pg88.html>.

Evaluation

In Round 6 (FY 07), 26% of SEAs used the NCLB designation of Adequate Yearly Progress (AYP) as the only evaluative benchmark; 49% required that all LEAs conduct a program evaluation; and 28% require the reporting of results compared to baseline.

Summary

The majority of states still find the formula portion of NCLB IID to be a valuable asset. It allows all districts in a state to participate in NCLB planning teams and to continue to use and select technology as a tool for improving student achievement. It engages personnel to consider technology as the planning teams search for ways to achieve outcomes. Even small grants are valuable to districts to fund staff development or train the trainer programs, or supplement their infrastructure needs. Table 12 presents the number of formula grants awarded by state.

Table 12. Number of formula grants awarded: Round 6 (FY 07)

State	Number of Formula grants awarded	State	Number of Formula grants awarded
Alabama	128	Montana	315
Alaska	47	Nebraska	250
Arizona	519	Nevada	17
Arkansas	—	New Hampshire	—
California	1,253	New Jersey	481
Colorado	172	New Mexico	—
Connecticut	158	New York	750
Delaware	33	North Carolina	138
District of Columbia	51	North Dakota	165
Florida	71	Ohio	907
Georgia	—	Oklahoma	538
Hawaii	1	Oregon	178
Idaho	—	Pennsylvania	—
Illinois	640	Rhode Island	—
Indiana	—	South Carolina	59
Iowa	—	South Dakota	157
Kansas	295	Tennessee	141
Kentucky	173	Texas	1,167
Louisiana	104	Utah	67
Maine	209	Vermont	60
Maryland	24	Virginia	132
Massachusetts	321	Washington	275
Michigan	709	West Virginia	—
Minnesota	—	Wisconsin	446
Mississippi	152	Wyoming	48
Missouri	—	Total	11,351

NOTE: Dashes (—) denote that the states opted out of awarding formula grants in Round 6 (FY 07).

Glossary of Strategies

assessment

Implement performance measurement systems to determine the effectiveness of education technology programs funded under this subpart, particularly to determine the extent to which activities funded under this subpart are effective in integrating technology into curricula and instruction, increasing the ability of teachers to teach and enabling students to meet challenging State academic content and student academic achievement standards.

data management/informed decision making

Use technology to collect, manage, and analyze data to inform and enhance teaching and school improvement efforts.

develop experts

Prepare one or more teachers in elementary and secondary schools as technology leaders with the means to serve as experts and train other teachers in the effective use of technology, providing bonus payments to these technology leaders.

foster outreach and communications with parents

Utilize technology to develop or expand efforts to connect schools and teachers with parents and students to promote meaningful parental involvement; to foster increased communication about curricula, assignments, and assessments between students, parents, and teachers; and to assist parents in understanding the technology being applied in their children's education, so that they are able to reinforce at home the instruction their children receive at school.

increase access

Establish or expand initiatives, including initiatives involving public-private partnerships, designed to increase access to technology, particularly in schools served by high-need local education agencies.

increase achievement and technology literacy

Adapt or expand existing and new applications of technology to enable teachers to increase student academic achievement, including technology literacy.

information technology courses

Develop, enhance, or implement information technology courses.

networking and infrastructure

Acquire connectivity linkages, resources, and services (including hardware, software, and other electronically delivered learning materials) for use by teachers, students, academic counselors, and school library media personnel in the classroom, in academic and college counseling centers, or in school library media centers in order to improve student academic achievement.

professional development

Professional development that provides school teachers, principals, and administrators with the capacity to integrate technology effectively into curricula and instruction aligned with challenging State academic content and student academic achievement standards, through such means as high-quality professional development programs.

proven learning and technology solutions

Acquire proven and effective courses and curricula that include integrated technology and are designed to help students meet challenging State academic content and student academic achievement standards.

technology

Acquire, adapt, expand, implement, repair, and maintain existing and new applications of technology to support the school reform effort and to improve student academic achievement, including technology literacy.