Evaluation

of the

Louisiana Technology Initiative:

1998-1999

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EXECUTIVE SUMMARY

The Louisiana Technology Initiative expended approximately $34,422,800 on technology and staff development for public and non-public schools during 1998-99. Of this amount, $24,150,000 came from the Classroom Based Technology Fund (CBTF) and $10,272,800 from the federal Technology Literacy Challenge Fund (TLCF). The TLCF funds were further divided with $5,822,800 allocated directly to public schools, approximately $42,000 going to state special schools, and approximately $4,018,000 awarded as Professional Development Grants. Four of the awardees received additional funding for Professional Development Centers that serve as regional extensions of LCET. The remaining $390,000 was used for state level activities.

CBTF funds were distributed to districts/schools using an RFP procedure with allocations based on a per pupil basis. TLCF funds were competitively awarded to all districts based on high poverty need. Proposals were developed based on district/school technology plans that were approved by the state and which addressed the State Technology Goal and the four National Pillars/Goals. Funds were primarily used to purchase hardware, utilizing the E-rate allocation, software, and conducting professional development activities. The professional development sessions emphasized the integration of technology into the curriculum, aligning curriculum with content standards through technology and enhancing student achievement.

In June 1999, the student to computer ratio in the public schools was 6.0:1. For the non-public schools the ratio was 6.7:1. In 1997-98, the student to computer ratio was 8.0:1 in both public and non-public schools. When only high-end computers are considered, the ratio in public schools is 10.5:1; in non-public schools, 10.7:1. In 1997-98, these ratios were 19:1 and 18:1, respectively, for public and non-public schools. (In 1998-99 data, type 486 computers were not included in the high-end category.). Ninety-one percent of the public schools and 92% of the non-public schools have access to the Internet, up from 84% and 88% in 1998, respectively. Internet connections via direct link is 76% for public and 61% for non-public schools this year compared to 49% and 38% in 1998, respectively.

The percentage of schools that have computers in classrooms, labs or media centers connected through local area networks (LANs) is 77% in public schools and 71% in non-public schools compared to 64% and 57% in 1998, respectively. The percentage of public schools with an approved technology plan is 94% compared to 90% in 1998. For non-public schools the current percentage is 92% compared to 88% in 1998.

Forty-one percent of public school teachers in the state are at the beginner level in using technology, as are 37% of the non-public teachers. At the intermediate level are 41% of the public and 44% of the non-public. At the advanced level are 18% of the public and 22% of the non-public. Both public and non-public teachers reported 8% at the instructor level. As expected, the percent at the beginning level is down and the percent at the intermediate and advanced levels is up compared to last year.

Approximately 10,000 educators participated in professional development during the year. Of that number, 7022 teachers completed an evaluation form; 6151 were public school teachers, 871 were non-public teachers. Professional development was delivered in a variety of ways. LA INTECH was the most structured delivery system and accommodated

932 public school teachers and 89 non-public teachers. Other delivery systems included university/college courses, TL^2 and district/regional workshops classified as non-credit. Each public school teacher received an average of 17 hours of professional development during the year. Non-public teachers received an average of 17.8 hours.

Each teacher completed a survey form following in-service which contained 9 rubrics (4 point scale) addressing the percentage of students/teachers/schools/time that they thought were affected by the training received. For public school teachers the percentages ranged from a high of 80% for "Organizational structure exists for support of all aspects of technology integration", to a low of 40% for "Teacher integrates technology into all subject areas, using resources that map technology to the curriculum." For non-public teachers the percentages ranged from a high of 81% for "Organizational structure exists for support of all aspects of technology integration" to a low of 34% for "Teachers design and implement technology-based learning experiences that promote higher level learning for students and authentic assessment."

Although no data are available from the two previous years, it is important to note that 51% of the public and 63% of the non-public instructional rooms have Internet access. Likewise, 49% of the computers in public schools and 61% of the computers in non-public schools have Internet access. When computers in instructional rooms have Internet access, the percent for public schools is 24.4% compared to 23.6% for non-public schools.

The Louisiana Technology Initiative for 1998-99 has demonstrated a significant gain compared to the two previous years. The Initiative has been very successful in placing technology into classrooms and providing professional development for faculty and staff. Successful collaboration with the Technology Consortium for Teacher Education resulted in the revision of current criteria for certification in the area of educational technology and the award of a $1.6 million (T.H.E./QUEST) grant to facilitate integration of technology into state teacher preparation programs.

The Governor, Legislature, Board of Elementary and Secondary Education, Louisiana Department of Education, Louisiana Center for Educational Technology and participating businesses and industry are to be applauded for their leadership, funding and active cooperation. The school children of Louisiana are the benefactors of this continuing program and in subsequent years, the State at large. In order for this Initiative to support the State Accountability Program, the stakeholders must continue to fund purchases of hardware and software, provide opportunity and funding for professional development and ensure that pre-service teacher education programs are providing new teachers with the appropriate skills to integrate technology into the curriculum.

Evaluation of the Louisiana Technology Initiatives: 1997-99

Data from QED Reports

GOAL	EVALUATION	RESULTS					
		Public Schools 1997	Public Schools 1998	Public Schools 1999	Non-Public Schools 1997	Non-Public Schools 1998	Non-Public Schools 1999
All educators and learners will have access to technologies that are effective in improving student achievement.	Ratio of students to **all computers** in schools	**8:1**	**8:1**	**6.0:1**	**11:1**	**8:1**	**6.7:1**
	Ratio of students to **high-end computers** in schools	**48:1**	**19:1**	**10.5:1**[1]	**48:1**	**18:1**	**10.7:1**[1]
	Percentage of computers with Internet access	*	*	**49%**	*	*	**61%**
	Percentage of schools reporting the percent of teachers who integrate technology in the curriculum based on Louisiana Content Standards						
	• 0 – 25%	*	*	**45%**	*	*	**52%**
	• 26 - 50%	*	*	**26%**	*	*	**22%**
	• 51 – 75%	*	*	**14%**	*	*	**9%**
	• 76 -100 %	*	*	**15%**	*	*	**14%**
All teachers will have the training and support they. need to help all students learn through computers and through the information superhighway.	Percentage of schools that have a school and/or district person who is responsible for providing teachers with support and assistance in integrating technology into the curriculum	**76%**	**77%**	**100%**	**66%**	**99%**	**99%**
	Percentage of schools that have a school and/or district person who helps to maintain and support hardware and software in the school	**82%**	**98%**	*	**65%**	**99%**	*
	Estimated percentage of teachers at each skill level in the use of technology in instruction	**Percent**	**Mean Percent**[2]	**Mean Percent**[2]	**Percent**	**Mean Percent**[2]	**Mean Percent**[2]
	• Beginner	**40%**	**50%**	**41%**	**38%**	**45%**	**37%**
	• Intermediate	**27%**	**37%**	**41%**	**26%**	**39%**	**44%**
	• Advanced	**8%**	**15%**	**18%**	**8%**	**18%**	**22%**
	• Instructor	*	**8%**	**8%**	*	**8%**	**8%**
All teachers and students will have a modern computer in their classrooms.	Percentage of computers that are in instructional rooms, computer labs and library media centers	*	**92%**	**93%**	*	**87%**	**87%**
	Percentage of **instructional rooms** with Internet access	*	*	**51%**	*	*	**63%**

Data from QED Reports – Continued

Every classroom will be connected to the information superhighway	Percentage of **schools** that have access to the Internet	56%	84%	91%	58%	88%	92%
	• Percentage of these schools that have access to the Internet via direct link.	35%	49%	76%	15%	38%	61%
	• Percentage of these schools that have access to the Internet via dial-up link.	53%	40%	20%	80%	51%	33%
	Percentage of **computers** with Internet access in instructional rooms	*	*	24.4%	*	*	23.6%
	Percentage of schools that have computers in classrooms, labs, or Media Center(s) connected through LANs (local area networks)	33%	64%	77%	27%	57%	71%
	Percentage of administration buildings and schools that are connected to another school or schools through a WAN (wide area network)	27%	68%	75%[3]	6%	30%	13%[3]
Effective and engaging software and on- line resources will be an integral part of every part of every school curriculum	Percentage of **students** who participate in distance learning	*	*	18%	*	*	13%
	Percentage of **teachers** who participate in distance learning	*	*	23%	*	*	22%
Every system or independent school will engage in long range planning for technology in the schools	Percentage of schools that have a technology plan	73%	90%	94%	58%	88%	92%
	Percentage of schools that have developed or updated their plans for technology within the last year	87%	99%	78%[4]	94%	97%	75%[4]
	Percentage of classrooms in schools that were developed based on the model classroom in the Louisiana State Technology Plan	*	*	15%	*	*	11%

*** Comparable data were not collected.**

[1] Ratios for 1998-99 did not include 486 type computers, whereas previous years did

[2] Results were presented in a different format.

[3] Only schools were reported in previous years

[4] Updated plans only

Evaluation of the Louisiana Technology Initiatives: 1997-99

Staff Development for Public School Teachers

Data from Appendix 6.5 "Evaluation of Training Form"

	Mean	Percentage
1. Students are involved in higher order thinking skills activities supported by technology.	**2.51**	**51%**
2. Teachers design and implement technology-based learning experiences that promote higher level learning for students and authentic assessment.	**2.35**	**43%**
3. Teachers integrate technology into all subject areas, using resources that map technology to curriculum.	**2.28**	**40%**
4. Technology resources are available and are being used to support a variety of student and teacher experiences.	**2.76**	**61%**
5. Technology has been allocated in such a way as to support its constructive use in the teaching and learning environment.	**2.81**	**66%**
6. Individual schools/districts have equitable access to technology.	**2.65**	**58%**
7. Organizational structure exists for support of all aspects of technology integration.	**3.20**	**80%**
8. Organizational capacity fosters transformations in school leadership to support technology and the changes it brings to teaching roles and methodologies.	**2.95**	**73%**
9. Effective and ongoing staff development opportunities exist to support capacity building for using technology to improve teaching and learning.	**2.87**	**69%**
Response Choices for Rubric		
1. = few: less than 25% of the time or group		
2. = some: 25% to 75% of the time or group		
3. = many : more than 75% of the time or group		
4. = most: almost all of the time or group		

Number of Teachers by Type of Training:

University Credit - **92** Non-Credit - **4826** LA INTECH - **932** TL[2] - **117**
Unknown - **184**

Total Number of Teachers Participating in Professional Development Activities	**6,151**[1]
Total Number of Students Impacted	**513,279**[2]
Total Number of Hours of Training	**104,177**

[1] Number of teachers represents a unique count
[2] Represents a duplicated count

Evaluation of the Louisiana Technology Initiative: 1997-99

Staff Development for Non-Public School Teachers

Data from Appendix 6.5 "Evaluation of Training Form"

	Mean	Percentage
1. Students are involved in higher order thinking skills activities supported by technology.	**2.54**	**52%**
2. Teachers design and implement technology-based learning experiences that promote higher level learning for students and authentic assessment.	**2.18**	**34%**
3. Teachers integrate technology into all subject areas, using resources that map technology to curriculum.	**2.28**	**39%**
4. Technology resources are available and are being used to support a variety of student and teacher experiences.	**2.97**	**73%**
5. Technology has been allocated in such a way as to support its constructive use in the teaching and learning environment.	**3.01**	**76%**
6. Individual schools/districts have equitable access to technology.	**2.75**	**63%**
7. Organizational structure exists for support of all aspects of technology integration.	**3.21**	**81%**
8. Organizational capacity fosters transformations in school leadership to support technology and the changes it brings to teaching roles and methodologies.	**2.70**	**60%**
9. Effective and ongoing staff development opportunities exist to support capacity building for using technology to improve teaching and learning.	**2.65**	**58%**
Responses Choices for Rubric		
1. = few: less than 25% of the time or group		
2. = some: 25% to 75% of the time or group		
3. = many : more than 75% of the time or group		
4. = most: almost all of the time or group		

Number of Teachers by Type of Training:

University Credit - **12** Non-Credit - **739** LA INTECH - **89** TL[2] – **20**

Unknown - **11**

Total Number of Teachers Participating in Professional Development Activities	**871**[1]
Total Number of Students Impacted	**90,292**[2]
Total Number of Hours of Training	**15,471**

[1] Number of teachers represents a unique count

[2] Represents a duplicated count

Evaluation of the Louisiana Technology Initiative: 1998-99

Professional Development for Louisiana Educators

Data from Appendix 6.5 "Evaluation of Training Form"

	All Teachers	School Adminis-trators	Central Office Adminis.	Aides	Others
Answers from Rubric	**Means**	**Means**	**Means**	**Means**	**Means**
1. Students are involved in higher order thinking skills activities supported by technology.	**2.53**	**2.19**	**2.31**	**2.23**	**2.12**
2. Teachers design and implement technology-based learning experiences that promote higher level learning for students and authentic assessment.	**2.24**	**1.71**	**2.55**	**1.88**	**1.91**
3. Teachers integrate technology into all subject areas, using resources that map technology to curriculum.	**2.28**	**2.00**	**2.31**	**1.99**	**1.92**
4. Technology resources are available and are being used to support a variety of student and teacher experiences.	**2.91**	**2.78**	**2.76**	**2.80**	**2.58**
5. Technology has been allocated in such a way as to support its constructive use in the teaching and learning environment.	**2.95**	**2.82**	**2.66**	**2.61**	**2.67**
6. Individual schools/districts have equitable access to technology.	**2.69**	**2.61**	**2.62**	**2.52**	**2.44**
7. Organizational structure exists for support of all aspects of technology integration.	**3.20**	**3.13**	**2.86**	**2.94**	**2.95**
8. Organizational capacity fosters transformations in school leadership to support technology and the changes it brings to teaching roles and methodologies.	**2.87**	**2.94**	**2.79**	**2.68**	**2.70**
9. Effective and ongoing staff development opportunities exist to support capacity building for using technology to improve teaching and learning.	**2.79**	**2.83**	**2.48**	**2.75**	**2.62**

Response Choices for Rubric

1. = few: less than 25% of the time or group
2. = some: 25% to 75% of the time or group
3. = many: more than 75% of the time or group
4. = most: almost all of the time or group

Number of Participants in Professional Development Activities

Type of Training:	All Teachers	School Adminis.	Central Office Adminis.	Aides	Parents/ Others	**Total**
• LA INTECH	**1,021**	**11**	**11**	**18**	**106**	**1,167**
• TL^2	**137**	**4**	**0**	**2**	**16**	**159**
• University Credit	**104**	**0**	**0**	**0**	**9**	**113**
• Non-Credit	**5,565**	**211**	**16**	**142**	**573**	**6,507**
• Unknown	**195**	**5**	**2**	**6**	**153**	**361**
TOTALS	**7,022**	**231**	**29**	**168**	**857**	**8,307**
Number of Hours of Professional Development	**119,649**	**2803**	**805**	**1,549**	**11,719**	**136,525**

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BACKGROUND AND SETTING

The Louisiana Technology Initiative had its inception in 1987 when the state first received funds for the ***Louisiana Educational Quality Support Fund (LEQSF),*** commonly called the ***8(g)*** fund***.*** In 1994 a $78,000 technology grant was awarded under the ***GOALS 2000: Educate America Act*** to form the ***Louisiana GOALS 2000 Program***, which existed as such from July 1994 through December 1995. Through a ***National Science Foundation (NSF)*** grant to the ***Louisiana Systemic Initiative Program (LASIP),*** the ***Louisiana Networking In Education (LANIE)*** project was implemented, focusing on putting technology into Louisiana classrooms. In 1995 the state was awarded a $4.3 million ***Technology Innovative Challenge Grant*** by the U.S. Department of Education to design model technology programs at five pilot sites. This was a major milestone in the focus on technology as a reform tool for changing pedagogy in Louisiana schools.

In January 1996, The Louisiana GOALS 2000 program was renamed ***Louisiana LEARN for the 21st Century: An Educational Initiative (LA LEARN)*** and a comprehensive reform effort to develop a long-term improvement plan for all aspects of the state educational system was created. The Louisiana Board of Regents, State Department of Education, the Board of Elementary and Secondary Education (BESE), and LASIP worked together to develop a State Education Plan, with technology as a major state objective. ***LA LEARN*** came under the auspices of the newly created ***Louisiana Education Achievement and Results Now (LEARN) Commission***, in March 1996, which proposed that various educational and legislative entities in the state begin planning for the incorporation of technology into the educational process in schools at all levels.

The state applied for and received $5.3 million ***of Technology Literacy Challenge Fund (TLCF***) funds for the 1997-98 school year, to be used for meeting the mandates of the National Technology Goals. the ***Classroom-Based Technology Fund (CBTF)*** was also established and funded that year by the Louisiana State Legislature, providing another $38.2 million for the integration of technology into all Louisiana classrooms. A comprehensive plan for impacting all schools and levels of education in the state was developed. It included the development and adoption of the State Technology Plan, the establishment of the ***Louisiana Center for Educational Technology (LCET)*** in the ***Louisiana Department of Education (SDE)***, the passage of legislation for providing state funding for technology, allocation formulas, and the development of an application process for distributing both state and federal funds equitably.

During the 1998 regular session, the Louisiana Legislature once again allocated monies for the ***Classroom-Based Technology Fund (CBTF)***, amounting to $25 million for the 1998-99 school year. Louisiana was also awarded a $10.2 million federal ***Technology Literacy Challenge Grant*** to provide for training and

professional development to help ensure successful integration of technology in the classroom and to meet the mandate of the National Technology Goals.

Louisiana is continuing its commitment to improve education through the integration of technology and learning through the awarding of grant monies to districts, private schools and professional development consortia to continue efforts to meet the State Educational Technology Goal:

> *"All educators and learners will have access to technologies that are effective in improving student achievement".*

SOURCES OF FUNDING

Technology Literacy Challenge Fund

Congress passed the ***Improving America's Schools Act (IASA)*** in 1994 to provide support for key elements of systemic education improvement efforts. Technology's potential for helping to accomplish these reforms by broadening teacher and student access to educational resources and accelerating student learning was quickly recognized. The result was ***Title III, Technology for Education.*** The broad purpose of Title III was to help develop and support "a comprehensive system for the acquisition and use by elementary and secondary schools in the United States of technology and technology-enhanced curricula, instruction, and administrative support resources and services to improve the delivery of education services" (ESEA, Title III, Part A, section 3112).

Programs and activities funded under Title III include the ***School Technology Resource Grants (Technology Literacy Challenge Fund)***, which funds states and local school districts to use technology to implement educational technology plans to improve teaching and learning. The TLCF was first funded in fiscal year 1997, two years after the development of the national technology plan and the Four Pillars, which provided a focus for infusing technology effectively into classrooms to improve teaching and learning. The focus of the TLCF is on the classroom, with at least 95 percent of the funding provided to local educational agencies ***(LEAs)***. The requirements in the authorizing statute are intended to ensure that LEAs use their funds in ways likely to lead to improved classroom instruction and student achievement.

Louisiana was awarded $10,272,812 million from this fund in 1998. Five percent of the total Louisiana TLC funds, $513,640, was used by the Louisiana Center for Educational Technology for administrative costs, including staffing, technical assistance workshops, professional development institutes, developing materials, etc., associated with the federal TLCF program and the state CBTF program. The adjusted budget available for schools was $9,759,172.

Classroom-Based Technology Fund

The Classroom-Based Technology Fund was established by House Bill No. 1911 during the Regular Session, 1997 of the Louisiana legislature, to enact R.S. 17:3921.2. This bill provided monies for the fund, created the ***State Technology Advisory Committee (STAC)*** to oversee it, and developed procedures and guidelines relative to the awarding of the grant funds. (See Appendix A - *House Bill 1911*). The bill provided $38,200,000 in 1997 "for the purpose of improvement of student learning through technology within Louisiana's school districts", and included charter schools approved by school district boards or by the state chartering authority, all elementary and secondary schools operated by the ***Board of Elementary and Secondary Education (BESE)***, elementary and secondary schools operated by Louisiana State University, Southern University, the Department of Public Safety and Corrections, the Louisiana School for Math, Science and the Arts, and all certified elementary and secondary non-public schools.

During the regular session of the 1998 Louisiana Legislature, the Fund was continued and funded for $25 million. The Louisiana FreeNet received $850,001 of the appropriation. Of the remaining $24,149,999, the adjusted budget available for the schools was $23,774,999. The Louisiana Center for Educational Technology used 1.5% of the CBT funds, $375,000, for administrative costs, including staffing, technical assistance workshops, professional development institutes, developing materials, etc., associated with the federal TLCF program and the state CBTF program.

APPLICATION PROCESS

Under the advisement of director Dr. Carol S. Whelan and her staff at the Louisiana Center for Educational Technology, plans were developed and executed for:

- the awarding of the CBTF and TCLF grant monies to public school districts, Diocesan systems, non-public schools and special state schools;
- the awarding of TLC funds for district and school activities and regional Professional Development Centers;
- design and delivery of exemplary professional development models for integrating technology into classrooms, and
- leadership, guidance and assistance to districts, consortia, and non-public schools for meeting mandates of the funding entities and applications.

Two types of technology grants were designed for the 1998-99 funding period:

1) CBTF/TLC Technology Improvement Grants, and
2) TLC Professional Development Grants.

CBTF monies were used to award Technology Improvement Grants to school systems (LEAs and Diocesan systems) and to independent schools (special schools, laboratory schools, and state-approved non-public schools). TLC monies were competitively awarded in two categories: (a) as a component of Technology Improvement Grants

awarded to LEAs and independent public schools, and (b) as separate TLC Professional Development Grants to consortia composed of one or more LEAs and institutions of higher education, libraries, or other educational entities appropriate to assist local programs.

CBTF/TLC Technology Improvement Grants

The Application Packet for Technology Improvement Grants (See Appendix B - *Louisiana's Classroom-Based Technology Fund and Technology Literacy Challenge Fund Application Packet for Technology Improvement Grants*) combined the two funds, with the Classroom-Based Technology Fund (CBTF) monies targeted at the purchase of equipment. Funds were allocated for all public and state approved non-public schools and determined by using a formula based solely on student population. (See Appendix 6.3of the *Application Packet for Professional Development Grants*; *Appendix C* for designated amounts).

The federally funded Technology Literacy Challenge (TLC) funds were awarded on a competitive basis to public local education agencies and independent public schools only, as per federal guidelines. Monies could be used for all items identified for CBTF funds and for professional development activities, including college tuition, stipends, salaries, substitutes, professional services, conferences, etc. Applicants who qualified and met the competitive standards of the RFP were awarded grants up to a maximum amount based on the number and percentage of students living in poverty as represented in district free-lunch counts on file in the Louisiana Department of Education. (See Appendix 6.3 in the *Application Packet for Technology Improvement Grants*; *Appendix C* for designated amounts.)

The Application addressed the following funding and instructional priorities:

- maximizing the use of technology among a targeted number of students in classrooms and schools with a genuine need for expanded technologies and with genuine commitment to effectively integrate technology into the curriculum to improve student learning;
- support of local school system preparations for educational accountability;
- making strong connections with system/school improvement plan(s);
- focusing on one or more of the following curriculum areas: mathematics, science, reading, language arts, or social studies;
- limiting the number of schools or grade levels impacted by the grant; and
- addressing one or more of the purposes/models provided in the packet.

Applicants were also required to have a school plan for technology at impacted schools, conduct annual updates of the system technology plan, demonstrate increasing commitments to achieving the state technology goal and the national technology goals through the establishment of a ***Teaching, Learning, and Technology Council (TLTC)***, increase coordination of federal and state funds to support teaching, learning, and technology, and establish and maintain electronic

communication connections to the Internet for EVERY school and all district and school technology leaders.

TLCF Professional Development Grants

In response to the dire need for preparing teachers to effectively use technology to improve teaching and learning, $4,025,071 of the federal TLC funds was allotted for these grants. The Application Packet for the Professional Development Grants, (see Appendix C - *Louisiana's Technology Literacy Challenge Fund Application Packet for Professional Development Grants*), offered up to $200,000 to each consortia. Each consortia had to have a Local Education Agency (LEA) and partners, which could include other LEAs, special schools, non-public systems, private schools, institutions of higher education, businesses, academic content experts, museums, libraries, public broadcasting stations, or other appropriate organizations. At least one LEA with a high percentage or number of children living below the poverty line had to be included. State-approved non-public schools, though not directly eligible for these funds, had to be provided opportunities to participate.

REVIEW PROCESS

LCET developed timelines for submitting proposals for the Technology Improvement Grants and the Professional Development Grants, as well as dates for reviewing the proposals, submitting them to the State Technology Advisory Committee (STAC) and then to the BESE board for approval.

For the Technology Improvement Grants, reviewers who possessed technical and instructional expertise were selected and each team was assigned a contact person from the LCET staff who worked closely with them to answer questions and resolve problems. Applications were classified as "Full Approval", "Approval Contingent Upon Modifications" or "In Need of Further Development". LCET staff worked closely with applicants who did not receive full approval in making required revisions. The applications that were approved with contingencies were fully approved as soon as the revised applications were received and reviewed by the LCET staff for compliance with the recommendations, then sent to the STAC and BESE for approval.

Those needing further development had to re-develop their applications according to the review teams' suggestions and resubmit them at the next review session. Contact persons from the LCET staff were assigned to each review team to assist with the modifications. All deadlines established for the 1998-99 Technology Initiative were met as scheduled.

Each of the 66 public school districts, seven Diocesan systems, 53 non-public schools, and five special state schools were approved for funding.

Expert review panels composed of out-of-state members reviewed the Professional Development Grant proposals and placed them in one of three categories: (1) Recommended for Full Funding; (2) Recommended for Partial Funding (3) Not Recommended for Funding. For each proposal, the panel identified strengths, weaknesses, and suggestions for improvement. Sixteen proposals were recommended for full funding and six were recommended for partial funding; seven proposals were not recommended for funding. The panel also recommended additional funding for four outstanding proposals. As a result, these four consortia each developed a ***Teaching, Learning, and Technology (TLT)Center*** to serve as extensions of LCET for serving educators in their immediate and surrounding parishes.

FUNDS DISTRIBUTION

Funds from the CBTF totaling $ 23,774,999 provided a per-pupil distribution of $26.59 for 894,199 students. (See Appendix D–*Allocations–Classroom-Based Technology (98-99)* and Appendix E–*1998-99 Nonpublic Classroom-Based Technology Allocations).* Each of the 66 public school districts, the seven Diocesan systems, 53 non-public schools, and 5 special state schools received funding.

Of the total $10,272,812 of TLC funds, $5,865,640 was competitively awarded to all 66 districts based on high-poverty need. (See Appendix F–*Louisiana Literacy Challenge Grant (98-99) Allocation)*

The Professional Development Grants provided $4,018,262 of the TLC funds for 17 Professional Development Grants. During the review of the proposals, four projects were recommended for additional funding and program expansion for each to create a **Teaching, Learning, and Technology Center (TLTC)**, and 13 District/Consortium Professional Development Grants were funded for varying amounts. See Appendix G-*Professional Development Grants 1998-1999*.

Funds were awarded to applicants who had been approved by the Department of Education, State Technology Advisory Committee and the BESE Board.

GOALS AND OBJECTIVES

In an effort to improve student performance and better prepare students for the future work force, a united effort was initiated to provide students in Louisiana schools with greater access to technology. In the development of a State Plan for Technology, the various stakeholders and agency representatives chose one state goal and adopted the four National Pillars/Goals. They are:

State Technology Goal

- All educators and learners will have access to technologies that are effective in improving student achievement.

National Technology Pillars/Goals

- All teachers will have the training and support they need to help all students learn through computers and through the information superhighway.

- All teachers and students will have modern multi-media computers in their classrooms.

- Every classroom will be connected to the information superhighway.

- Effective and engaging software and on-line learning resources will be an integral part of the school curriculum.

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EVALUATION DESIGN

The purpose of the 1998-99 State Technology Evaluation Project was five-fold. One, the Evaluation team, through data collected on-line and analyzed by ***Quality Education Data (QED)*** of Denver, Colorado, ascertained the availability and extent of use of technology in the state. (See Appendices H and I for the forms). This comprehensive report on schools, found in Appendix J, compiled data on a variety of fronts, including number and types of computers in schools and classrooms, skill level of teachers and administrators, funding for technology, extent of technology planning, and Year 2000 Compliance, among others. The comprehensive report for districts and special schools is found in Appendix K.

Two, a professional development survey form was designed and put on-line for every teacher and staff member to complete following their participation in some form of technology staff development. The form solicited responses to nine rubrics that addressed items from use of technology to organizational structure to the integration of technology into the curriculum. Each rubric was answered using a four point scale ranging from few (1) to most (4) of the time or group. A copy of this instrument is found in Appendix L - *Evaluation of Training Form*. In addition to the rubrics, teachers indicated the type of training received, the number of students they believe were impacted by their training and the number of hours of training received.

Three, the Evaluation Team developed and put on-line End of Year Report (EOY***)*** survey forms, which were completed by technology coordinators in each district/school. These data addressed the extent to which the national Four Pillars and the State Goal were met and the Strategies which each district/school used to address the Pillars/Goals. A copy of the ***EOY Report for Districts and Special Schools*** can

be found in Appendix M and the ***EOY Report for Non-Public Schools*** can be found in Appendix N.

Four, a series of focus groups were held across the state and a summary of the data analysis for those meetings is found later in this report.

Five, an evaluation video was made that documented use of technology in a sample of classrooms around the state. This documentation addressed the National Pillars/Goals and the State Goal. A copy of the tape is appended to this report.

All of these databases were used to ascertain the change in availability and the use of technology in 1998-99 compared to the two previous years. The following section entitled *Data Analysis and Results* contains the various analyses and reports.

DATA ANALYSIS AND RESULTS

Summary of QED Report

Established in 1981, Quality Education Data (QED) is a nationally recognized research and database company, located in Denver, Colorado. QED provides information and data analysis to educational agencies and institutions worldwide. In 1996, QED and the Louisiana Department of Education collaborated on the design and implementation of a state survey. The purpose of this partnership was to establish a baseline for instructional technology and to provide the state with an instrument for the evaluation of a comprehensive statewide initiative to enhance the use of technology in all Louisiana classrooms, both public and non-public. Yearly information provided has included infrastructure/connectivity of schools to the Internet, availability of hardware and software in instructional settings, the integration of technology into the curriculum, and the collaboration between districts and schools with parents, the community and industry.

Two surveys were conducted, one for districts, usually completed by district technology coordinators, and one for schools, completed by school principals or technology coordinators. (See *Appendix H - Louisiana District Technology Survey 1998-1999* and *Appendix I - Louisiana School Technology Survey 1998-1999*). QED received 64 responses, (97%) from the 66 school districts (technology coordinators). Of the 1499 public schools in the state**,** 1462 responded for a 98% rate of response. Two hundred eighty three non-public schools responded, including the seven diocese systems from which each submitted only one survey form for all the schools in the respective dioceses. Only 52 non-public schools outside of the dioceses applied for technology funding.

As seen in ***Table 1***, below, the ratio of students to all types of computers for public schools is 6.0:1 in 1999. This ratio has reduced from 8:1 in 1997. In non-public

schools, the current ratio is 6.7:1 compared to 11:1 in 1997. When only high-end computers are considered, the student to computer ratio for public schools is now 10.5:1 compared to 48:1 in 1997 and 19:1 in 1998. For non-public schools, this ratio is 10.7:1 compared to 48:1 in 1997 and 18:1 in 1998.

Concerning connectivity, the percentage of public schools that have access to the Internet is now 91% compared to 84% in 1998 and 56% in 1997. In the non-public schools, 92% had access in 1999, 88% in 1998 and 58% in 1997. The Internet connections via direct link increased significantly. Public schools reported 76% of their computers were connected by direct link compared to 35% in 1997 and 49% in 1998. In non-public schools, direct link hookups were 61% this year compared to 15% in 1997 and 38% in 1998.

The complete QED report can be seen in Appendix K -*1998 Louisiana State Project EdTech™ Report, Quality Education Data (QED)*. District data are reported in Appendix J - *A Comparison of 1997-98 to 1998-99 QED Data for Districts & Special Schools.*

Table 1
Results from data collected by Quality Education Data, Inc. (QED)
Data from QED Reports -1997, 1998, 1999

GOAL	EVALUATION	RESULTS					
		Public Schools 1997	Public Schools 1998	Public Schools 1999	Non-Public Schools 1997	Non-Public Schools 1998	Non-Public Schools 1999
All educators and learners will have access to technologies that are effective in improving student achievement.	Ratio of students to **all computers** in schools	**8:1**	**8:1**	**6.0:1**	**11:1**	**8:1**	**6.7:1**
	Ratio of students to **high-end computers** in schools	**48:1**	**19:1**	**10.5:1**[1]	**48:1**	**18:1**	**10.7:1**[1]
	Percentage of computers with Internet access	*	*	**49%**	*	*	**61%**
	Percentage of schools reporting the percent of teachers who integrate technology in the curriculum based on Louisiana Content Standards						
	• 0 – 25%	*	*	**45%**	*	*	**52%**
	• 26 - 50%	*	*	**26%**	*	*	**22%**
	• 51 – 75%	*	*	**14%**	*	*	**9%**
	• 76 -100 %	*	*	**15%**	*	*	**14%**
All teachers will have the training and support they. need to help all students learn through computers and through the information superhighway.	Percentage of schools that have a school and/or district person who is responsible for providing teachers with support and assistance in integrating technology into the curriculum	**76%**	**77%**	**100%**	**66%**	**99%**	**99%**
	Percentage of schools that have a school and/or district person who helps to maintain and support hardware and software in the school	**82%**	**98%**	*	**65%**	**99%**	*
	Estimated percentage of teachers at each skill level in the use of technology in instruction	**Percent**	**Mean Percent**[2]	**Mean Percent**[2]	**Percent**	**Mean Percent**[2]	**Mean Percent**[2]
	• Beginner	**40%**	**50%**	**41%**	**38%**	**45%**	**37%**
	• Intermediate	**27%**	**37%**	**41%**	**26%**	**39%**	**44%**
	• Advanced	**8%**	**15%**	**18%**	**8%**	**18%**	**22%**
	• Instructor	*	**8%**	**8%**	*	**8%**	**8%**
All teachers and students will have a modern computer in their classrooms.	Percentage of computers that are in instructional rooms, computer labs and library media centers	*	**92%**	**93%**	*	**87%**	**87%**
	Percentage of **instructional rooms** with Internet access	*	*	**51%**	*	*	**63%**

Table 1 - Continued

Every classroom will be connected to the information superhighway	Percentage of **schools** that have access to the Internet	56%	84%	91%	58%	88%	92%
	• Percentage of these schools that have access to the Internet via direct link.	35%	49%	76%	15%	38%	61%
	• Percentage of these schools that have access to the Internet via dial-up link.	53%	40%	20%	80%	51%	33%
	Percentage of **computers** with Internet access in instructional rooms	*	*	24.4%	*	*	23.6%
	Percentage of schools that have computers in classrooms, labs, or Media Center(s) connected through LANs (local area networks)	33%	64%	77%	27%	57%	71%
	Percentage of administration buildings and schools that are connected to another school or schools through a WAN (wide area network)	27%	68%	75%[3]	6%	30%	13%[3]
Effective and engaging software and on- line resources will be an integral part of every part of every school curriculum	Percentage of **students** who participate in distance learning	*	*	18%	*	*	13%
	Percentage of **teachers** who participate in distance learning	*	*	23%	*	*	22%
Every system or independent school will engage in long range planning for technology in the schools	Percentage of schools that have a technology plan	73%	90%	94%	58%	88%	92%
	Percentage of schools that have developed or updated their plans for technology within the last year	87%	99%	78%[4]	94%	97%	75%[4]
	Percentage of classrooms in schools that were developed based on the model classroom in the Louisiana State Technology Plan	*	*	15%	*	*	11%

*** Comparable data were not collected.**

[1] Ratios for 1998-99 did not include 486 type computers, whereas previous years did

[2] Results were presented in a different format.

[3] Only schools were reported in previous years

[4] Updated plans only

Professional Development Report

In this third year of the Louisiana Technology Initiative, strong emphasis was placed on professional development for teachers and staff. The LA INTECH model was developed by the LCET staff, which focused on the integration of technology into the curriculum and using standards-based activities that incorporate higher order thinking skills. The "Train the Trainer" model provided opportunities for participants to incorporate the model into local and regional staff development activities. Districts, regional centers, professional development centers, universities and schools also developed and/or provided staff development activities that focused on introducing teachers and staff to technology use in the classroom and standards-based teaching and learning, which were financed with Initiative monies.

In order to capture the impact of these efforts, a new survey form was designed by the evaluation team. A rubric was developed based on the SEIR♦TEC model that included nine statements in these four areas:

- Level of Student Engagement
- Environment for Teaching Engagement
- Availability and Accessibility of Appropriate Resources
- Organizational Support

For each statement, participants were asked to choose from a 4 point scale, with 1 = few - less than 25% of the time or group, 2 = 25% to 75% of the time or group, 3 = more than 75% of the time or group, and 4 = almost all of the time or group.

The survey was designed to provide a unique count of teachers and staff who participated in professional development activities, as well as to provide data on the types of training, the number of hours of training, the number of students impacted, and the subject areas taught, and participants perceptions of the effects of the training on their students and pedagogy. The form was posted on-line on the LCET Web page, and technology coordinators were asked to ensure that each trainee complete the form only once during the year. Rather than assess particular sessions, this would provide a global view of the quality and impact of the professional development activities taking place in the state, as well as the effects of that training in classrooms. (See Appendix L - *Evaluation of Training Form*).

Of the approximately 10,000 educators who participated in some form of professional development during the year, 7022 teachers completed the on-line survey. The instrument was referred to as *Appendix 6.5 – Evaluation of Training Form,* and was found in the Application Package for both CBTF and TLCF grants. Educators were requested to complete the survey form at the completion of their professional development training.

As seen in **Table 2**, data from this survey show that 615l public school teachers completed the survey. Of these, 92 received training through university/college courses, 932 through LA INTECH training, 117 through TL^2

workshops, 4826 through district/regional workshops for non-credit, and 184 did not indicated the type of training received. Among the 871 non-public teachers who completed the survey, 12 received training through university/college coures, 89 through LA INTECH, 20 through TL^2 workshops, 739 from district/regional workshops for non-credit, and 11 did not indicated type of training. (See **Table 3**).

Public school teachers recorded 104,177 hours of training for a mean of 17 hours per teacher. Non-public school teachers participated in 15,471 hours of training for a mean of 17.8 hours per teacher. Public school teachers believed that they impacted approximately 513,000 students with their training, however this is probably a duplicated count. Non-public teachers indicated impacting approximately 90,000 students, which also is probably a duplicated count.

Table 2 - Staff Development for Public School Teachers and *Table 3 - Staff Development for Non-Public School Teachers* provide the results of this survey. For these tables, only the surveys submitted by teachers were considered, and means of the ranges and percentages were computed. Results were very favorable. For public school teachers, eight of the means were at the “25% to 75% of the time or group” level and one at the “more than 75% of the time or group” level. For non-public school teachers, seven of the means were at the “25% to 75% of the time or group” level and two were at the “more than 75% of the time or group” level.

More than half of the teachers in both public and non-public schools reported that their students are involved in higher order thinking skills activities supported by technology. Sixty-six percent of public school teachers and 76% of non-public school teachers reported that technology has been allocated in such a way as to support its constructive use in the teaching and learning environment. Eighty percent of the public school teachers and 81% of the non-public school teachers believed that an organizational structure exists for the support of all aspects of technology integration.

One item with a low percentage for both public and non-public school teachers was, “Teachers integrate technology into all subject areas, using resources that map technology to curriculum”, with 40% of the public and 39% of the non-public teachers indicating they are doing this.

Results offer strong baseline markers for measuring future growth in these important areas.

Table 2 Staff Development for Public School Teachers Data from Appendix 6.5 "Evaluation of Training Form		
Statement	**Mean**	**Percentage**
1. Students are involved in higher order thinking skills activities supported by technology.	**2.51**	**51%**
2. Teachers design and implement technology-based learning experiences that promote higher level learning for students and authentic assessment.	**2.35**	**43%**
3. Teachers integrate technology into all subject areas, using resources that map technology to curriculum.	**2.28**	**40%**
4. Technology resources are available and are being used to support a variety of student and teacher experiences.	**2.76**	**61%**
5. Technology has been allocated in such a way as to support its constructive use in the teaching and learning environment.	**2.81**	**66%**
6. Individual schools/districts have equitable access to technology.	**2.65**	**58%**
7. Organizational structure exists for support of all aspects of technology integration.	**3.20**	**80%**
8. Organizational capacity fosters transformations in school leadership to support technology and the changes it brings to teaching roles and methodologies.	**2.95**	**73%**
9. Effective and ongoing staff development opportunities exist to support capacity building for using technology to improve teaching and learning.	**2.87**	**69%**
Response Choices for Rubric		
1. = few: less than 25% of the time or group		
2. = some: 25% to 75% of the time or group		
3. = many : more than 75% of the time or group		
4. = most: almost all of the time or group		

Number of Teachers by Type of Training:

University Credit - **92** Non-Credit - **4826** LA INTECH - **932** TL[2] - **117**
Unknown - **184**

Total Number of Teachers Participating in Professional Development Activities	**6,151**[1]
Total Number of Students Impacted	**513,279**[2]
Total Number of Hours of Training	**104,177**

[1] Number of teachers represents a unique count
[2] Represents a duplicated count

Table 3 Staff Development for Non-Public School Teachers **Data from Appendix 6.5 "Evaluation of Training Form**		
Statement	**Mean**	**Percentage**
1. Students are involved in higher order thinking skills activities supported by technology.	**2.54**	**52%**
2. Teachers design and implement technology-based learning experiences that promote higher level learning for students and authentic assessment.	**2.18**	**34%**
3. Teachers integrate technology into all subject areas, using resources that map technology to curriculum.	**2.28**	**39%**
4. Technology resources are available and are being used to support a variety of student and teacher experiences.	**2.97**	**73%**
5. Technology has been allocated in such a way as to support its constructive use in the teaching and learning environment.	**3.01**	**76%**
6. Individual schools/districts have equitable access to technology.	**2.75**	**63%**
7. Organizational structure exists for support of all aspects of technology integration.	**3.21**	**81%**
8. Organizational capacity fosters transformations in school leadership to support technology and the changes it brings to teaching roles and methodologies.	**2.70**	**60%**
9. Effective and ongoing staff development opportunities exist to support capacity building for using technology to improve teaching and learning.	**2.65**	**58%**
Respoinse Choices for Rubric		
1. = few: less than 25% of the time or group		
2. = some: 25% to 75% of the time or group		
3. = many : more than 75% of the time or group		
4. = most: almost all of the time or group		

Number of Teachers by Type of Training:

University Credit - **12** Non-Credit - **739** LA INTECH - **89** TL[2] – **20**

Unknown - **11**

Total Number of Teachers Participating in Professional Development Activities	**871**[1]
Total Number of Students Impacted	**90,292**[2]
Total Number of Hours of Training	**15,471**

[1] Number of teachers represents a unique count

[2] Represents a duplicated count

Much emphasis has been placed on the need for professional development of all educators so that a unified effort to change pedagogy through technology can be accomplished. With this in mind, a concerted effort was made to involve educators from all levels in the professional development activities. With this in mind, School Administrators, Central Office Administrators, Aides, and Parents and others, such as university faculty, were invited to participate in professional development activities at LCET as well as across the state, and required to complete the *Evaluation of Training Form*.

Table 4 presents the results of these surveys. A total of 1,285 participants, other than teachers, classified in these categories participated in training. Of this total, there were 231 School Administrators, 29 Central Office Administrators, 168 aides, and 857 Others. All participants, including public and non-public school teachers, received 136,525 hours of professional development in the 1998-99 grant period.

For most items on the rubric, mean scores were very similar for teachers, school administrators and central office administrators. Statements 1 and 2, however, showed fairly large differences in perceptions. When asked to respond to "Students are involved in higher order thinking skills activities supported by technology," the means for teachers was 2.53, for school administrators, 2.19 and for central office administrators, 2.31. Teachers obviously felt that they were involving students in higher order thinking skills more often than their administrators did.

A wider variance occurred for the second statement, "Teachers design and implement technology-based learning experiences that promote higher level learning for students and authentic assessment." Though the mean score for teachers was 2.24, representing 25% to 75% of the time or group, school administrators' mean score was 1.71, representing less than 25% of the time or group.

For statement 7, "Organizational structure exists for support of all aspects of technology integration.", mean scores of 3.20 for teachers and 3.13 for school administrators indicated that they felt this occurred more than 75% of the time or group. Central office administrators' mean score, however, was 2.86, falling in the "25% to 75% of the time or group" range.

As a whole, the survey revealed a very favorable impact of professional development on all levels of the educational infrastructure in the state, as well as impressive baselines for measuring future progress.

Table 4

Professional Development for Louisiana Educators

Data from Appendix 6.5 "Evaluation of Training Form

	All Teachers	School Adminis-trators	Central Office Adminis.	Aides	Others
Answers from Rubric	**Means**	**Means**	**Means**	**Means**	**Means**
1. Students are involved in higher order thinking skills activities supported by technology.	**2.53**	**2.19**	**2.31**	**2.23**	**2.12**
2. Teachers design and implement technology-based learning experiences that promote higher level learning for students and authentic assessment.	**2.24**	**1.71**	**2.55**	**1.88**	**1.91**
3. Teachers integrate technology into all subject areas, using resources that map technology to curriculum.	**2.28**	**2.00**	**2.31**	**1.99**	**1.92**
4. Technology resources are available and are being used to support a variety of student and teacher experiences.	**2.91**	**2.78**	**2.76**	**2.80**	**2.58**
5. Technology has been allocated in such a way as to support its constructive use in the teaching and learning environment.	**2.95**	**2.82**	**2.66**	**2.61**	**2.67**
6. Individual schools/districts have equitable access to technology.	**2.69**	**2.61**	**2.62**	**2.52**	**2.44**
8. Organizational structure exists for support of all aspects of technology integration.	**3.20**	**3.13**	**2.86**	**2.94**	**2.95**
8. Organizational capacity fosters transformations in school leadership to support technology and the changes it brings to teaching roles and methodologies.	**2.87**	**2.94**	**2.79**	**2.68**	**2.70**
9. Effective and ongoing staff development opportunities exist to support capacity building for using technology to improve teaching and learning.	**2.79**	**2.83**	**2.48**	**2.75**	**2.62**

Response Choices for Rubric

1. = few: less than 25% of the time or group
2. = some: 25% to 75% of the time or group
3. = many: more than 75% of the time or group
4. = most: almost all of the time or group

Number of Participants in Professional Development Activities

Type of Training:	All Teachers	School Adminis.	Central Office Adminis.	Aides	Parents/ Others	**Total**
• LA INTECH	**1,021**	**11**	**11**	**18**	**106**	**1,167**
• TL[2]	**137**	**4**	**0**	**2**	**16**	**159**
• University Credit	**104**	**0**	**0**	**0**	**9**	**113**
• Non-Credit	**5,565**	**211**	**16**	**142**	**573**	**6,507**
• Unknown	**195**	**5**	**2**	**6**	**153**	**361**
TOTALS	**7,022**	**231**	**29**	**168**	**857**	**8,307**
Number of Hours of Professional Development	**119,649**	**2803**	**805**	**1,549**	**11,719**	**136,525**

End of Year Report: Public and Non-Public Schools

Louisiana has 64 public parish school systems, two city school systems, and six special schools including schools for the deaf, visually impaired, and for children with physical disabilities, among others. Of these 72 districts/schools, 67 completed an *End of Year Report* (EOY) which was due by August 13, 1999. The non-public schools include seven Catholic Diocesan schools, other parochial schools, private and independent schools, alternative schools, and charter schools. Thirty-nine non-public schools completed the *End of Year Report*. All *End of Year Reports* were submitted on-line.

Copies of these report forms are found in Appendix M and Appendix N. The forms requested demographic information about the district/school, the amount of the Technology Improvement Grant Classroom Based Technology Fund award, the amount of the Technology Improvement Grant Technology Literacy Classroom Fund award, and the amount of the Professional Development Grant award from TLCF funds, the latter only for 24 districts/consortia that received a Professional Development Grant. In addition, the report form requested the number of teachers that received professional development (unique count) and the number of contact hours of professional development sessions.

The next section of the EOY listed the Louisiana State Technology Plan Objectives and Strategies and requested the technology coordinators to list local goals, objectives, and activities that addressed the respective strategies; results as of August 13, 1999; and anticipated results as of September 30, 2002. The technology coordinators then were instructed to repeat the same type of information in regards to the U.S. Department of Education's strategies for the Technology Literacy Challenge Fund grant. There are five of these strategies.

The EOY also solicited responses referencing the National Technology Goals/Pillars with four Likert-type rubrics (scale = 1 to 5). Each rubric indicated progress toward the goals as a result of all funding sources (federal, state and local). (See Appendix O for **Tables 5** and **6**.) Finally, the technology coordinators completed nine rubrics, each with a four-point scale which addressed their perception as to the degree of technology integration/implementation into the curriculum. (See Appendix P for **Table 7**.) These were the same nine rubrics completed by the teachers and whose results appear in **Table 2** and **Table 3**. The results of the data analyses for each section of the EOY Report are presented herewith.

The format of this section of the report provides the objective and the parish responses in the qualitative context analysis. Given the state goal, respective objectives, and the Louisiana State Technology Plan strategies, the parish/district identified, from its original application, it's goal(s) for each strategy, the related objectives or activities to accomplish the strategy, the results as of August 13, 1999,

and the anticipated results as of September 30, 2002. A qualitative context design identifies major themes in the information and data provided by the technology coordinators.

The State Technology Goal: All educators and learners will have access to technologies that are effective in improving student achievement.

Objective 1: Technology-rich Learning Environments[1]

Strategy1B.1 – Implement short-range technology planning process.

Short-range technology goals included creating, in some districts, and maintaining in others, an infrastructure that enhances student achievement and teacher effectiveness. The infrastructures were to ensure technology access in each classroom, establishing LANs and WANs, installing and maintaining software and providing professional development programs for teachers. Some districts were establishing technology committees, technology master plans and TLTC councils. A few districts were finalizing the wiring of classrooms and offices.

To meet these goals, school districts are expanding existing LANs into each classroom, designing lesson plans to integrate technology into the curriculum, upgrading current computer systems, installing and learning more about educational software and evaluating and refining technology policies. Enhancing student achievement is an underlying objective given the emphasis on infrastructure and technology integration into the curriculum.

As for results during 1998-99, several schools reported completing their LANs adding presentation centers, adding drops to more classrooms, purchasing and installing multi-media computers, upgrading wiring to 64kB and CAT5, connecting more classrooms and computers to the Internet and installing more software packages. In the area of faculty development, several districts had teachers participate in LA INTECH training, local faculty workshops, and working with mentor teachers.

Anticipated results for the year 2002 include all classrooms connected by LANs and WANs, all classrooms connected to the Internet, all teachers being computer literate, all school records on line and accessible to appropriate personnel and all students able to use and learn from technology.

Strategy 1B.2 – Implement long-range technology planning process.

[1] Not all strategies and objectives in the State Technology Plan required responses from parishes/districts

Long-range goals for school districts included providing all teachers and students access to technology through LANs, WANs, Internet, district-wide computer systems and operators, a student to computer ratio of less than five to one, and preparing students academically so that achievement scores on the IOWA and LEAP would be nationally competitive. Staff development was a high priority and would culminate in having all teachers computer literate. Districts were creating technology committees and councils to address these long-range goals and the strategies necessary to meet the goals.

Local objectives to focus on the broader goals were to establish LANs and WANs, juxtapose needs with budgets to ensure an infrastructure to accommodate teacher and student needs, to integrate technology into the entire curriculum over the next few years, to update technology plans annually, and to provide release-time for teachers and staff so that knowledge and skills stay abreast of the rapid growth in technology. Opportunities for faculty and staff to meet and communicate will be increased as plans are made and upgraded each year.

Results across the school systems included creation of TLTC's, more classrooms wired for computers and the Internet, the creation of long-range plans, involving business and community leaders on technology committees, and increasing teacher participation in staff development activities. Anticipated results for the year 2002 mirrored those of the previous strategy with all classrooms and computers hooked to the Internet, all teachers using technology in the curricula, and all students achieving higher on norm and criterion-referenced tests.

Strategy 1B.3 –Implement a plan to equip all districts/schools with technology.

As reported elsewhere in this report, 100 percent of the school systems have developed and filed a technology plan with the Louisiana Department of Education. Within each of these plans is the interest to equip all schools in the district with technology. Most school systems indicated their intent to revise and update their technology plans on a yearly basis, train all teachers to integrate technology into the curricula, and to continue to connect classrooms and labs to LANs, WANs, and the Internet. Local TLTC councils are active in their review of technology plans and are providing leadership to faculty and students in their quest for a technology infrastructure in each school.

School districts are continuing to purchase new computers, update older models, and secure appropriate educational software to fulfill their goals. Additional classrooms are being prepared to accommodate technology, presentation centers are being developed, and new computer labs are being established. School districts are addressing new policies on faculty leave for teachers and staff to participate in needed professional development.

Many technology coordinators reported for the 1998-99 year the addition of new computers, technology plans reviewed and revised, classrooms prepared for new technology, multi-media systems installed and used, business and community persons participating in technology committees, and teachers participating in LA INTECH and other types of professional development. Anticipated results by year 2002 include a computer in every classroom, all schools upgraded to TI lines, increases in achievement test scores, a 5:1 student to computer ratio, and additional funding for maintenance and upgrade of existing technology.

Strategy 1B.4 – Develop and maintain staff to support the technical infrastructure.

As was reported last year, maintaining qualified staff with the appropriate technology skills to train other staff, remains a problem. Many school systems have recruited internally to find the most qualified person and then have expected this person to provide training for the other faculty with no or limited technology skills. Elsewhere in this report it is documented that approximately 10,000 teachers and other staff received some form of professional development in the area of technology during 1998-99. The average number of hours of training per teacher was only approximately one hour, thus some of these teachers received very minimal training. The LA INTECH workshops, which accommodated 1021 teachers, provided the most intense training, approximately 30 hours in a one week workshop. Local professional development varied, on average, from less than an hour to several hours of training for the rest of the teachers.

Local school systems established goals to address this strategy in various ways. The prominent goals were to establish a cadre of technical staff to maintain the hardware and software, provide additional staff development opportunities, implement staff development technology plans, and to assist all teachers in their efforts to integrate technology into the curricula. The major objective to facilitate these goals was to train all teachers using technology to be able to troubleshoot minor hardware and software problems, especially in those districts where a technical person was not available to handle all related problems. Some school systems were purchasing extended warranties on hardware so that the vendor would be responsible for repairs or replacements.

Results for 1998-99 showed that some districts were training the technology coordinators to maintain equipment while others were trying to identify a faculty member who could be trained for similar responsibilities. Some systems were budgeting money for maintenance and repair and hiring outside personnel to handle these problems.

Anticipated results for 2002 were mixed. Some school districts were pessimistic as to where the funding would come to hire personnel for maintaining the existing technology. Other districts, typically the larger ones, were able to find money for

technical support personnel but added that additional state or federal funding would be needed to maintain the technology in the next three to five years.

Objective 2: Professional Development

Strategy 2B.1 – Integrate into professional development an understanding of technology standards and competencies.

The understanding of technology standards and competencies is considered a component of professional development which is supplied through LA INTECH and local workshops. Parish school systems and consortia professional development staffs realize the importance of teachers knowing these standards and competencies and include them in their training as one of their goals.

The objectives written to carry out these goals emphasize both state and federal pillars/goals and the importance of teachers knowing them as they integrate technology into their curricula. State technology standards still seem to be illusive as technology coordinators are not sure whether they exist, and if so, where they can be found.

The major concept of *standards* to most teachers is *content standards* and how to integrate technology into the curricula using the content standards as a basis or foundation. Most districts/schools reported that a major percentage of their teachers participated in professional development activities emphasizing the integration of technology into the curricula. Anticipated results by the year 2002 were to have from 80 to 100% of the teachers trained, through LA INTECH or other means, to be able to integrate technology into the curricula.

Strategy 2B.2 – Allocate significant technology funds to achieve Strategy 2B.1.

Funding for technology staff development came from a variety of sources for teachers and staff. The major sources were CBTF, TLCF, 8(g), LEARN, and local budgets. A few school systems reported that funding had come from businesses and other private entities in the parish/district. The consortia Challenge grants provided significant funding for staff development and served both public and non-public teachers. Other schools reported using funds from Title I, Title II, and IDEA for professional activities.

Technology coordinators reported that even though hundreds of teachers in their respective systems received staff development, more is needed every year through September, 2002. The changing technology scene will demand yearly professional development to keep teachers current and at the cutting edge.

Strategy 2C.1 – Get advice from LEA's, buisiness, regional, and university representatives on the kind of teacher training.

As with last year's EOY Report, the printer failed to put the word "needed" at the end of the strategy statement. This caused several different interpretations of this strategy and rendered most of the responses invalid. Of those districts that inferred the appropriate ending, they cited evidence of communication with local universities, primarily colleges of education, local businesses and industry, regional service centers, regional or local libraries, and newly developed TLTC's. With this input, professional development workshops and activities were planned and facilitated by the appropriate agencies. Professional development plans were developed for school systems as well as for individual schools. School-wide technology teams and committees were created drawing expertise from a broad spectrum of technology users.

Strategy 2C.2 – Provide educators with access to professional development in the use of educational technology.

The Louisiana Center for Educational Technology took a strong leadership role in providing staff development for teachers, administrators, and staff during 1998-99. Dr. Carol Whelan and her staff conducted numerous workshops, primarily LA INTECH workshops, for over 300 persons during the summer of 1999. The workshop participants, in turn, were responsible for conducting similar workshops in their respective schools during 1999-2000.

Regional LA INTECH workshops are to be conducted around the state during the next year, and will accommodate several hundred more teachers and staff. Anticipated results will be to have all teachers trained in integrating technology into the curriculum by 2002.

<u>Objective 3: Integration of Technology and Learning</u>

Strategy 3B.1 – Develop local plans that integrate technology and curriculum.

The goals of schools striving to merge technology into their current local curricula involved developing a local consortium of administrators, technology coordinators, staff, and community leaders to guide the process and make decisions regarding implementation. Focus was on installing or upgrading computer hardware and purchasing and using educational software that would directly involve students in academic activities using the Internet, word processing, or remedial programs. Regarding their objectives, the local teams often focused development efforts to provide equitable technological access to teachers and students, to increase communication regarding instructional needs, and to use educational software on specific grade levels or content areas.

As a result, staff development opportunities were available in all districts and educated participants on a variety of topics including national and state standards,

development of hands-on computer skills, basic troubleshooting techniques, and the use of educational software in the classroom. In addition, many districts created or compiled a publication of resources for those teachers using more technology-rich activities in their classrooms and made them available throughout the district and community in print and on-line. Furthermore, many schools saw the installation of updated computers with Internet access and required teachers to develop specific lesson plans using the new equipment. Many anticipate improved student achievement in the up-coming year and plan on communicating regularly with technology teams to review and revise current local plans in the future.

Strategy 3B.2 – Develop local curriculum based on content standards.

The schools' goals centered on integrating technology and a locally developed content-standards curriculum into their classrooms. To complete this multi-faceted task, districts continued to encourage technology-related staff development opportunities and extensive planning sessions with technology teams and standards experts. These efforts provided instruction and resources that supported district objectives of developing new curriculums based on the content standards, selecting more standards-related textbooks and teaching tools, and creating guidebooks to track teaching progress and attained goals.

According to reports, most schools utilized faculty experience in the development of local content standards and classroom activities. One district's "living curriculum" provided technology resources to teachers including technology-enriched lesson plans designed by their own teachers who were implementing strategies from professional development experiences. Faculty and staff members were also meeting with administrators and technology coordinators to mesh the components of technology and state standards. They anticipate future progress, expecting 50-100% of the new local curriculums to be developed and adopted, all teachers to be computer literate and capable of integrating educational software into their classrooms, and to continue consultations with coordinators and other leaders.

Objective 4: Technology Leadership, Policy, and Accountability

Strategy 4B.1 – Cultivate leadership within each school and district to guide the appropriate integration of technology and the curricula.

As discussed in last year's report, school systems in Louisiana were very fortunate to have existing employees who could step forward and assume the responsibilities of a technology coordinator or technology committee chairperson. These people provided leadership necessary to help create a technology infrastructure, to set-up laboratories, and to train other teachers and staff in the use of new equipment and software.

With this nucleus of dedicated faculty, school and district technology committees and councils were formed, technology plans were developed, and a process established to monitor plans and results. Acceptable use and copyright policies were developed, adopted, and distributed to employees and students. Teacher mentors were trained, often one per building or one per grade level, to provide assistance to neophyte teachers.

Based upon the staff development evaluation form completed by approximately 10,000 teachers and staff, the professional development workshops were a major success and impacted approximately 300,000 students at all grade levels.

Strategy 4B.2 – Establish targets for measuring the effectiveness of technical infrastructure, training, and curriculum in improving student learning.

The State Accountability Plan and the expectations held for student achievement in the state is well known by every district and school in the state. Achievement levels have been established and schools are graded according to a four-level standard. To meet the appropriate standard, schools are developing plans for a technology infrastructure which includes maintenance, upgrading, and retrofitting. Each curriculum area is to address its plan for integrating technology into the curriculum based upon state content standards and federal guidelines, when appropriate.

As technology-rich environments and infrastructure are created, the expectations for student achievement continue to rise. Districts/schools know that the impact of technology on learning is a continuous process and therefore curricula and instruction must also continue to improve.

Strategy 4C.1 – Develop policies concerning ethical and legal issues.

Acceptable Use policies have been developed in approximately 90 percent of the school systems in the state. The remaining 10 percent indicate that they will have plans in place by the year 2000. Teachers, students, and parents are all informed of the policies with the hope that they will be followed. Local technology committees/councils are taking the leadership in the development of these policies, and local school boards are adopting them in due course. District Acceptable Use (DAU) policies are mandatory for all aspects of technology use.

Students are affected by these policies as they increase their use of the Internet, copyrighted curriculum software packages, and locally developed software, that complement the local curriculum. DAU policies address the ethical and legal issues of technology use and relate to the technological infrastructure, curricula, and personal use of educational material.

Strategy 4C.2 – Add technology component to evaluations of educators to ensure students are receiving high quality education.

The Louisiana Teacher Assessment Program addresses the use of technology, including media, but does not consider it a major component. Most districts emphasized in this strategy the need to adopt DAU policies and to make technology mandatory for teacher evaluation at the school level. The use of technology in the classroom and laboratory will undoubtedly become a major component of the teacher assessment process.

Most districts reported that integrating technology into the curriculum was the next level of teacher assessment needed. With the ultimate goal to improve student achievement, integrating technology into the curriculum becomes a major thrust at this point in the state accountability program. Teachers' professional growth plans will need to include technology integration into the curriculum as a part of their professional development. Also, teachers need to include this concept into the writing of new curriculum guides.

Objective 5: Effective Use of Technology Funding and Resources

Strategy 5B.1 – Encourage school/business partnerships and matching funds programs.

Schools striving to better integrate technology into classrooms sought funding from many sources. Those agencies mentioned most by the technology coordinators were 8(g) monies for innovative professional development, the Louisiana Challenge Grant, Title I, and Title 6. Many also desired to compete for funding from private foundations and to also participate fully in Partner Education. The technology committees encouraged districts/schools to pool resources within their parish in order to maximize efficiency in providing equitable access to equipment and infrastructure, and to promote technology-related collaboration with local industry, businesses, and school districts which would foster effective use of technology instruction and provide parish funding for recurring technological expenses. All voiced efforts to communicate with teachers regarding grant-writing assistance and future opportunities for additional funding.

Many sites reported expenditures from the aforementioned agencies used for establishing and updating the school infrastructure as well as providing additional hardware and software. Many have also submitted applications for CBTF and TLCF funding. Of particular interest, Caldwell parish established the Caldwell Connection through a partnership of the school board and the Parish Industrial Board which provided free Internet services for Caldwell schools. All districts expressed interest in continuing partnerships with local agencies and in seeking new alliances and funding.

Strategy 5B.2 – Encourage pooling of resources to provide technology infrastructure for student learning.

Based on the conclusion that a cooperative effort would be more economical and efficient than several independent ones, many schools/districts were interested in pooling all local, state, federal, and grant monies available for technology advancement. Goals were to provide teachers and students access to classroom technology labs, to allow instructional flexibility; to enhance learning and student achievement; to diagnose and address student weaknesses through the use of computers and educational software; and to support and maintain equipment and existing infrastructure. Other specific objectives included the acquisition of educational software synchronized with state content standards, manufacturers' extended warranties, and more multi-media computer systems. In addition, districts wanted to develop cooperative plans throughout the parish for funding technological infrastructure, maintenance, expansion, upgrading, and retrofitting.

As a result of these goals, Title I, LEARN, 8(g), *Schools to Work*, and *High Schools that Work* monies were collaborated and used to support technology programs with new equipment and services. The technology coordinators expect many new projects to develop and to continue a cooperative effort to make efficient use of resources.

Strategy 5B.3 – District plans include funding schedule for technology infrastructure.

District goals to establish adequate technical maintenance service for hardware, software, and networking systems as well as to increase the number of direct classroom Internet connections were addressed in local budgets, many times in conjunction with the availability of E-rate funds. Schools planned to utilize computer technicians, technology coordinators, and data processing managers as liaisons for service, maintenance, and installation of computers as well as trainers for novice teachers. It was anticipated that additional personnel would be necessary in the future as technology plans advanced. These programs encouraged technology planning, even mandating that all new district buildings and/or schools include technology components from conception. A continued coordination of available funding would encourage these efforts.

Strategy 5C.1 – Consider creative solutions for funding.

Attempts to secure additional funds for technological advancement targeted new opportunities for supplemental funding, mainly from grants and other private sources. Training was needed to help novice writers apply for additional monies, so districts provided experienced grant-writers as resources for those wanting to learn. As a result, many schools received new monies from 8(g), Louisiana Challenge, and LEARN. Local industries also participated, and provided services (e.g. Internet connections) or equipment for local schools. Many districts also appealed to PTO

and PTA groups for additional support through fundraisers designated for technology initiatives. Continued efforts include seeking new grant opportunities and new partnerships with other local businesses and with parents.

Objective 6: Public Awareness

Strategy 6B.1 – Develop material to inform stakeholders of resources and to solicit information from them regarding the impact of technology on improved student performance.

The impact of technology on student performance must be communicated to stakeholders to inform them of school technology initiatives and progress. Most respondents agreed that varied data should be collected, aggregated, evaluated, and then compiled in a visually comparative form and disseminated to the public at a meeting or from a centralized location. Many wanted to solicit information from the public and suggested surveying the public regarding the impact of technology on improved student performance; questioning teachers and principals on the usage and effectiveness of technology in classrooms; joining with LEARN, BESE, SDE, and LPB in launching initiatives to promote support for excellence in student achievement through use of technology; and developing materials in print, video, and electronic formats.

As a result students in some schools were encouraged to develop and give multimedia presentations for the community at public meetings and school open houses. Others created web-sites to communicate with the general public. Currently many are analyzing data, reviewing specific plans, and using other media such as local newspapers, school newsletters, and an in-parish Voicelink system to communicate. All plan to continue practices already in existence, to add new efforts as they are developed, and to follow-up efforts to improve technology utilization. Steering committees across the state will convene for long-range planning; will work with PTO groups to develop new ideas, and will maintain portfolios of clippings, printouts, brochures, and activities in an effort to create a systematic program of public awareness.

*Strategy 6B.2 – Plan Louisiana **Netday** to truly bring the local communities together in support of school technology initiatives.*

Only a few schools/districts responded to this item. Those that did, however, indicated a goal of improving student achievement by exposure to Internet resources. One school even sponsored an evening activity that allowed parents and students to surf the net together. They also wanted to provide a communication link between homes, schools, and the community through public awareness initiatives. Some schools are sponsoring Internet Driver's License classes for parents and students, lessons in which participants can be "licensed" to surf the net.

In schools participating in *Netday*, parents and students participated in activities sponsored by the Technology Training Center. Various projects were held at school sites, and parents and school employees worked together to wire schools and offices for the new technology. Local industry also funded wiring for Internet service. These districts expect parents and school employees to continue working together to keep schools updated with latest technology equipment. They have also invited parents and students to participate in open houses at Technology Training Center, to view projects held at school sites, and to attend the evening Internet Driver's License classes.

United States Department of Education Requirements

Strategy 7.0--Promoting in individual schools sharing, distribution, application of educational technologies with demonstrated effectiveness.

The *Trainer of Trainers Model* was used throughout the state. The Louisiana Center for Educational Technology conducted LA INTECH workshops for approximately 1020 teachers, either in the Baton Rouge Center, or in several other satellite centers across the state during the year. These teachers were expected, upon return to their schools, to train other teachers in the use of technology and how to integrate it into the curriculum. Approximately 7,000 public and non-public teachers received some type of technology training during 1998-99.

In addition to teachers, local technology coordinators participated in workshops and were also called upon to deliver training to local teachers and staff. Another form of training, TL^2, was conducted for approximately 150 teachers and staff members during the summer of 1998. These participants were also learning how to integrate technology into the curriculum.

The overall effectiveness of the technology integration lies in the success of students on state achievement examinations. Teachers are hopeful that students' achievement on standardized tests will improve, that the delivery system of the curricula through the use of technology will improve and that the school infrastructure will continue to grow and better serve the constituents.

Strategy 8.0 – Assisting schools in promoting parental involvement.

Parents continue to be deeply involved in promoting technology in schools. Several schools reported how parents helped to install computers, connect computers to peripherals, and maintain and service computers. Other schools reported how parents helped provide training to teachers and staff in the use of technology. Still other schools indicated how parents had helped develop newsletters, web-pages, and bulletin boards.

Some schools have asked parents for their e-mail addresses and have included them in their dissemination of information. Many parents serve on district and school technology committees and provide their expertise and experience to teachers and staff.

Strategy 9.0 – Assisting community in providing literacy-related services.

Several schools reported that evening classes are held for parents and other interested persons from the community where technology programs are presented. Many computer labs are used to offer the GED program for dropouts. Other schools reported holding late afternoon and evening classes where use of e-mail, Internet, and chat-rooms were presented and discussed.

A few schools offer computers on loan to parents so that they can help their students at home in completing homework and other school assignments. Adult education classes are very popular and are held in computer labs on school campuses.

Strategy 10.0 – Partnerships with private or public education providers to serve needs of children in poverty.

A few districts/schools responded to this item. Each indicated an effort to work with federal and state supported agencies which address the needs of families in poverty. Agencies noted in particular were Even Start, Head Start, Title I, JTPA, Special Education, Vocational and Adult Education, Community Services Offices, Teacher Corps, and the Salvation Army. In most cases schools shared computer expertise and use of facilities with community agencies.

Strategy 11.0 – Business, industry, other public and private agencies, including libraries, library literacy programs, museums, cultural and scientific institutions and institutions of higher education participate in the implementation, on-going planning and support of the plan.

Very few districts/schools responded to this item. Of the agencies identified in the strategy, institutions of higher learning and public libraries were mentioned most. Every district identified in their proposal the intent to partner with a local university or college. Universities provided consultants, classes, and technical assistance to schools in their region.

Business and industry continued to assist schools through employees serving on technology committees, lending expertise and manpower in preparing schools to receive and use technology, and in troubleshooting technical and maintenance problems. There is no doubt that business and industry, both locally and statewide, played a significant role in the technology infusion in the state's schools. They provided money, leadership, expertise, staff development, and manpower, among

other types of assistance. This aid and influence definitely helped shape the educational plans and goals of schools and helped to integrate technology into the curriculum.

Four National Pillars

Each of the Parish and special schools technology coordinators was asked to indicate the progress made toward fulfilling the Four National Pillars (Goals) for technology. (See Appendix O) With 67 of 72 districts/schools reporting, the coordinators responded to Pillar Number One, "All *teachers* in the nation will have the training and support they need to help all students learn through computers and through the information superhighway," by marking a five-point scale. The range of rubric statements on the scale were:

- 1=No members of teaching workforce participating in on-going training and receiving support.
- 3=Half of the teaching workforce participating in on-going training and receiving support.
- 5=Entire teaching workforce participating in on-going training and receiving support.

As seen in ***Table 5*** in Appendix O, the mean on the five-point scale was 3.21 indicating approximately 55 percent of the *teachers* were participating in on-going training and were receiving support to help students learn through computers and through the information superhighway.

For the Second Pillar, "All teachers and students will have modern multi-media computers in their classrooms, " the rubric statements on the five-point scale were:

- 1=All classrooms with a student to multi-media computer ratio greater than 21:1.
- 3=All classrooms with a student to multi-media computer ratio of 13:1.
- 5=All classrooms with a student to multi-media computer ratio at or less than 5:1

The mean value for this Pillar was 2.85, which corresponds to a *student to computer ratio* of approximately 13.6:1 as seen by the technology coordinators (see Table 5).

Pillar Number Three, "Every *classroom* will be connected to the information superhighway," had the following rubric statements on a five-point scale:

- 1=Less than 14% of classrooms connected to the information superhighway.
- 3=55% of classrooms connected to the information superhighway.
- 5=All classrooms connected to the information superhighway.

The mean value was 3.69 and corresponds to approximately 71% of the *classrooms* connected to the information superhighway.

In response to Pillar Number Four, "Effective and engaging software and on-line learning resources will be an integral part of the *school's* curriculum," the mean response was 3.11, based on the following rubric statements:

- 1=Effective and engaging software and on-line learning resources not in use in any core content areas.
- 3=Effective and engaging software and on-line learning resources in use in half of the core content areas..
- 5= Effective and engaging software and on-line learning resources in use in all core content areas.

This mean indicates that approximately 53 percent of the *schools* in the state have effective and engaging software and on-line learning resources in core content areas.

Thirty-four non-public schools, including six of the seven diocesan school systems, responded to the same four scales. The same rubrics, ratios, and percentages were used for their responses. Means, standard deviations, and percents were calculated and are presented in ***Table 6.***

Non-public schools believed that 73% of their teachers have the training and support needed to help students learn through computers and the information superhighway, compared to 55% for public schools. The student to computer ratios were almost the same, 13:1 for non-publics and 13.6:1 for public schools. Seventy-one percent of the public schools reported that *every* classroom will be connected to the information superhighway, whereas only 62% of the non-public schools agreed for their schools. Finally, 53% of the public schools and 51% of the non-public schools believed that they had effective and engaging software and on-line learning resources as an integral part of the school's curriculum.

The persons reporting for the non-public schools completed the same four-point rubrics for the nine items. Their mean responses, standard deviations, and percents of groups are found in Appendix - P - ***Table 7****.*

End of Year Report: Louisiana Center for Educational Technology Staff

On the Louisiana State Plan for Technology, strategies considered to be the responsibility of the state are identified with the letter A. (See Appendix Q - *End of Year Report - Louisiana Center for Educational Technology)* The Director of the Louisiana Center for Educational Technology and her staff were asked to identify goals, objectives and/or activities and actual results that were accomplished by her staff for these as well as all strategies in the State Plan. The major accomplishments identified are reported.

Objective 1: Technology-rich Learning Environments

Dr. Whelan and her staff have actively recruited and received funding for technology infrastructure from state and federal sources such as Legislative grants, TLCF grants, and E-rate rebates. Districts and schools were assisted with short- and long-term planning for technology and applying for funding. The Center hires technical staff to provide, to support, and to manage the development of the Louisiana network. Cooperative efforts between LCET and the Governor's office, LASIP, LACUE, Louisiana Challenge Grant Project, and higher education have helped provide a uniform technical infrastructure and models. Representatives of these other groups were appointed as members of the State Technology Advisory Committee.

During the 1998-99 school year, a Task Force of the ***Teaching, Learning & Technology Council (TLCL)*** revised Appendix B - Technology Infrastructure and Resources of the State Plan, and a subcommittee is currently revising the Technology Standards. Subcommittees from all divisions of the Louisiana Department of Education (SDE) and all regions of the state participated. Appendix D - Funding Recommendations is scheduled for revision this year. District and school technology plans are required for grant funding, and plans must be (updated) yearly.

The ***Statewide Distributive Learning Network (SDLN***), established with a $1 million 8(g) grant, is providing students and teachers the opportunity to access needed courses and appropriate curriculum and enrichment programs utilizing telecommunications systems. Through TeleLearning, Satellite Learning, and Compressed Video, unavailable and/or enrichment courses will be available for both students and teachers. Students are provided access to BESE-approved core curriculum courses required for university admission, the Louisiana Tuition Assistance Plan, Board of Regent's Scholar Awards, TOPS, and to BESE-approved Advance Placement (AP) Courses. Additional information can be found on the Web page at www.doe.state.la.us/DOE/lcet/DL.asp

Objective 2: Professional Development

During the fiscal year 1998-99, LCET provided 1,054 hours of professional development activities for 1609 participants. Some workshops were for administrators and SDE personnel, such as *Understanding Louisiana INTECH* and *CVC Training,* to introduce to participants to techniques for delivering instruction via Compressed Video Conferencing. Others, such as *Teaching, Learning, and Technology Leadership Institute, Folklife and Technology Institute,* and *Louisiana INTECH* focused on teachers.

Louisiana INTECH, an intense, content-rich, hands-on 56-hour professional development program, was developed. During the 1998-99 school year, the Louisiana INTECH K-6 project was inaugurated. In that pilot year, 180 participants - representing 30 of the state's 66 school districts, eight of the state's colleges of education, three of the state's Diocesan systems, and the state's special school districts - successfully completed INTECH training at LCET. In the summer of 1999, an additional 900 teachers completed INTECH sessions that were hosted by Regional Teaching, Learning, and Technology Centers and district teams of trainers. Full information Louisiana INTECH can be found on the Web site at **www.lcet.doe.state.la.us/laintech**

During 1998-99, $24,149.999 of state funds was allocated to state schools for staff development and technology infrastructure; another $10.2 million of federal TLC funds was awarded, mostly for professional development. Seventeen Professional Development Grants were awarded to consortia representing 54 parishes and enabled the establishment of four new ***Teaching, Learning, and Technology Centers***. They serve as extensions of LCET, for providing technology-training services to educators at regional staff development centers around the state. Each TLT Center provides technology training during the school year and summer that includes the INTECH Classroom Module, Technical Support courses, and Administrative Support courses. Additional TLTC information is available on the INTECH Web page at **www.lcet.doe.state.la.us/laintech**

The LCET continued its partnership with the ***Louisiana Technology Consortium for Teacher Educators (LTCTE)*** by including a team of college professors in one *Louisiana INTECH* Institute, encouraging districts and schools to adopt ISTE standards, and becoming a partner in ***Technology in Higher Education ½Quality Education for Students and Teachers (T.H.E.½QUEST)***. This project was awarded a $1.6 million catalyst grant by U.S.D.E. to develop a consortium of state agencies that are work collaboratively to facilitate the systemic integration of technology into teacher preparation programs statewide. The Center worked closely with ***Louisiana College Teacher Educators (LCTE), National Council for the Accreditation of Teacher Education (NCATE),*** and ***NETS*** to advise the Louisiana Board of Regents about technology certification requirements.

Active partnerships with *TLTC,* the *STAC* state council, and *LASIP* provided opportunities for advice from business, regional, and university representatives on the design of teacher training activities.

Objective 3: Integration of Technology and Learning

The Louisiana INTECH model developed by LCET provides technology-rich, standards-based strategies that support and enhance curriculum and provide a catalyst for fundamental change in overall teaching and learning processes. The Louisiana Content Standards are the basis for all technology-connected lessons and are on-line on the SDE Web page. INTECH teams of teachers learn basic technology skills while focusing on project-based activities that are based on the Louisiana Content Standards. All professional development activities offered by SDE and LCET emphasize technology integration into the curriculum to support those standards.

The ***Making Connections Project***, a collaborative effort between LCET and the Louisiana Department of Education's Division of Student Standards and Assessment, was created this year and is beginning to create a "virtual" resource center of lesson plans, Web site resources, software and assessment items for state educators. The Louisiana Content Standards - Mathematics, English Language Arts, Science, Social Studies, Foreign Languages, and the Arts - are the heart of the project and provide the context in which all resources are selected, presented, and implemented. All of these resources are linked on the Center's Web page at **www.lcet..doe.state.la.us/conn**.

Application Packets for *Technology Improvement Grants* required that applicants address one of five models that support integration of high academic standards. These included meaningful access to electronic linkages, staff development to promote the integration of technology into the existing curriculum, the use of technology for improving teaching and learning, or using technology to improve the school library media program.

The ***Committee for Advancing Technology Standards (CATS)*** was organized this year to coordinate and oversee the effective integration of technology in K-12 curriculum. The three major initiatives are development of ***K-12 Louisiana Educational Technology Standards (ETS)***, identification and development of models of standards-based high school technology courses, and development of standards for high school Distance Learning Courses.

Objective 4. Technology Leadership, Policy and Accountability

The *Teaching, Learning, and Technology Council* established last year continues to meet regularly The mission of the council is to provide support, guidance, and statewide leadership in educational technology. A representative from each

Department unit sits on the Council, as well as a technology leader from each region. Members of the LCET and MIS staffs provide support to the Council. Subcommittees of the council help to address specific goals of the state educational technology plan.

Through the Louisiana Technology Initiative, the Center administered the awarding of CBTF and TLC funds. Collaboration with the ***State Educational Technology Planning Committee (SETPC)*** has advanced the funding for technology projects, and the Universal Access Committee helped oversee the E-rate application process.

The LCET has worked with schools and districts in developing their technology professional development plans. The Center has provided numerous workshops to Department staff to address the need for enhanced technology leadership. The LCET has sponsored several workshops, videoconferences, and an E-rate help desk to assist schools and systems with their E-rate plans and applications. A prerequisite for schools and systems to take advantage of the E-rate program is an approved technology plan. Because of the CBTF grant applications required that applicants have a Department of Education-approved plan, every school system in the state was able to receive discounts for telecommunications costs. Over $38 million in commitment letters were approved during the 1998-99 school year.

The Center continues to research and present new possibilities for answering the needs of students with disabilities, provided 168 hours of workshops for 200 participants, and has developed a web page of Assistive Technology resources which can be seen at **www.doe.state.la.us/DOE/lcet/AT/at_descr.asp**. Workshops for professionals are sponsored regularly.

LCET has offered recommendations to the State Technology Advisory Committee and the BESE board on initiatives and policies that promote technology as integral to the teaching and learning process. The CATS committee was organized this year to coordinate and oversee the effective integration of technology in K-12 curriculum. When a Legislative bill was passed mandating filtering of Internet resources at schools, this requirement was included in the Application Packets for CBTF AND TLCF grants. .Acceptable Use Policies have been adopted and also required in the Application Packets.

On-going staff development for Department of Education staff provided 160 hours of training for 830 participants, enabling them to move to Windows 95 and Office 97 platforms. The ***Teaching, Learning, and Technology Leadership Institutes*** helped teachers develop an understanding of the role of technology in support of curriculum, stimulate integrated teaching and learning practices, and develop leadership skills. Through these institutes, a network of Teaching, Learning and Technology Leaders, the (***TL)^2 Network***, was established.

During 1998-99, LCET staff worked closely with the ***Technology Consortium for Teacher Education Education (TCTE)*** to encourage state colleges and universities to incorporate educational technology foundations courses into all teacher education and professional development programs in Louisiana. Proposed certification requirements for three Educational Technology Specialties were developed during the year.

Objective 5: Effective Use of Technology Funding and Resources

The staff helped significantly in facilitating the application for the E-rate. Over $38.9 million in commitment letters for telecommunications infrastructure has been approved for Louisiana schools and libraries. Having a school technology plan was a prerequisite for applying, and, because this was mandated in the RFP process, 100% of the state public school districts were able to apply.

The Director and her staff have also worked with the state and school systems to look at funding issues more globally and to try to consolidate plans for spending. In the Application Packets for 98-99 grants to districts and schools, applicants were required to include a list of their *Community and Business Partnerships*, with a clear explanation of their roles and contributions in the forms of financial support, equipment, personnel, an/or other resources. The involvement of state-approved non-public schools and systems had to be explained, and they had to describe how they would continue to involve these groups. The applicants' *Teaching, Learning, and Technology Council* members had to be identified.

Grants to districts and schools also were a cost-effective means of reducing disparities for the state, because applicants were required to target children living in poverty specifically and/or reach out to underserved groups.

A partnership between Project EdTech™, developed by Quality Education Data (QED), and the Louisiana State Department of Education produced a cost-free method of collecting data from all grant recipients. Data were collected on-line and summary reports were presented for use by the evaluation team.

The Center has on-going communications with all schools and districts, the SDE, all committees and organizations in the state as well as regional and national groups involved with educational technology. They have communicated funding opportunities via email, their Web page, and videoconferences. Cost effective pricing was obtained for identified large quantity items requested in grant applications.

The Department applied for and received a $10,272,812 Technology Literacy Challenge Grant for the 1998-99 school year, which was made available to districts and schools through an application procedure. In its 1999 regular session, the Louisiana Legislature once again allocated monies for the Classroom-Based

Technology Fund. The $14,037,250 will be used to purchase additional classroom computers, connect more classrooms to the Internet, purchase software to support curriculum, and provide additional technology tools needed to carry out district and school technology plans. In addition, Louisiana has been awarded a $10,592,000 Federal Technology Literacy Challenge Grant for the 1999-2000 school year to help ensure successful integration of technology in the classroom.

Objective 6. Public Awareness

The Center has on-going communications with all schools and districts, the SDE, all committees and organizations in the state as well as regional and national groups involved with educational technology. A CD-ROM ***Reaching for Results: Education Reform in Louisiana***, was developed and distributed, and also put on-line. It contains video examples of "best practices" of technology integration into the curriculum.

The video tape entitled *Technology In the Classroom, K-3 Reading and Math Initiative. - Video Progress Reports* was produced as part of the 1997-*98 Evaluation of the Louisiana Technology Initiative* and shared extensively to develop awareness of “best practices” that can be used as models. In February 1999, an on-line submissable *Mid-Year Technology Initiatives Report* was developed for collecting pertinent data needed for securing renewal of state funding. Results were posted on-line, along with all submitted *Applications for Inclusion in the Video Taping*. (See Appendix R) All applications and reports can be viewed at http://www.lcet.doe.state.la.us/districts/checkit.asp. Qualitative data were also collected. Solicitations of teacher and student quotes about educational experiences, use of the Internet, increased access to computers, professional development experiences, and interesting classroom projects provided a wealth of “real life” data that were available to the public on the LCET web site.

In April 1999, LCET assisted the Louisiana Department of Education and The Louisiana Legislature in hosting the first ever Capitol Schoolhouse project, showcasing educational technology and its impact in classrooms across the state. Six parishes and one Diocese participated in classroom demonstraton sessions in the Rotunda of the State Capitol building. Students used the Internet and other resources to research the legislator representing their area, and compiled a list of questions that were used to interview the legislators via compressed video. Students worked on projects, and teachers were on hand to discuss the role of educational technology in their classrooms.

Business people, higher education representatives, and telecommunications representatives have been included on the State Technology Advisory Committee. Louisiana Public Broadcasting (LPB) system representatives serve on the STAC and LPB has held some videoconferences for LCET and helped with the distance

learning component. LCET and LPB have collaborated in providing announcements and workshops.

The Louisiana Department of Education Web site has undergone significant reorganization and re-design over the past year. Efforts have been directed toward more effective communication and dissemination of information, as well as expanding availability of resources. The increased involvement of all divisions of the department is evidenced in two striking examples - the Accountability Database and the Statewide Professional Development Calendar. The Web page can be accessed at **www.doe.state.la.us.** An evaluation video of the Louisiana Technology Initiative is found in Appendix S.

FOCUS GROUPS AND INTERVIEWS

During the months of March and April 1999, interviews and focus groups were conducted to provide feedback on the progress of the Louisiana Technology Initiative. The focus of the questions centered around the adequacy of the application process, the problems encountered in implementing technology projects, and their perception of the impact of technology on the achievement of students.

Focus groups were conducted in Alexandria, Bossier City, Homer, Lake Charles (2), and New Orleans (2) and interviews were conducted in schools in Caddo Parish, Bossier Parish and at the Special Education Center in Alexandria. Sixty-six people were involved in the seven focus groups and seventeen were involved in the interviews. Focus groups were composed of Parish Technology Coordinators, principals, and teachers and ranged in size from four participants to twelve participants. In Region I, the Regional Service Center arranged for the meetings in that area. In Alexandria, Lake Charles, and Bossier City, the Technology Coordinator from the host parish made arrangements Sites were chosen to encourage good geographical distribution and sites not involved last year were utilized with the exception of Bossier City. Efforts to have focus groups in Hammond were not successful because of the heavy Spring schedule.

Interviews were conducted in February and March in Bossier Parish, Caddo Parish and at the State Special Education Center in Alexandria. In Bossier, Curtis Elementary School was visited and the principal, the librarian, three classroom teachers and two classrooms of students were interviewed. In Caddo, at Shreve Island Elementary School, interviews were conducted with the principal, the Curriculum Coordinator and four classroom teachers. Both schools are making progress toward utilizing technology effectively in the classroom. Shreve Island started a number of years ago primarily utilizing 8(g) funds though they have added technology obtained from other sources of funds. Computers are an integral part of the curriculum, well integrated with the subject matter. Their instructional focus is clear. Curtis Elementary also is using primarily 8(g) funds to increase technology in their classrooms, an effort that began several years ago. Faculty and staff at both schools are committed to utilizing computers and other forms of technology to enhance their curriculum and to making the teaching process more efficient. Both schools have principals with vision who have the energy, drive and leadership skills to lead their schools in positive directions.

The Special Education Center at Alexandria is very unique. The school serves students who are considered to be severely handicapped. Many of the students are moved to classroom activities in wheelchairs or gurneys. Many are not able to speak clearly, yet each wants to communicate their ideas to others. Unique forms of technology allow them to do that. The joy one sees in the eyes of these students is evidence enough of the value of technology in these situations. They are served by a faculty and staff who are devoted to them and a principal who utilizes the

strengths of his various faculty members to provide more effective ways to help them learn. Numerous sources of funds have been used to add to the devices that help these special students learn.

Each focus group lasted between one hour and fifteen minutes to one hour and thirty minutes. Interviews ranged from 30 minutes to an hour depending upon the willingness of the interviewee to provide information. Focus group members were eager in their participation as were most of those interviewed. A protocol was followed for the focus group with the same questions being asked each group.

The following evaluation questions were addressed regarding the planning and application phase of the project:

1. Were the criteria established for funding clear, fair, educationally sound, capable of improving student learning, and cost effective?

2. Have adequate (effective) processes been established for assessing the impact of the funding on improved teaching/student learning, and the comparison of student scores for tech and non-tech schools?

3. Were applicants trained/informed about the process, criteria and given assistance by Louisiana Center for Education (LCET) during and before submitting applications?

4. Were application forms clear, relevant to goals, easy to understand, effective for gathering sufficient data for decision-making, or were they too cumbersome, or time consuming for applicants?

5. Did the application forms collect sufficient data for effective decision making, cause schools to rethink pedagogy, and provide justification for funding.

6. Were all stakeholders involved in planning kept abreast of the process as it evolved, informed about documents, criteria, etc. and sent periodic progress reports?

Implementation issues addressing the following evaluation questions were discussed:

1. Has the site received the appropriate materials for implementation?

2. Does the staff understand the key elements of student-centered, technology-rich instructional activities?

3. Does the staff understand how technology can be used to enrich instruction?

4. Did the targeted schools receive the proposed training?

5. Did each site receive the hardware necessary for implementation?

6. Was the hardware/software compatible to the training provided?

7. Have teachers integrated technology into their instructional practices?

8. Was the intended population defined? Were the schools selected to serve the intended population?

9. Were the teaching models appropriate for the intended population?

10. What knowledge do teachers have of the use of technology in their classrooms?

11. What are the attitudes of teachers about the use of technology in their classrooms?

In addition, more general questions were asked, especially in the interviews regarding perceptions of the impact of technology in the classrooms.

Results

A. Planning and Proposal Process

As was the case last year, almost everyone involved in the proposal process felt that the criteria were clear and understandable and the guidelines useful (Evaluation question #1). One group felt that the process was user friendly and should not be changed from year to year. The concern over guidelines for private and parochial schools expressed last year did not surface this year. Most felt the process was smoother this year than last year.

Last year some systems who followed the guidelines regarding concentrating efforts on fewer schools rather than diluting impact were agitated by the problems generated by systems that did not follow that practice. There also was minor confusion regarding eligibility of wiring or security measures as a part of expenditures. That concern still exists though not as severe as last year. Timing of the proposals was a source of concern. All but one group felt that the notices of funding came too late for acquisition and implementation in the 98-99 school year. They felt that notice should be received earlier to have the program implemented in the current year. Some, however, said they felt that they had received notification

of guidelines and eligibility in the Spring of the previous year and only had to adjust their proposal to deal with the difference in the estimated amount of funding given to them earlier and the actual funding they received in the summer. Many systems, however, at the end of the 98-99 academic year still did not have all equipment received or installed.

Reasons given for the late implementation include: 1) lateness of proposal approvals; 2) dealing with local bureaucracies in the bidding and purchasing process; 3) vendors receiving orders without adequate stock to fill the orders; 4) the time required to install adequate wiring (especially older buildings). Last year, some felt that the state bid list provided had some difficulties in that some recommended peripherals were not compatible to the computers. Participants recommended some coordination between main equipment and peripherals on the bid list. That continues to be a problem.

Generally, the participants felt the guidelines were fair, and educationally sound. They had no opinion regarding the cost effectiveness the guidelines reflected.

Feedback regarding the adequacy of evaluation of the effectiveness of technology in the classroom (Evaluation question #2) reflected a number of concerns (2). First they were anxious that they would be required to show academic gains when most were not completely implemented. Presently, most programs are not properly evaluating their programs. There should be a generic evaluation design they can implement and training needs to be provided.

Most persons who were involved in the proposal writing process felt they were adequately informed about the process. The Regional Service Centers and the LCET were complimented for their usefulness in the process. There were numerous opportunities, however, they felt LCET activities though good, often were not advertised soon enough for some to attend. Those who missed these opportunities were able to get help from Regional Centers or the SDE. This was a problem last year as well. All felt, however, that the new efforts in teleconferencing using current technology were very helpful.

Question #3 also asked about the adequacy of the service provided by the LCET or Regional Centers. Responses were very positive regarding LCET, complimenting the dedication and commitment of the personnel. They felt that Regional Centers need to be more involved but many did not have people with a background in technology and were not all that helpful. Some did say, however, that Regional Centers helped facilitate training and were often instrumental in forming collaboratives that had been very productive.

Evaluation question #4 asks if the application forms were clear, relevant and effective for gathering good data for decision making. Although respondents felt that the process was much improved, they felt it was still cumbersome. They felt

that while they saw the need for the demographic data in the first proposal, they could not see supplying the same information each year. A few even felt there was duplication within the application form. One suggested a menu of acceptable programs so that a system could select the program description that fit their needs rather than writing a new one each time. They suggested an earlier deadline to make summer programs possible and to give more lead time for equipment. Question #5 asks about the role of the questions in rethinking pedagogy and justifying funding. Most felt that the rethinking had begun before they received the forms but that the forms (most of them) were useful in organizing thought.

Evaluation question #6 addresses the involvement of all stakeholders in planning and whether or not they were kept informed about the progress of the application. There seems to be good coordination between the state technology plan, parish technology plan, and what local schools are planning. In most cases, the parish proposal came from input provided by selected schools. In most cases, what the school provided was developed by a small nucleus of teachers working with an administrator. Usually other teachers were informed of the proposal and at times were given the opportunity to make suggestions for change. Parish Central Office personnel generally wrote proposals with a committee of teachers and principals. Apparently only a few involved parents or community representatives, but those who did reacted positively to it. Communication regarding progress was not outstanding, primarily because much of this was done during the summer months. It should be noted that many people contributed their time for the welfare of their students.

B. Implementation Process

Evaluation questions #1 and #5 in this section ask if the appropriate materials for implementation have been received at each site. Very few respondents were able to say that everything ordered had been received and installed. In most cases hardware had not been received or had not been installed. The delays were longer in older schools that required rewiring to install the hardware. In other cases the basic computer and peripherals were not compatible and the process of returning useless equipment and replacing it with compatible hardware or software was often a lengthy process. Similar responses occurred last year but more frequently.

Evaluation questions #2, 3, 4, and 6 address staff development activities associated with the implementation of technology in the classroom. Focus group participants and interviewees alike applauded the quality of the staff development provided. Individuals were interviewed who provided the training and their concern was that many more wanted training than were served. Their students were eager and often the trainers worked in the schools where there was a heavy concentration of teachers being trained or where the equipment or software was unique and could not be addressed in the training labs. Some of the larger school systems have installed training labs and hired experienced teachers to provide the training.

Schools did, however, suggest that training is needed for individual schools that have peripherals that they do not know how to use but wish to learn. In several focus groups, the suggestion that Regional Service Centers assume that role surfaced. In one meeting of Technology Coordinators, many were lamenting the number of things they had to do and keeping up with current technology was an added burden. They felt perhaps the Regional Centers could keep them apprised of "growing edge" technology.

Training has three basic focal points; training with the hardware, software, and integration of technology into the curriculum. The training with the hardware utilizes the kind of equipment being purchased by the school even if the training must take place at the school site. There seems to be a growing awareness on the part of teachers of the role of technology as a tool of learning - especially in helping teachers deal with learning at the higher cognitive levels. Software is becoming available which deals with problem solving and critical thinking, though there is much on the market today that boasts success in teaching these higher cognitive level skills that in fact do not begin to address them. Training in some cases, addresses the manner in which software should be chosen and that is important for educators to learn.

In some areas of the state, especially where there is a strong consortium of parishes addressing technology, collaboration efforts with colleges and universities are underway, not only to provide training for teachers, but also to offer college credit to participants. In addition, several universities working with local parishes are using Initiative support to provide preservice training to prospective teachers so that they enter the profession with the proper skills. Some of the funding provided Regional Centers is used to facilitate this effort. They are also developing resource materials teachers can use to help integrate computers into the curriculum.

Local systems provide training as well. The amount of training varies from parish to parish. In the case of systems providing the most training much effort was provided dealing with the integration of technology into the curriculum. The thrust of this training includes the use of technology beyond expensive "drill and practice" into reasoning and information access.

Efforts in the past decade to integrate technology into the curriculum were often met by resistance from teachers. At least two reasons existed for that resistance. Some "more experienced" teachers were threatened by a teaching tool that they did not know how to use. Even those who were confident in using the hardware saw little in software that was any better than some far less expensive materials on the market that did not require investment of hardware. That resistance has evaporated over the years with more user-friendly hardware and much better, more challenging software. Some report the fact that many of their students are already computer literate and have been very helpful in helping them learn more about the

technology. These students have become valuable resources not only for teachers, but also for fellow students.

Teachers have been complimentary of the quality of the training that they have received and eager for more. Systems who are more advanced in their efforts encourage and facilitate teachers getting together to share their ideas and problems in using technology. While some of that happens naturally in a school setting, it is magnified by groups of teachers voluntarily meeting together to share.

There seems to be ample evidence that teachers today are much more comfortable using technology in their classrooms and see it as a means for better comprehensive teaching and learning. The ability of students to use technology is still a goal of schools and teachers. They recognize that if their graduates cannot utilize the technology on the market today, they will not be able to compete in the job market nor will they be able to access a rapidly growing market in accessing information for more informed decision making in everyday life events. Still the ability of technology properly used to provide spice and excitement to the learning experience is what is attracting teachers to this drastically different approach to teaching.

Respondents voiced concern over when training was to take place without undue displacement time from their students. Suggestions included looking for creative ways of providing training like interactive T.V., or video tapes, and/or a menu of skills from which participants could choose with a second menu of delivery systems.

Whatever is developed must reduce displacement time, and be specifically relevant to participants. They also feel that there needs to be follow-up to the initial training to help participants deal with protocol problems.

Other Areas of Impact

One respondent said computers were "the great equalizer". He felt that students who normally would not participate in class because of the fear of how others would respond to their work, utilized the computer freely to communicate what they know to whomever they choose. In the observation of one class, a young second grade student approached the observer to show him some of his work posted on the bulletin board. The quality of the work (a letter to Mother) was excellent and the child was proud of what he had accomplished. The teacher later informed the observer that the child was one of her special education students. There are many stories like this that imply that technology provides a non-threatening atmosphere for learning that some students are able to respond. Respondents said that technology sparks more interest in the students and that they work harder. Teachers said students seek answers to their own questions more now than ever before and are working with greater confidence. Students appear to be anxious to work with computers and are not intimated by them at all. Teachers say discipline

problems are greatly reduced and classroom observations verify this. Students are often found in computer labs before school, during recess and after school. The word processing function was heavily used after school hours for term papers, etc. Also use of the Internet was a primary use of the computer after hours.

Teachers, too, have been impacted by technology. Principals said that many of their teachers now use off time at the computer.

C. Conclusions and Recommendations

1. The process of planning and applying for the funds is apparently clear, understandable and "user friendly". There is some redundancy within the application form and many feel the information should not be necessary for each application. They feel the application takes too much time, but in other areas it is user friendly.

   Recommendations

   A. Both public and private participants were concerned that furniture was not eligible for purchase. While they understood the potential for abuse, they felt that limiting furniture acquisition to specific items and restricting purchases to perhaps 2% of the budget would control abuse and at the same time provide furniture necessary for implementation.
   B. Consider developing a menu of acceptable programs to eliminate the need for a description of the program. Participants could then choose what program and provide only the information that would enhance the model.
   C. Consider requiring the demographics on the first proposal but waive the requirements on subsequent grants unless something has caused a substantial change in the information.

2. Many of the systems observed were not fully implemented. Delays were caused by: 1) vendors with inadequate supplies and/or equipment; 2) rewiring required, especially in older buildings; 3) lateness in acquiring notification of funding, and 4) time required for the bidding process.

   Recommendations

   A. Before vendors are selected, they should provide evidence that they can or will provide delivery by a certain date. Sanctions should be identified for late delivery.
   B. Notification of funding no later than mid-August but earlier if possible.
   C. Consider some way of even earlier proposals for summer programs, especially staff development grants or summer school programs.

D. Provide legal options to the bidding process to facilitate ordering of goods and services.

E. State Bid lists should be coordinated so that compatible peripherals and basic hardware are identified.

3. Inadequate hardware and software continues to be a problem in Louisiana.

Recommendations

A. A Technology clearinghouse should be established which identified acceptable hardware and software or alerts people to problems encountered with certain equipment, software or vendor services.

B. Warn participants about "package software deals" that contain inadequate software, hidden among more appropriate hardware.

4. Participants have been very pleased with the staff development phase of the Initiative. Generally the focus of the training has been appropriate (hardware and software usage and selection and integration of technology into the curriculum) and for the most part provided by experienced teachers. Usually the training centered on equipment and software already at the school. However, the following suggestions are offered:

Recommendations

A. Provide options for summer training with college credit if possible. Some teachers were unable to attend during the year because of family obligations or other reasons. It is recognized that others may not be able to participate in the summer because of employment or other reasons but another option would be helpful.

B. Build in a follow-up stage of staff development. Many times questions arise as implementation begins. Teachers feel they need help after the training.

C. Creative approaches to providing staff development activities without classroom displacement time or a lot of travel should be considered.

D. The use of technology and a menu of topics and skills with schedules might be considered. Utilize practitioners in developing options.

E. A suggestion of providing staff development days in the summer at the teachers' daily rate of pay provided by the State was suggested numerous times and should be considered. University involvement and college credit could be possible as an added incentive.

F. Establish more collaboration efforts with college and universities to not only provide training for teachers, but better prepare prospective teachers. Perhaps requiring technology in the classroom courses in the teacher preparation program should be mandated.

5. There is some concern that the impact of technology in the classroom may not be properly evaluated. There is doubt about the standardized test presently used and reported and the ability of local systems to provide good evaluation design.

Recommendations

A. Design a statewide evaluation plan which draws information from the state testing data and supplements that with specific identified data to be provided by each parish. Perhaps a sampling method could be employed so that the evaluation is not too cumbersome. Control groups should be established to more directly assess the impact of technology.
B. Seek or develop instrumentation that more properly measures the important outcomes anticipated.
C. Provide training to local systems to properly aggregate and analyze existing data to identify areas of strength and/or weakness in their curricula.

D. Anticipated Roadblocks

In all the discussions, teachers, parents, other school personnel and educational leaders applauded this united effort to help Louisiana improve its educational environment so that the children of this state can be better served. They continue, however, to have some concerns for the future. First, they feel that decision-makers should know that this is a first step and that the problem is not solved. As large as this year's investment was, it has by no means brought us close to solving the problems. A small portion of schools have been served. They hope that lawmakers and decision-makers understand this, and feel that support systems should be in place to keep the process moving.

In addition, they see the necessity of a maintenance budget for repair of hardware when warranties expire. They see the need for support personnel to continue training and to keep the process moving. While larger parishes are doing this, smaller parishes need support either by forming consortia or through Regional Centers. They are resentful about numerous surveys for information by agencies outside the SDE, and later finding that information for sale on the Internet. They see the need to begin to network schools and to encourage the use of technology to improve communication. They see teleconferencing as a means to getting consistent information out to the systems for the planning process to help with

changes in the process and applaud the efforts in that direction this year. They also feel the need to prioritize the efforts of the Regional Service Centers and staff them accordingly. While they feel that Regional Service Center personnel are very busy responding to local needs, they feel they have not responded adequately to needs in technology because they have neither the staff nor the time to provide. Principals, teachers, SDE leaders, and district Central Office personnel should meet together to redefine and prioritize the very important role of the Centers. The establishment of some regional technology centers in the state will be helpful.

There is a level of excitement among educators in this state. They face the future with a level of expectancy that this educator has not seen in many years. The potential is tremendous.

VIDEO PROGRESS REPORT

In this second year of the Technology Initiative, there was still much concern that results submitted in the *End of Year Reports* would not adequately capture the exciting changes that were beginning to occur in classrooms all over the state as a result of the funding. The 1997-98 efforts had focused mainly on installing infrastructure, a much larger emphasis on professional development activities for changing pedagogy was evident this year.

Therefore, a video tape component was incorporated into the evaluation design to capture actual practices occurring in classrooms that received funding. (See Appendix S *Video Tape).* An application process was designed and the application form was posted on the LCET Web page. (See Appendix R - *Application for Video Taping*).

District Technology Coordinators were asked to nominate classrooms that exemplified the integration of technology for standards-based learning, where teachers were designing and implementing technology-based activities, student-centered learning, problem solving and higher order thinking skills, peer collaboration and authentic assessment. LCET staff members and the Louisiana Technology Initiative evaluation team reviewed applications. Twenty-six teachers were selected, representing a good mix of grade levels, regions, and subject areas.

The video format was designed to spotlight actual classroom scenes that portrayed ways of accomplishing each of the goals and objectives of the State Technology Plan. This provided visual documentation of actual results obtained as they related to the overriding objective of the Louisiana Technology Initiative, *"All educators and learners will have access to technologies that are effective in improving student achievement."*

Twenty-three classrooms and two Technology Training Centers provided rich examples of exciting and effective integration of technology into the curriculum. For

example, two students at Peabody Magnet High School were studying Latin in Distance Learning Classes provided by the University of Virginia. At Transylvania Elementary, third and fourth graders answered questions, developed predictions, drew conclusions, and interpreted themes of the book *Edward the Emu* with drawings and answers created with the ***KidPix*** drawing program, then developed timelines of the story sequence using ***Timeliner*** software, and researched the topic on the Internet.

The Hahnville High School 9-12 science classes are conducting water sampling and analysis for the Barataria Terrebonne National Estuary Program (BTNEP) at the site of the Davis Diversion Project in west St. Charles Parish. This project is focused solving the ecological problems facing the Louisiana wetlands, and was originally planned for contract with a commercial lab. Instead, the students are performing it as a long-term community service project. Students are using computers to develop Quality Control databases, logs and charts, The collected data will be made available on the Internet from the school's Web page, and will also be linked to databases of agencies performing other analyses of sites in the estuary. Students are using "state of the art" instrumentation currently used in industrial applications, and are complying with EPA protocols. The project is an excellent example of real-life application of technology.

Another far-reaching project was the *Inuit of the Artic: A Child's View* project at South Highlands Elementary School in Shreveport, La. After visiting the Inuit Art collection at the local museum, armed with digital and video cameras, Judy Johnson's third and fourth grade art students returned to class to recreate HyperStudio stacks describing it. Students compressed and digitized photos and images of ALL of the works in the collection. They surfed the web and CD-ROMs, read books and watched videos to gather information about the Inuit culture, then used text, sounds, and movies to add that information to their stacks. Finally, the stacks were pressed onto a CD-ROM containing 100 megabytes of information. It will be used by the Meadows Museum to introduce patrrons to the exhibit, and teachers will be able to check it out for classroom use.

All applications for the video taping reflected a new exciting view of padagogy, in which technology is playing not only and exciting part, but and integral part. For the most part, these lessons were better with the technology component. All of the applications can be viewed at http://www.iltc.state.la.us/districts/checkit.asp by selecting a project in the lower box of the left frame titled "Evaluation of Louisiana Technology Funds Initiatives".

SUMMARY

The Louisiana Technology Initiative began in 1987 with the use of funds from the Louisiana Educational Quality Support Fund (LEQSF), commonly called the 8(g) fund. Each of the past 11 years additional funds have been allocated by the state or received from federal sources to continue the purchase and implementation of technology in schools. In 1997 the state legislature created the Classroom Based Technology Fund (CBTF) with a $38.2 million allocation. From the Federal government, an additional $5.3 million allocation from the Technology Literacy Challenge Fund (TLCF) was received. In 1998 the CBTF fund allocated $24,150,000 and $10,272,800 was received from TLCF.

The State Plan for Technology delineated one state goal combined with four national goals (pillars). The state goal is: All educators and learners will have access to technologies that are effective in improving student achievement. The federal goals are: 1) All teachers will have training and support they need to help all students learn through computers and through the information superhighway; 2) All teachers and students will have modern computers in the classroom; 3) Every classroom will be connected to the information superhighway; and 4) Effective and engaging software and on-line resources will be an integral part of every school curriculum. These goals provided direction and motivation for the schools in the development of their proposals and their commitment to effectively integrate technology into the curriculum. Subsequently, this process is to significantly improve student achievement as measured by national and state examinations.

As school systems addressed the objectives and strategies set forth in the State Technology Plan, it was obvious that their accomplishments in 1998-99 were guided by these strategies. School systems, both public and non-public, had plans for equipping their buildings with technology, were developing and planning to maintain a staff to support the technical infrastructure of the schools, provide appropriate staff development for teachers, administrators and staff, and sought advice and leadership from business and industry, institutions of higher education and from other local education agencies. Likewise, school systems were beginning the process of integrating technology into the curriculum, developing curricula based on state content standards, cultivating leadership for long term guidance and direction, developing policies for ethical and legal issues, and establishing procedures for measuring the effectiveness of this new technical infrastructure on student learning and achievement.

School systems have also involved business and industry into their planning and funding of projects, are pooling resources from various funding sources to maximize purchases and used the E-rate program extensively. Teachers and central office staff are encouraged to write new proposals for grant funds to increase their equipment and software holdings. Parents, individually and through parent-techer organizations, are contributing funds to help individual schools. These projects are

primarily to help connect classrooms to the Internet and to purchase additional equipment.

CBTF funds were distributed to districts/schools using an RFP procedure with allocations based on a per pupil basis. TLCF funds were competitively awarded to all districts based on high poverty need. Proposals were developed based on district/school technology plans that were approved by the state and which addressed the State Technology Goal and the four National Pillars/Goals. Funds were primarily used to purchase hardware, utilizing the E-rate allocation, software, and conducting professional development activities. The professional development sessions emphasized the integration of technology into the curriculum, aligning curriculum with content standards through technology and enhancing student achievement.

In June 1999, the student to computer ratio in the public schools was 6.0:1. For the non-public schools the ratio was 6.7:1. In 1997-98, the student to computer ratio was 8.0:1 in both public and non-public schools. When only high-end computers are considered, the ratio in public schools is 10.5:1; in non-public schools, 10.7:1. In 1997-98, these ratios were 19:1 and 18:1, respectively, for public and non-public schools. (In 1998-99 data, type 486 computers were not included in the high-end category.). Ninety-one percent of the public schools and 92% of the non-public schools have access to the Internet, up from 84% and 88% in 1998, respectively. Internet connections via direct link is 76% for public and 61% for non-public schools this year compared to 49% and 38% in 1998, respectively.

The percentage of schools that have computers in classrooms, labs or media centers connected through local area networks (LANs) is 77% in public schools and 71% in non-public schools compared to 64% and 57% in 1998, respectively. The percentage of public schools with an approved technology plan is 94% compared to 90% in 1998. For non-public schools the current percentage is 92% compared to 88% in 1998.

Forty-one percent of public school teachers in the state are at the beginner level in using technology, as are 37% of the non-public teachers. At the intermediate level are 41% of the public and 44% of the non-public. At the advanced level are 18% of the public and 22% of the non-public. Both public and non-public teachers reported 8% at the instructor level. As expected, the percent at the beginning level is down and the percent at the intermediate and advanced levels is up compared to last year.

Approximately 10,000 educators participated in professional development during the year. Of that number, 7022 teachers completed an evaluation form; 6151 were public school teachers, 871 were non-public teachers. Professional development was delivered in a variety of ways. LA INTECH was the most structured delivery system and accommodated 932 public school teachers and 89 non-public teachers.

Other delivery systems included university/college courses, TL^2 and district/regional workshops classified as non-credit. Each public school teacher received an average of 17 hours of professional development during the year. Non-public teachers received an average of 17.8 hours.

Each teacher completed a survey form following in-service which contained 9 rubrics (4 point scale) addressing the percentage of students/teachers/schools/time that they thought were affected by the training received. For public school teachers the percentages ranged from a high of 80% for "Organizational structure exists for support of all aspects of technology integration", to a low of 40% for "Teacher integrates technology into all subject areas, using resources that map technology to the curriculum." For non-public teachers the percentages ranged from a high of 81% for "Organizational structure exists for support of all aspects of technology integration" to a low of 34% for "Teachers design and implement technology-based learning experiences that promote higher level learning for students and authentic assessment."

Although no data are available from the two previous years, it is important to note that 51% of the public and 63% of the non-public instructional rooms have Internet access. Likewise, 49% of the computers in public schools and 61% of the computers in non-public schools have Internet access. When computers in instructional rooms have Internet access, the percent for public schools is 24.4% compared to 23.6% for non-public schools.

The Louisiana Technology Initiative for 1998-99 has demonstrated a significant gain compared to the two previous years. The Initiative has been very successful in placing technology into classrooms and providing professional development for faculty and staff. Successful collaboration with the Technology Consortium for Teacher Education resulted in the revision of current criteria for certification in the area of educational technology and the award of a $1.6 million (T.H.E./QUEST) grant to facilitate integration of technology into state teacher preparation programs.

The Governor, Legislature, Board of Elementary and Secondary Education, Louisiana Department of Education, Louisiana Center for Educational Technology and participating businesses and industry are to be applauded for their leadership, funding and active cooperation. The school children of Louisiana are the benefactors of this continuing program and in subsequent years, the State at large. In order for this Initiative to support the State Accountability Program, the stakeholders must continue to fund purchases of hardware and software, provide opportunity and funding for professional development and ensure that pre-service teacher education programs are providing new teachers with the appropriate skills to integrate technology into the curriculum.

RECOMMENDATIONS

1. The legislature needs to continue to fund the Classroom Based Technology Fund (CBTF). The student to computer ratio is near the national goal of 5.0:1 and can be achieved with additional funding. Also, the monies needed to maintain and update the present technology must come from state appropriations and could be included in the CBTF funding.

2. The professional development needs of educators have only partially been met. The state needs to continue application for the Technology Literacy Challenge Fund (TLCF) monies and dedicate that to the professional development of teachers and staff in the schools. Only limited TLCF monies should be used for purchasing additional hardware and software.

3. The BESE board should approve additional professional development days in the academic calendar year for teachers. It is imperative that all teachers learn how to integrate technology into the curriculum and this can only be accomplished with additional time provided for staff development.

4. The state should modify the Minimum Foundation Plan funding to include a full-time technology coordinator and a technical support person for each school system. These persons are needed to promote leadership and support for the integration of technology into the curriculum.

5. The Louisiana Content Standards need to be integrated into the curricula to ensure that technology and standards are compatible and are an integrated part of teachers' lesson plans.

6. Every school in the state needs to have access and use of the Internet. CBTF funds should be sufficient enough in 2000 to accommodate this objective.

7. All colleges and departments of education should include their faculties in professional development to ensure that pre-service teachers are technology literate and ready to appropriately use technology when they enter the classroom.

8. Demonstration of technology skills should be a requirement by schools for the employment of new teachers.

9. The instrumentation currently used in the statewide technology evaluation project should be redesigned and redeveloped so that duplicity among respondents is minimized.

Appendix A

House Bill 1911

Appendix B

Louisiana's Classroom-Based Technology Fund
and
Technology Literacy Challenge Fund

Application Packet
for
Technology Improvement Grants

Found at:
http://www.lcet.doe.state.la.us/doe/grants/techgrants.asp

Appendix C

Louisiana's Technology Literacy Challenge Fund

Application Packet
for
Professional Improvement Grants

Found at:
http://www.lcet.doe.state.la.us/doe/grants/techgrants.asp

Appendix D

Allocations - Classroom-Based Technology Fund (1998-99)

Appendix E

1998-99 Non-Public Classroom-Based TechnologyAllocation

Appendix F

Louisiana Technology Literacy Challenge Grant (98-99) Allocation

Appendix G

Professional Development Grants 1999-2000

Appendix H

Louisiana District Technology Survey 1998-1999 (QED)

Appendix I

Louisiana School Technology Survey 1998-1999 (QED)

Appendix J

1998 Louisiana State Project EdTech™ Report, Quality Education Data (QED)

Appendix K

A Comparison of 1997-98 to 1998-99 QED Data for Districts & Special Schools

Appendix K

Evaluation of the Louisiana Technology Initiative
A Comparison of 1997-98 to 1998-99 QED Data for Districts & Special Schools

Item	1997-98	1998-99
1. Percent of administration buildings having access to the Internet	92%	100%
1a. Type of Internet connection in administration buildings		
Direct Link	57%	86%
Dial-up Link	32%	14%
Both	11%	*
1b. Bandwidth capacity for Direct Link		
TI	32%	64%
56kb	17%	24%
Cable Modem	3%	3%
ADSL	*	1%
T3	*	1%
Other	*	6%
Unknown	*	1%
2a. Percent of classrooms with Internet access	*	55%
2b. Average number of schools per district with Internet access	*	21.8
2c. Percent of districts where information can be accessed from an outside location via the Internet.**		
District Calendar	27%	47%
Information on School Board Members	30%	40%
School Board Agenda & Minutes	5%	14%
Information on District Staff	32%	47%
District Newsletter	8%	7%
Other	13%	28%
3. Average number of computers in use (instructional & administrative) per district.	*	1706.5
4. Average number of computers with Internet access per district	*	853.4
5. Percent of districts providing Internet services/access accounts to educators at their homes.	*	19%
6. Mean number of schools per district having a Local Area Network (LAN).	5.6	18.9
7. Percent of districts where administration buildings & schools are connected to each other through a Wide Area Network (WAN).	69%	76%
8. Mean number of administration buildings & schools connected to each other through a WAN per district.	20.7	28.9
9. Student to computer ratio (high end, multimedia computers).	18.5:1	10.5:1
10. Percent of districts providing distance learning for students.	77%	80%

* No data available as same question was not asked.
** Total exceeds 100% due to multiple responses.

Appendix K - Continued A Comparison of 1997-98 to 1998-99 QED Data for Districts & Special Schools		
Item	**1997-98**	**1998-99**
11. Percent of districts which have teachers participating in distance learning.	*	69%
12. Percent of districts requiring teachers to demonstrate technology skills for employment.	3%	7%
13. Skill level of teachers in use of technology**:		
Beginner	48%	42%
Intermediate	34%	37%
Advanced	13%	16%
Instructor	5%	5%
14. Skill level of school administrators/principals in use of technology**:		
Beginner	56%	49%
Intermediate	37%	44%
Advanced	12%	14%
Instructor	6%	6%
15. Skill level of district administrators/staff in use of technology**:		
Beginner	39%	38%
Intermediate	40%	46%
Advanced	22%	22%
Instructor	12%	9%
16. Hours per school year each district offers professional development for each employee group to upgrade technology and computer skills:		
Teachers (average hours per district)	28	
Introduction to Operations	***	185.2
Using Applications	***	116.9
Curriculum Integration	***	96.6
Teaching Applications	***	81.0
School Administrators/Principals (average hours per district)	19	
Introduction to Operations	***	142.5
Using Applications	***	52.7
Curriculum Integration	***	26.5
Teaching Applications	***	19.8
District Administrators/Staff (average hours per district)	17	
Introduction to Operations	***	162.4
Using Applications	***	50.3
Curriculum Integration	***	31.8
Teaching Applications	***	19.8

* No data available as same question was not asked.
** Total exceeds 100% due to multiple responses.
*** In 1997-98 districts responded as to number of days per year district offered professional development in technology for staff members. The subcategories were not included.

Appendix K - Continued A Comparison of 1997-98 to 1998-99 QED Data for Districts & Special Schools		
Item	**1997-98**	**1998-99**
17. Percent of districts offering release time to teachers for training.	*	100%
2 days or less	*	56%
3-5 days	*	29%
More than 5 days	*	15%
18. Percent of districts incorporating technology use into student content performance standards.	46%	75%
19. Percent of districts having technology proficiency requirements for students to matriculate to the next level.	8%	14%
20. Percent of districts having anyone whose responsibilities include leadership and support for teachers in integrating technology into the curriculum.	88%	100%
Full-time	62%	62%
Part-time	38%	38%
21. Persons responsible for technical maintenance and/or support of hardware:		
District Staff	78%	81%
Support/Classified Staff	38%	56%
Licensed/Certified Staff	15%	24%
Vendor	77%	76%
Students	8%	19%
Regional Centers/BOCES	3%	6%
Parents/Community	8%	15%
Other	0%	4%
22. Percent of districts with written technology plan.	100%	100%
Technology plan written for:		
1 year	2%	4%
2-4 years	51%	68%
5 or more years	47%	28%
23. Number of computers to be purchased by year		
Projected per district	*	157.2
Actual per district	229	267.6
24. Percent of districts applying for e-rate discount.	93%	97%

* No data available as same question was not asked.
** Total exceeds 100% due to multiple responses.

Appendix K - Continued
A Comparison of 1997-98 to 1998-99 QED Data for Districts & Special Schools

Item	1997-98	1998-99

25. Percent of districts reporting how technology is funded (multiple responses allowed):		
District Line Item Budget	65%	61%
Site-Based Line Item Budget	22%	32%
Capital Funds	12%	13%
Loans	2%	3%
Local Bonds	7%	17%
State Funds	88%	94%
Federal Funds	78%	85%
Grants	92%	92%
Vendor Contributions	10%	17%
26. Bond issue planned in next 18 months to include technology.	*	22%
27. Amount of money spent on leasing hardware.	$1,010,500	$310,500
28. Percent of districts having a written plan for achieving Year 2000 compliance:		
Percent completed for:		
Awareness	*	53%
Assessment	*	87%
Renovation (Fixing systems)	*	65%
Validation	*	25%
Implementation	*	19%
	*	19%
29. Average projected cost for achieving Year 2000 compliance per district.	*	$129,126
30. Parties involved in district's plan to achieve Year 2000 compliance (in percent).		
State Legislature	*	3%
District	*	43%
Consultant	*	21%
Vendor	*	32%

* No data available as same question was not asked.
** Total exceeds 100% due to multiple responses.

Appendix L

Evaluation of Training Form

Appendix 6.5

Appendix M

EOY Report for Districts and Special Schools

Appendix N

EOY Report for Non-Public Schools

Appendix O

Table 5

Rubric Mean and Percent of Public Schools
Fulfilling the Four National Pillars

And

Table 6

Rubric Mean and Percent of Non-Public Schools
Fulfilling the Four National Pillars

Appendix O

Table 5 Rubric Mean and Percent of Public Schools Fulfilling the Four National Pillars			
Pillar/Goal	**Mean**	**Std. Dev.**	**Percent**
1. All *teachers* in the nation will have the training and support they need to help all students learn through computers and through the information superhighway.	3.21	1.18	55%
2. All teachers and students will have modern multi-media computers in their classrooms.	2.85	1.29	13.6:1*
3. Every *classroom* will be connected to the information superhighway.	3.69	1.50	71%
4. Effective and engaging software and on-line learning resources will be an integral part of the *school's* curriculum.	3.11	1.16	53%
*This response given as ratio rather than as a percent.			

Table 6 Rubric Mean and Percent of Non-Public Schools Fulfilling the Four National Pillars			
Pillar/Goal	**Mean**	**Std. Dev.**	**Percent**
1. All *teachers* in the nation will have the training and support they need to help all students learn through computers and through the information superhighway.	3.90	1.52	73%
2. All teachers and students will have modern multi-media computers in their classrooms.	3.00	1.54	13:1*
3. Every *classroom* will be connected to the information superhighway.	3.29	1.81	62%
4. Effective and engaging software and on-line learning resources will be an integral part of the *school's* curriculum.	3.03	1.28	51%
*This response given as ratio rather than as a percent.			

Appendix P

Table 7
Technology Integration for Non-Public Schools
End of Year Report Data

Table 7
Rubric Mean and Percent of Time or Groups for Progress of Technology Integration in Non-Public Schools as Reported by Technology Coordinators

Statement	Mean	Std. Dev.	% of Group
1. Students are involved in higher order thinking skills activities supported by technology.	2.45	1.02	48%
2. Teachers design and implement technology-based learning experiences that promote higher-level learning for students and authentic assessment.	2.00	0.83	25%
3. Teachers integrate technology into all subject areas, using resources that map technology to curriculum.	2.03	0.86	26%
4. Technology resources are available and are being used to support a variety of students and teacher experiences.	3.00	1.05	75%
5. Technology has been allocated in such a way as to support its constructive use in the teaching and learning environment.	2.87	1.08	69%
6. Individual schools/districts have equitable access to technology.	2.47	1.31	49%
7. Organizational structure exists for support of all aspects of technology integration.	3.33	1.28	83%
8. Organizational capacity fosters transformations in school leadership to support technology as the changes it brings to teaching roles and methodologies.	2.83	1.19	66%
9.Effective and on-going staff development opportunities exist to support capacity building for using technology to improve teaching and learning.	2.42	1.04	46%

Response Choices for Rubric
1=*Few*=Less than 25% of the time or group.
2=*Some*=25% to 75% of the time or group.
3=*Many*=More than 75% of the time or group.
4=*Most*=Almost all of the time or group.

Appendix Q

End of Year Report:
Louisiana Center for Educational Technology (LCET)

Appendix R

Application for Video Taping

Appendix S

Video Tape