TECHNOLOGY LITERACY CHALLENGE PROGRAMS: TECHNOLOGY LITERACY CHALLENGE FUND, TECHNOLOGY INNOVATION CHALLENGE GRANTS, AND NATIONAL ACTIVITIES

Goal: To use educational technology as part of broader education reform that will provide new learning opportunities and raise educational achievement for all students.	**Funding History ($ in millions)**			
	Fiscal Year	**Appropriation**	**Fiscal Year**	**Appropriation**
Legislation: Title III, Section 3136 of the Elementary and Secondary Education Act (ESEA) of 1965, as amended (Technology Literacy Challenge Fund). Title III, Part A, SubPart 2 of the Elementary and Secondary Education Act (ESEA) of 1965, as amended (Technology Literacy Challenge Grant). Title III, Part A, SubPart 1, Section 3122 of the Elementary and Secondary Education Act, as amended (Community Technology Centers). Title III, Part A, SubPart 1, Section 3122 of the Elementary and Secondary Education Act (ESEA) of 1965, as amended (National Activities).	1985	$0 (TLCF) $0 (TICG) $0 (CTC) $0 (NA)	2000	$425 (TLCF) $146 (TICG) $33 (CTC) $2 (NA)
	1990	$0 (TLCF) $0 (TICG) $0 (CTC) $0 (NA)	2001	$450 (TLCF) $136 (TICG) $65 (CTC) $2 (NA)
	1995	$0 (TLCF) $10 (TICG) $0 (CTC) $3 (NA)	2002 (Requested)	$0

Program Description

Technology Literacy Challenge Fund (TLCF): The purpose of the TLCF program is to provide assistance to states and districts to support the integration of technology into school curricula to improve teaching and learning and enable all students to become technologically literate. TLCF funds also support state and local efforts to ensure that: (1) All teachers have the training and support to integrate technology effectively into their classrooms; (2) All students and teachers have access to multimedia computers; (3) Every classroom is connected to the Internet; and (4) Effective and engaging software is an integral part of every school curriculum.

Technology Innovation Challenge Grant (TICG): The purpose of the TICG program is to support the development of innovative applications of technology in schools.

Community Technology Centers (CTC): The purpose of the CTC program is to increase access to technology and to promote the use of technology in education through the development of programs that demonstrate the educational effectiveness of technology in urban and rural areas and economically distressed communities.

National Activities (NA): The purpose of the NA program is to support Federal leadership activities that promote the use of technology in education.

Program Performance

OBJECTIVE 1: STUDENTS IN HIGH-POVERTY SCHOOLS WILL HAVE ACCESS TO EDUCATIONAL TECHNOLOGY THAT IS COMPARABLE TO THE ACCESS OF STUDENTS IN OTHER SCHOOLS.

Indicator 1.1 Computer access in high-poverty schools: The student-to-computer ratio in high-poverty schools will be comparable to that in other schools.

Targets and Performance Data				Assessment of Progress	Sources and Data Quality
Student-to-computer ratio				**Status:** Positive movement toward target.	**Source:** Internet Access in U.S. Public Schools and Classrooms: 1994-99, February 2000.
Year	**Actual Performance**		**Performance Targets**	**Explanation:** Student to computer ratios are decreasing toward the goal of one computer for every five students. However, student to computer ratios are decreasing at a slower rate in high-poverty schools than low-poverty schools.	*Frequency:* Annually.
	Low-Poverty Schools	High-Poverty Schools	High-Poverty Schools		*Next collection update:* February 2001 for fall 2000.
Fall 1998:	10:1	17:1			*Date to be reported:* Summer 2001.
Fall 1999:	7:1	16:1	15:1		
Fall 2000:			**10:1**		**Validation Procedure:** Data validated by NCES review procedures and NCES Statistical Standards.
Fall 2001:			5:1		
Fall 2002:			5:1	The band used to define "high-poverty schools" consists of schools in which 71 percent of students or more are eligible for free or reduced-price lunch; the band used to define "low-poverty schools" consists of schools in which less than 11 percent of students are eligible for free and reduced-price lunch.	**Limitations of Data and Planned Improvements:** Poverty measures are based on data on free and reduced-price school lunches, which may underestimate school poverty levels, particularly for older students and immigrant students.

Indicator 1.2 Internet access in high-poverty schools: Internet access in high-poverty school classrooms will be comparable to that in other schools.

Targets and Performance Data				Assessment of Progress	Sources and Data Quality
Percentage of classrooms with Internet access				**Status:** No change.	**Source:** Internet Access in U.S. Public Schools and Classrooms, 1996, 1997, 1998, 1999 & 2000.
Year	**Actual Performance**		**Performance Targets**	**Explanation:** While there has been no change in the percentage of classrooms in high-poverty schools with Internet access, the number of high-poverty schools with Internet access rose to 90 percent in 1999, up from 80 percent in 1998. As high-poverty schools increasingly obtain access to the Internet, it is likely that their classroom connections will subsequently increase.	*Frequency:* Annually.
	Low-poverty schools	High-poverty schools	High-poverty schools		*Next collection update:* April 2001 for fall 2000.
Fall 1994:	4	2			*Date to be reported:* Summer 2001.
Fall 1995:	9	5			
Fall 1996:	18	7			**Validation Procedure:** Data validated by NCES review procedures and NCES Statistical Standards.
Fall 1997:	36	14			
Fall 1998:	62	39			
Fall 1999:	74	39	55		
Fall 2000:			**100**		
Fall 2001:			100		
Fall 2002:			100	The band used to define "high-poverty schools" consists of schools in which 71 percent of students or more are eligible for free and reduced-price lunch; the band used to define "low poverty schools" is of schools in which less than 11 percent of students are eligible for free and reduced-price lunch.	**Limitations of Data and Planned Improvements:** Poverty measures are based on data on free and reduced-price school lunches, which may underestimate school poverty levels, particularly for older students and immigrant students.

Indicator 1.3 High-poverty districts—Technology Literacy Challenge Fund: The number of states that award at least 66 percent of their TLCF funds to school districts designated as high-poverty will increase.

Targets and Performance Data			Assessment of Progress	Sources and Data Quality
Year	**Actual Performance**	**Performance Targets**	**Status:** Positive trend, target not met. **Explanation:** The FY 1998 performance covers the period from October 1997 to September 1999. In September of 1999, 30 states reported awarding 66 percent or more of their FY 1998 TLCF allocation to districts they designated as high-poverty. There is no statutory TLCF requirement that a specific amount or percentage of state allocations be awarded to high-poverty districts, nor does the statute define poverty. States must, however, provide assistance to the districts with the highest numbers or percentages of children in poverty and the greatest need for technology. The amount of funding provided to high-poverty districts is dependent on state program implementation and the effectiveness of the Department's leadership with states.	**Source:** Technology Literacy Challenge Fund online performance report. *Frequency:* Annually. *Next collection update:* 2002 (for FY 2000 data). *Date to be reported:* March 2002. **Validation Procedure:** Data supplied by states. No formal verification procedure applied. **Limitations on Data and Planned Improvements:** Subgrant allocation data are state self-reported and there is no alternative source. Reports on the distribution of funds are estimates (and may be substantially inaccurate) until the year following the end of their period of availability. Thus, state awards of FY 1999 funds are reported in 2001, following the end of their period of availability in September 2000. Corrections to 1998 data were made in March 2001.
FY 1997:	27 of 50	Establish baseline		
FY 1998:	28 of 50	32 of 50		
FY 1999:	30 of 50	35 of 50		
FY 2000:	**No Data Available**	**37 of 50**		
FY 2001:		39 of 50		
FY 2002:		50 of 50		

OBJECTIVE 2: PROVIDE TEACHERS AND OTHER EDUCATORS WITH THE PROFESSIONAL DEVELOPMENT AND SUPPORT THEY NEED TO HELP STUDENTS LEARN THROUGH THE USE OF EDUCATIONAL TECHNOLOGY.

Indicator 2.1 Staff training and support: Increasing percentages of teachers will indicate that they feel very well prepared to integrate educational technology into classroom instruction.

Targets and Performance Data			Assessment of Progress	Sources and Data Quality
Year	**Actual Performance**	**Performance Targets**	**Status:** No 1999 data, but progress toward target is likely. **Explanation:** In 1998, 20 percent of teachers reported that they were fully prepared to integrate technology in their instruction. Federal resources for training for teachers to use technology (including the Technology Literacy Challenge Fund and the Technology Innovation Challenge Grants) as well as state and local funds continue to support professional development in the use of educational technology for teachers and, correspondingly, progress toward the targets for this indicator.	**Source:** Teacher Quality: Report on the Preparation of Public School Teachers, 1999. *Frequency:* Biennially to date. *Next collection update:* Uncertain. *Date to be reported:* Uncertain. **Validation Procedure:** Data validated by NCES review procedures and NCES Standards. **Limitations of Data and Planned Improvements:** The data are self-reported by teachers. The cost and burden to regularly gather data other than self-report data on teacher preparedness for a nationally representative sample are prohibitive.
FY 1998:	20%			
FY 1999:	Data Collected Biennially	Continued increase		
FY 2000:	**Data Collected Biennially**	**40%**		
FY 2001:		Continuing increase		
FY 2002:		Continuing increase		

Indicator 2.2 District professional development: The percentage of TLCF subgrantees that report professional development as a primary use of funds will increase.

Targets and Performance Data			Assessment of Progress	Sources and Data Quality
Percentage of TLCF districts			**Status:** Target met.	**Source:** Technology Literacy Challenge Fund online performance report.
Year	**Actual Performance**	**Performance Targets**		*Frequency:* Annually.
FY 1997:	55%	Baseline established	**Explanation:** The FY 1997 performance covers the period from October 1996 to September 1998.	*Next collection update:* 2001 for FY 1999.
FY 1998:	60%	60%		*Date to be reported:* Summer 2001.
FY 1999:	No Data Available	65%		
FY 2000:	**No Data Available**	**70%**	States conduct competitions under the Technology Literacy Challenge Fund and have wide discretion to set priorities for those competitions. Districts also have considerable discretion (depending on the state) to direct the use of funds. States have been encouraged to devote at least 30 percent of funds to professional development related to educational technology beginning in 1998.	**Validation Procedure:** Data supplied by states. No formal verification procedure applied.
FY 2001:		75%		**Limitations of Data and Planned Improvements:** District data are self-reported by districts to states that self-report to ED. Data are estimates from district technology coordinators for the most part. Of the 1998 subgrantee reports examined, 377 (12.3 percent) provided no data related to this indicator.
FY 2002:		80%		

Indicator 2.3 Professional development models: An increasing percentage of TICG projects will develop models of professional development that result in improved instructional practice.

Targets and Performance Data			Assessment of Progress	Sources and Data Quality
Year	**Actual Performance**	**Performance Targets**	**Status:** Target exceeded. **Explanation:** Based on the rationale that it would take at least 3 years for projects to develop and implement professional development models that could result in improved instructional practice, a target of 10 percent was set for projects in the 4th and 5th years, which include 43 projects awarded in 1995 and 24 awarded in 1996. First-year data show that nearly half of these projects provided data indicating improved instructional practices. Performance was underestimated because: (1) no baseline and corroborating data were available, (2) measures were put in place during the 2nd and 3rd years of the projects reporting, and (3) school districts equipped classrooms more quickly than anticipated, allowing more time, effort, and resources to be applied to professional development, allowing for greater progress toward the goal.	**Source:** Evaluations conducted by the Technology Innovation Challenge grantees and reviewed by ED program and evaluation staff. *Frequency:* Annually. *Next collection update:* December 2001. *Date to be reported:* Spring 2002.. **Validation Procedure:** Data supplied by grantees. No formal verification procedure applied. **Limitations of Data and Planned Improvements:** Data are supplied by grantees. A 3-tier data collection, review, and analysis process is used, involving program staff, team leaders, and an evaluation team. Each review stage examines and analyzes the reported results for quality and validity of data and methodology. The Department will continue to assess the quality of the data and develop plans for improvement, if needed.
1999:	No Data Available	No data available		
2000:	**44% of all projects in their 4th or 5th year**	**10% of all projects in their 4th or 5th year**		
2001:		15% of all projects in their 4th or 5th year		
2002:		20% of all projects in their 4th or 5th year		

Indicator 3.1 Classroom use: Students will increasingly use educational technology for learning in core academic subjects.

Targets and Performance Data				Assessment of Progress	Sources and Data Quality
Percentage of students that ever use a computer to solve math problems				**Status:** Unable to judge. **Explanation:** Computer use is fairly ubiquitous in writing. As computers become more available and knowledge about how to integrate computer use into instruction increases, computer use in mathematics also likely will increase.	**Source:** NAEP, 1996; 1999. *Frequency*: Every 4 years. *Next collection update:* 2000 for 1999 data. *Date to be reported:* Summer 2001. **Validation Procedure:** Data validated by NCES review procedures and NCES Statistical Standards. **Limitations of Data and Planned Improvements:** Questions yielding this data do not fully capture the extent to which computers are regularly used in classrooms to support instruction. For mathematics, NAEP asks students if they have ever used a computer to solve math problems. (For changes in the mathematics measure between 1996 and 1999 NCES indicates a certainty level of less than 95 percent that the differece is significant). For writing, NAEP asks students if they use a computer to write stories or papers.
Year	**Actual Performance**		**Performance Targets**		
	3	Age 17	(Both grades)		
1978:	56%	46%			
1996:	74%	70%			
1999:	71%	66%	75%		
2000:			**Continuing increase**		
2001:			Continuing increase		
2002:			Continuing increase		
Percentage of students using computers in writing					
Year	**Actual Performance**		**Performance Targets**		
	Eighth grade	Eleventh grade	(Both grades)		
1978:	15%	19%			
1996:	91%	96%			
1998:	Quadrennial Data	Quadrennial Data	98%		
2000:	**Quadrennial Data**	**Quadrennial Data**	**Continuing increase**		
2001:			Continuing increase		
2002:			Continuing increase		

Indicator 3.2 Progress on State Goals—Technology Literacy Challenge Fund: An increasing percentage of states will report progress on state goals related to integrating online and other technology resources into the curriculum.

Targets and Performance Data			Assessment of Progress	Sources and Data Quality
Percentage of states			**Status:** Unable to judge. **Explanation:** States report progress on state goals related to the national goals in annual performance reports. Most states (46 of 50) have goals that relate to national ET goal concerning integrating ET resources into the curriculum. Target data should be read as follows: For 1998: Of the States with the same goals in 1997 and 1998, [baseline] percent will show progress. For 1999: Of the States with the same Goals in 1998 and 1999, 50 percent will show progress.	**Source:** Technology Literacy Challenge Fund Online performance report. *Frequency:* Annually. *Next collection update:* 2001 (for 1998 data). *Date to be reported:* Summer 2001. **Validation Procedure:** Data supplied by states. No formal verification procedure applied. **Limitations of Data and Planned Improvements:** States report on their own goals and information cannot be added across states. There are currently no plans to establish common measures, although states will be provided with a critique of their goals as part of the Department's evaluation studies through the Supplemental Study contract.
Year	**Actual Performance**	**Performance Targets**		
1997:	N/A			
1998:	No Data Available	Baseline established		
1999:	No Data Available	50%		
2000:	**No Data Available**	**55%**		
2001:		60%		
2002:		65%		

Indicator 3.3 Classroom impact: The percentage of TICG projects that demonstrate positive impacts on curriculum and student achievement will increase.				
Targets and Performance Data			Assessment of Progress	Sources and Data Quality
Year	**Actual Performance**	**Performance Targets**	**Status:** Target exceeded. **Explanation:** Performance reports from projects provide the necessary data to respond to this indicator. For the purposes of this assessment, positive impacts on student achievement may include improved attendance and discipline, acquisition of technology and telecommunications skills, problem-solving skills, performance or portfolio assessments, state assessment tools, or standardized tests. Based on the rationale that it would take at least 2 years for projects to demonstrate positive impacts on curriculum or student achievement, a target of 25 percent was set for projects in the 3rd, 4th and 5th years, which include 19 projects awarded in 1995 and 24 in 1996, and 19 in 1997. First-year data show that nearly half of these projects provided data indicating improved instructional practices. Performance was underestimated because: (1) no baseline and corroborating data were available, (2) measures were put in place during the 2nd and 3rd years of the projects reporting, and (3) school districts equipped classrooms more quickly than anticipated, allowing more time, effort, and resources to be applied to professional development, allowing for greater progress toward the goal.	**Source:** Evaluations conducted by the Technology Innovation Challenge grantees and reviewed by Office of Educational Research and Improvement program and evaluation staff. *Frequency:* Annually. *Next collection update:* Summer 2001. *Date to be reported:* December 2001. **Validation Procedure:** Data supplied by grantees. No formal verification procedure applied. (See Indicator 2.3) **Limitations of Data and Planned Improvements:** Data are supplied by grantees. A 3-tier data collection, review, and analysis process is used, involving program staff, team leaders, and an evaluation team. Each review stage examines and analyzes the reported results for quality and validity of data and methodology. The Department will continue to assess the quality of the data and develop plans for improvement, if needed.
1999:	No Data Available	No data available		
2000:	**44% of all projects in their 3rd, 4th, or 5th year**	**25% of all projects in their 3rd, 4th, or 5th year**		
2001:		30% of all projects in their 3rd, 4th, or 5th year, not counting FY1998 awardees		
2002:				

OBJECTIVE 4: HELP IMPROVE STUDENTS' INFORMATION TECHNOLOGY LITERACY SKILLS IN ALL STATES.

Indicator 4.1 Standards for students in educational technology: The number of states that have standards for student proficiency in the use of technology will increase.

Targets and Performance Data			Assessment of Progress	Sources and Data Quality
Year	**Actual Performance**	**Performance Targets**	**Status:** No 1999 data, but progress toward target is likely. **Explanation:** In 1997-98, 38 states had standards or graduation requirements pertaining to technology. As states increasingly devote resources to educational technology, they also increasingly focus on measuring the impact of educational technology. Setting standards is a precursor to that measurement of student proficiency.	**Source:** Education Week, Technology Counts, 1998; TLCF Profiles for future updates. *Frequency:* Planned. *Next collection update:* Fall 2000 for 1999-2000 school year. *Date to be reported:* Summer 2001. **Validation Procedure:** Education Week Data supplied by Education Week. No formal verification procedure applied. TLCF Profile data will be provided by SRI International. **Limitations of Data and Planned Improvements:** Education Week provides no detail on the rigor or comprehensiveness of standards.
1998:	38			
1999:	No Data Available	42		
2000:	**No Data Available**	**45**		
2001:		46		
2002:				

Indicator 4.2 Student proficiency in technology: In states that assess student proficiency in technology, the percentage of students that are proficient will increase.

Targets and Performance Data			Assessment of Progress	Sources and Data Quality
Year	**Actual Performance**	**Performance Targets**	**Status:** Unable to judge. **Explanation:** Data on this indicator have not yet been collected; however, collection of relevant data is planned through the TLCF Profiles project. Development of a test of student computer skills is being planned for future studies and evaluations. A literature search, collection, and analysis of existing assessments is underway.	**Source:** TLCF Profiles. *Frequency:* Planned. *Next collection update:* Planned. *Date to be reported:* Planned. **Validation Procedure:** Data to be supplied by SRI International. No formal verification procedure applied. **Limitations of Data and Planned Improvements:** Limitations of data will be defined as data are collected.
1999:	No Data Available	No data available		
2000:	**No Data Available**	**Baseline to be established**		
2001:		Increase over baseline		
2002:				

OBJECTIVE 5: THROUGH THE CREATION OR EXPANSION OF COMMUNITY TECHNOLOGY CENTERS IN DISADVANTAGED AREAS, IMPROVE ACCESS TO COMPUTERS, THE INTERNET, AND EDUCATIONAL TECHNOLOGY.

Indicator 5.1 Customer reports on value of access: An increasing percentage of clients of the Community Technology Centers will report that access to computer technology improved their educational or employment outcomes.

Targets and Performance Data			Assessment of Progress	Sources and Data Quality
Year	**Actual Performance**	**Performance Targets**	**Status:** No 1999 data available, but baseline data are being established in 2000. Progress toward goal is likely. **Explanation:** The mission of the Community Technology Center program is to establish or expand community centers that increase access to computers, the Internet, and educational technology for residents of economically distressed communities. The program awarded its first grants in fall 1999.	**Source:** Annual performance report, customer satisfaction survey. *Frequency:* Annually. *Next collection update:* 2000. *Date to be reported:* Summer 2001. **Validation procedure:** Data supplied by grantees. No formal verification process procedure applied. **Limitations of data and planned improvements:** FY 2000 will be the first time project performance information is collected. Issues regarding consistency in reporting will be examined in this year. Satisfaction measures will be self-reported from clients.
FY 1999:	No Data Available	No Data Available		
FY 2000:	**No Data Available**	**Baseline to be established**		
FY 2001:		Increase over baseline		
FY 2002:				