



**Long Beach Unified School District**

# **Technology Use Plan**

**2005 – 2010**

# **Technology Planning Committee**

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# **Mission Statement**

## Mission Statement

*The LBUSD mission is to provide a comprehensive technology use plan to effectively leverage and optimize all resources, human and fiscal, to support a standards-based curriculum to maximize student achievement. This plan will enhance the effective use of technology for instruction while providing all students (including GATE, ELL and Special Education) equal access to current technology.*

Long Beach Unified School District is the third largest school system in the State of California. The district provides services to close to 100,000 students at 53 elementary, 23 middle/K-8 and 11 high schools with about 5000 certificated staff.

Long Beach is the winner of the 2002 Broad Prize for Best Urban School District. There is a strong focus on standards-based instruction across all the content areas. Professional development for pre-service and in-service teachers emphasizes using content standards framework. Most of the training is coordinated through the Office of Curriculum, Instruction and Professional Development (OCIPD). Curriculum Leaders assist schools with the delivery of content as well as instructional strategies. Long Beach Unified School District is also participating in the Baldrige process across various departments and schools.

Access to technology has been growing over the past few years due to funding from various sources and grants. The district has been the recipient of technology funding from the following sources: NCLB Title II-D Formula Funds, Enhancing Education Through Technology (EETT) Competitive grant, Magnet Schools Assistance Projects, Technology Literacy Challenge grants, Digital High School grants, E-Rate and other similar grants. Title II-D and EETT funds have been used to reduce the student to computer ratio in the classrooms. E-Rate funds have been used to wire and network every classroom in the district providing a minimum of six data ports in each instructional area. Technology training has been provided to teachers all the way from basic skills training to technology integration.

**The instructional goal of the district is to introduce educational technology as one additional resource to improve student achievement for all our students – including GATE, English Language Learners (ELL) and Special Education.** In order to accomplish our technology goals, we must recognize that teachers will embrace instructional strategies that are both available and reliable. Teachers require staff development as well as ongoing support that focuses on educational technology resources that are aligned with our standards based instructional program. The Technology Literacy Challenge and EETT grants used the coaching/mentoring model to provide training based on teacher needs followed with support in the teacher's classroom. This proved to be an effective model to enable teachers to effectively integrate technology into their classrooms.

The purpose of the Technology Use Plan is to develop a vision that will guide the implementation and use of technology resources over the next five years. The recommendations made in the **National Education Technology Plan** will focus the efforts of the district:

1. Strengthen leadership
2. Consider innovative budgeting
3. Improve teacher training
4. Support e-Learning and virtual schools
5. Encourage broadband access
6. Move towards digital content
7. Integrate data systems

With the assistance of E-Rate, Digital High School and a successful bond election, campus-wide networking and Internet access have become an affordable addition to most school campuses. Every classroom in the district has access to all the networked resources in the district, including filtered access to the Internet. The Technology Use Plan will focus the efforts of the involved departments and offices to provide access to above instructional strategies. The vision is to move towards an Integrated Data System to share information across the various departments to allow for informed decisions to improve student achievement.

The following instructional strategies will become reality as a result of comprehensive district network:

- Internet Access from all classrooms, Libraries, and Media Centers
- Administrative communications with teachers
- Email communications between teachers and parents
- Discussion threads for communication between teachers and administrators in the district
- District/School web pages
- Integrated Data System
- Educational Portals to access online resources/media content
- Computer Assisted Instruction programs using central servers
- An instructional environment where WIntel and Apple computers work together seamlessly in one network for campus-wide file and print sharing.
- Standardized library management system
- District Intranet for instructional and administrative business.
- Parent access to student grades
- Pickup student homework
- Textbook tracking systems
- VoIP (Voice over IP)
- Wireless access
- Microwave between sites
- Video streaming/conference
- Y-Macs
- Voice recognition systems

**Stakeholders**

Representatives from various departments were involved in the development of the district's Technology Use Plan. Updating of the plan is an ongoing process and the district continues to involve stakeholders in the procedure. The Board of Education supports the vision of the Technology Use Plan. The plan is shared at the scheduled technology coordinator's meeting. The plan is also posted on the district's Technology Curriculum web page for use by the local community as well as our teachers and administrators.

**Private Schools**

The district believes in supporting the students in the city of Long Beach, and as such has implemented an ongoing collaborative effort with the local private schools. Each of the non-profit private schools within the district's boundaries, have access to Federal funding. The office of Special Projects works with the departments in charge of the various federal programs to provide the private schools with their share of Federal funds. Consultation over site plans, and appropriate use of funds takes place through out the year so that the private schools can make the most effective use of their funds. The first meeting is held with all the local non-profit private schools to advise them of their entitlement from each of the Titles from which they are eligible to receive funding. The next consultation involves assistance with their site plans based on student needs and use of funds appropriate to their plans. Private schools consult directly with each of the coordinators of the Title program throughout the school year. Private schools in the area of target EETT competitive grant schools also received funding for their middle school students. The schools also use the district's purchasing and contract departments to purchase equipment and services.

**Acceptable Use Policy**

The district has an "opt-out" only Internet Acceptable Use Agreement which is included in the Student Handbook. This handbook is distributed to the parents at the beginning of the year and has to be returned with signatures back to the school.

# **Vision and Outcomes**

## Vision and Outcomes

2005 - 2010

*The LBUSD vision is to provide teachers with the resources to support the use of technology in the improvement of teaching and learning and empowerment of all students (including GATE, ELL and Special Education) to use technology as a tool to enhance their personal, professional, and academic life.*

### **Expected student outcomes in 5 years as a result of technology use:**

As aligned with the National Educational Technology Standards -

- Students will understand the various applications of technology in society.
- Students will move towards proficiency in skills related to technology used in society.
- Students will use appropriate technology tools and ethical practices to collect, analyze, and present information across the curriculum.
- Students will meet the district's computer literacy proficiency requirement for high school graduation (graduating class of 2008)
- Increased use of computers by students to access academic content

### **Expected staff outcomes in 5 years as a result of technology use:**

As aligned with the California Technology Assistance Project Technology Proficiency Standards-

- Teachers, administrators, and paraprofessionals will use appropriate technology tools and ethical practices to enhance standards-based instruction in the classroom.
- Select number of teachers will qualify for the district's Instructional Technology Certification.
- Teachers, administrators, and paraprofessionals will support students in the application of appropriate technology tools.
- Teachers, administrators will use appropriate technology tools to gather and analyze student data for instructional purposes.

**Expected 5 year technology outcomes: infrastructure, hardware, tech support and software**

- Enhance the capabilities of the Wide Area Network to every instructional area
- Standardize workstation setups across the district
- Increase communication between sites, support offices, information services and media services
- Implement an Integrated Data System in the district to allow information to be shared across various departments to allow for informed decisions related to student achievement and to be SIF (School Interoperability Framework) compliant
- Decrease the student to computer ratio in all classrooms
- Increase the number of classroom presentation devices and digital input media devices
- Decrease the down time of technology in the classrooms through-
  - Teacher training
  - Site support
  - District support
- Standardize hardware and software used on instructional workstations
- Provide standard productivity software for all instructional workstations
- Implement the use of web-based student information that allows teachers and administrators to streamline record keeping and reporting
- Provide schools with quick response times in troubleshooting and maintenance
- Provide schools with access to educational portals with instructional resources
- Put into place classroom delivery of digital content

**Expected funding/budget outcomes in 5 years:**

- Maintain or increase the overall line item budget from district general fund for technology
- Pursue ways to reduce costs for technology implementation, troubleshooting and maintenance at the district and site levels through grants, partnerships,
- Continue to obtain funding through grants and partnerships.

**Expected monitoring and assessment outcomes in 5 years:**

- Develop ways of monitoring and assessing:
  - Students' technology proficiency level
  - Student's use of technology
  - Teachers' technology proficiency level
  - Teachers' use of technology as an instructional tool
  - Teachers' use of technology as a productivity tool
  - Infrastructure
  - Increased use of delivery of digital content
  - Reduced cost of operation
  - High functionality of technology in the classrooms

# Curriculum

# CURRICULUM

Long Beach offers standards-based curriculum in all the content areas for all its students, which is aligned with California State Standards. Based on CTAP2 Proficiency Assessments, teachers are at the Intermediate proficiency levels. Teachers have participated in professional development activities over the past three years in focusing on productivity tools and resources. The next steps include plans to have teachers collaborate to create a database of units of instruction, which are models of effective technology integration in the classroom.

The CTAP2 assessments will be used to measure gains made by teachers in proficiency as well the use of instructional technology. The annual California Online Technology Survey will also assist the district in assessing the available technology, technical support, curricular support and usage of technology by students and administrators. This information will be used to guide the district in meeting the growing technology needs of the district.

Long Beach Unified School District has also implemented a computer literacy requirement for students graduating from high school in 2008. The intent is to have students leave high school with basic technology skills to help them be successful in higher ed/workforce.

## 1.1 Goal statement(s) for curriculum integration to improve teaching and learning

- 1.1a Teachers, administrators, and paraprofessionals will use appropriate technology tools and ethical practices to enhance standards-based instruction in the classroom.

### BENCHMARKS

Percentage of teachers using appropriate technology tools to support teaching and learning in a standards-based classroom				
Measured by CTAP2 Assessments and California Technology Survey				
2006	2007	2008	2009	2010
30%	40%	50%	60%	75%

- 1.1b Teachers, administrators, and paraprofessionals will support students in the application of appropriate technology tools.

### BENCHMARKS

Percentage of Teachers, administrators, and paraprofessionals supporting students in the application of appropriate technology tools				
Measured by CTAP2 Assessments and California Technology Survey				
2006	2007	2008	2009	2010
30%	40%	50%	60%	75%

- 1.1c Teachers, administrators will use appropriate technology tools to gather and analyze student data for instructional purposes.

### BENCHMARKS

Percentage of Teachers, administrators using appropriate technology tools to gather and analyze student data for instructional purposes				
Measured by CTAP2 Assessments and California Technology Survey				
2006	2007	2008	2009	2010
50%	60%	75%	90%	100%

### IMPLEMENTATION PLAN

Goal #	Implementation Plan/Activities	Responsible Person	Timeline	Budget Source	Monitoring and Evaluation activities
1.1	Staff development for the integration of technology into the curriculum.	Technology Trainers	Ongoing	Title II-D and other grants	Training Evaluations
1.1	Develop units of technology integration across grade levels and content areas	K-12 Teachers	Summer 2005-2009	Title II-D and other grants	Number of units created and shared with teachers
1.1	Survey teachers and students to determine the current level of integration of technology tools and individual skill level	Technology Curriculum Leader	Ongoing	Varied funding sources	California School Technology Survey & CTAP2 and sample lessons by grade levels and departments
1.1	Annual assessment of staff and students	Site technology representatives	Annual	Varied funding sources	CA School Technology Survey, CTAP2

### 1.2.Goal statement for student acquisition of technological and information literacy skills

- Students will understand the various applications of technology in society.
- Students will move towards proficiency in skills related to technology used in society.
- Students will use appropriate technology tools and ethical practices to collect, analyze, and present information across the curriculum.

### BENCHMARKS

Percentage of students acquiring appropriate information literacy skills to collect, analyze, and present information				
Measured by California School Technology Survey				
2006	2007	2008	2009	2010
30%	40%	50%	60%	80%

## IMPLEMENTATION PLAN

Goal #	Implementation Plan/Activities	Responsible Person	Timeline	Budget Source	Monitoring and Evaluation activities
1.2	Define and articulate appropriate technology tools for integration in the classroom.	Tech Planning Committee	Annual planning	General Funds	N/A
1.2	Survey teachers and students to determine the current level of integration of technology tools and individual skill level.	School site technology representatives /administrators	Annual survey	General Funds	California School Technology Survey & CTAP2
1.2	Staff development for the integration of technology into the curriculum.	OCIPD & Site coordinators	Ongoing	Grants/ Varied Sources	Training Evaluations
1.2	Provide opportunities for teachers to share student projects.	District Tech Committees, School site coordinators/ administrators	Annual	Grants/ Varied Sources	Science Fair, Junior Thesis, Senior Projects
1.2	Annual assessment of staff and students	School site technology representatives /administrators	Annual	Site funds	CA School Technology Survey, CTAP2

### 1.3. Goal statement for utilization of technology to ensure appropriate access for students

- Students will have regular access to technology resources in either the classroom, computer lab, Media Center (library)

## BENCHMARKS

### Students

Percentage of students who will have regular access to technology resources in either the classroom, computer lab, Media Center (library)				
Measured California School Technology Survey				
2006	2007	2008	2009	2010
30%	40%	50%	60%	80%

## IMPLEMENTATION PLAN

Goal #	Implementation Plan/Activities	Responsible Person	Timeline	Budget Source	Monitoring and Evaluation activities
1.3	Develop Technology Resources	Tech Planning Committee	Every Summer	General Funds	Completed Technology Resource and Student Access Survey
1.3	Assess the extent of regular student access to technology.	School site technology representatives /administrators	Annual survey	General Funds	Results from Technology Resource and Student Access Survey
1.3	Staff development on models for increasing student access to technology.	OCIPD & Site coordinators	Ongoing	Various Sources	Training Evaluations
1.3	Develop site student access technology plan.	District Tech Committees, School site coordinators/ administrators	Ongoing	General Funds	Completed Student Access Technology Plan
1.3	Implement student access technology plan.	School site technology representatives /administrators	Ongoing	Various Sources	Complete Technology Resource and Student Access Survey

**1.4. Goal statement for utilization of technology to make student record keeping and assessment more efficient and supportive of teachers' efforts to meet each student's academic needs.**

Teachers and administrators will utilize appropriate technology to monitor, analyze, and communicate student performance.

### BENCHMARKS

Percentage of teachers and administrators who will utilize appropriate technology to monitor, analyze, and communicate student performance				
Measured California School Technology Survey and CTAP2				
2006	2007	2008	2009	2010
50%	60%	75%	90%	100%

## IMPLEMENTATION PLAN

Goal #	Implementation Plan/Activities	Responsible Person	Timeline	Budget Source	Monitoring and Evaluation activities
1.4	Survey teachers and administrators to determine the current use of appropriate software for monitoring, analyzing, and communicating student performance.	School site technology representatives /administrators	Annual survey	General Funds	California School Technology Survey & CTAP2 Survey
1.4	Staff development for the integration of technology into the curriculum.	OCIPD & Site coordinators	Ongoing	Grants/ Varied Sources	Training Evaluations
1.4	Annual assessment of teachers and administrators	School site technology representatives /administrators	Annually	Site funds	CA School Technology Survey, CTAP2

### 1.5. Goal statement for utilization of technology to make teachers and administrators more accessible to parents.

Schools will use the Internet, E-mail, and voicemail to communicate more effectively with parents.

### BENCHMARKS

Percentage of schools that will use the Internet, E-mail, and voicemail to communicate more effectively with parents.				
Measured California School Technology Surveys				
2006	2007	2008	2009	2010
50%	60%	75%	90%	100%

## IMPLEMENTATION PLAN

Goal #	Implementation Plan/Activities	Responsible Person	Timeline	Budget Source	Monitoring and Evaluation activities
1.5	Develop school site email account	Information Services	Ongoing	General Funds	School site email account log
1.5	Survey parents and teachers to assess the extent to which school web-sites, email, and voicemail are being utilized.	School site technology representatives /administrators	Annually	General Funds	District survey
1.5	Posting of grades on the web for parents to monitor student progress	Information Services, Technology Curriculum Office	Ongoing	Title II-D / EETT grant funds	District survey
1.5	Staff development on the effective use of technology to communicate with parents.	OCIPD & Site coordinators	Ongoing	Grants/ Varied Sources	District survey and training evaluations

**Distance Learning Options:**

Given the size and extent of the district, it is becoming exceedingly important to offer distance learning opportunities for students to meet their individual abilities and needs. Students at Avalon School on Catalina Island take AP courses through UCCP. Middle School students eligible for high school math classes use EPGY's distance learning coursework.

Millikan High School has a classroom set up with video conferencing equipment that allows the students to collaborate with other students across the country. As we see the success of these programs, the focus is to move in that direction so as to provide enriching options for the students.

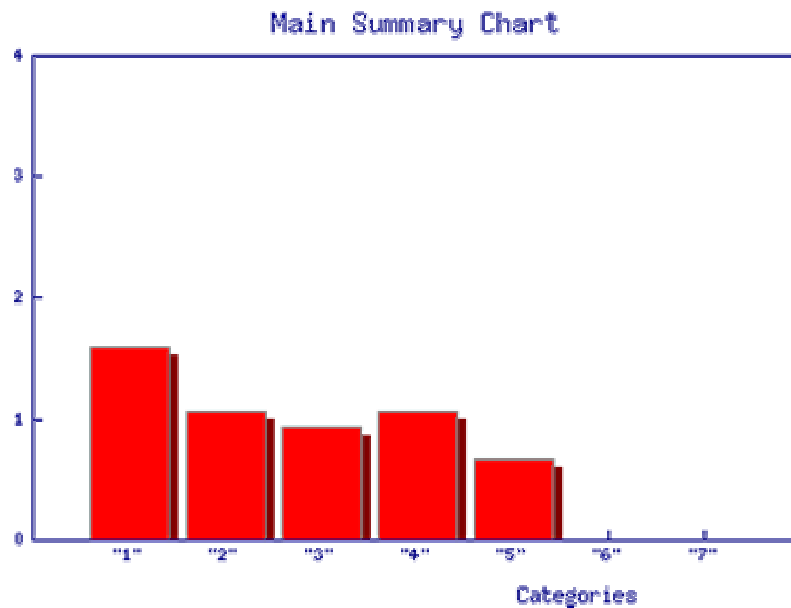
# Professional Development

## PROFESSIONAL DEVELOPMENT

The Long Beach Unified School District is committed to giving all students a superior education. The district takes pride in its talented and energetic teachers, who participate in ongoing professional development to ensure all students have access to a rigorous and challenging standards-based curriculum. Our teachers are highly skilled professionals. They strive for a deep understanding of their academic subjects, and they keep abreast of new and effective teaching strategies, including technology.

As of Spring of 2005, 50% of the teachers had taken the CTAP2 online assessment.

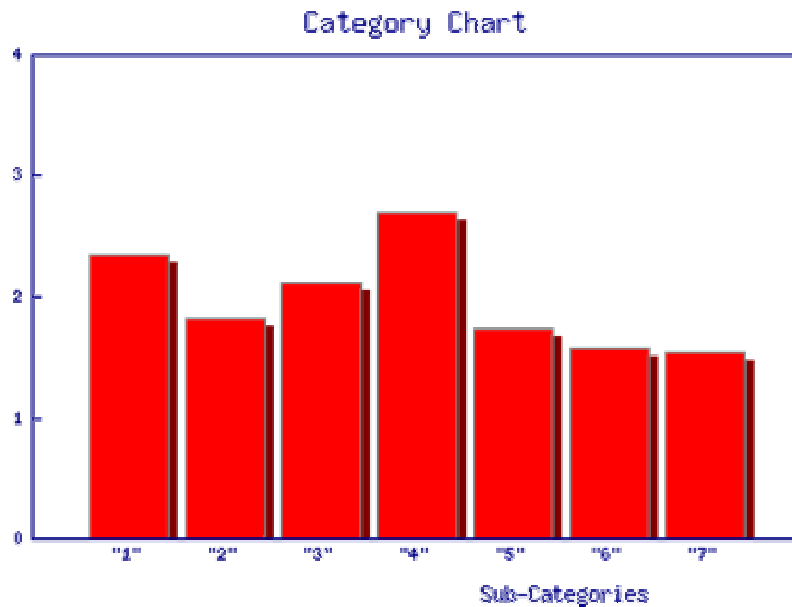
### *Teachers CTAP<sup>2</sup> Technology Proficiency Assessment*



- |   |                     |
|---|---------------------|
| <b>1. Computer Knowledge and Skills</b>                     | <b>Intermediate</b> |
| <b>2. Technology Integration Skills (Standard 9)</b>        | <b>Introductory</b> |
| <b>3. Technology Integration Skills (Standard 16)</b>       | <b>Introductory</b> |
| <b>4. Personal Use</b>                                      | <b>Introductory</b> |
| <b>5. Student Use</b>                                       | <b>Introductory</b> |
| <b>6. Staff Development Needs</b>                           |                     |
| <b>7. Technical Support (Includes 2,359 in calculation)</b> |                     |

The district has offered professional development that mainly focused on basic productivity schools. These were funded by the Enhancing Education Through Technology Formula and Competitive grants. The School Renovation Technology Grant and the Regional Educational Technology Services funds also afforded professional development opportunities to teachers and schools. The CTAP2 online assessment indicates that teachers are now ready for integration skills. Professional development offerings in the district will focus on integration skills and curriculum development that will include the use of appropriate and effective technology in the content areas.

## Administrators CTAP<sup>2</sup> Technology Proficiency Assessment



<b>1. General Computer Knowledge and Skills</b>	<b>Proficient</b>
<b>2. Internet</b>	<b>Proficient</b>
<b>3. E-mail</b>	<b>Proficient</b>
<b>4. Word Processing</b>	<b>Proficient</b>
<b>5. Presentation</b>	<b>Proficient</b>
<b>6. Spreadsheet</b>	<b>Proficient</b>
<b>7. Database</b>	<b>Proficient</b>

Administrators' demonstrate proficiency is using computers for productivity. The focus for administrators will be to provide them training on the use of the various assessment and data gathering tools that have been developed at the district level so that they can be efficient instructional leaders at their sites.

The National Educational Technology Standards for Administrators will be used to focus professional development in this area. Administrators will be trained on the following skill areas:

- Data-driven decision making
- Curriculum Integration
- Financial Planning
- Operations and maintenance
- Professional Development
- Technology Planning

The Research Office has developed a LBUSD Research Office Intranet (LROI) site for teachers to record reading benchmarks and math facts proficiency data. Administrators are able to access data for their students using these tools. Training is provided to the principals on using this data

to assess site needs and provide instructional leadership to improve student achievement. Teachers use data for their students to drive instruction. All of the fiscal data for the sites is available through the district's Financial System (FinSys), and this is also used extensively by site administrators. The intent is to integrate all the data systems used in the district so as to increase efficiency and productivity in the district.

### **Technology Training Centers**

The District uses the following training facilities to deliver training and staff development:

#### **Teacher Resource Center**

A complete Mac lab and a mobile PC lab are available at our Teacher Resource Center for professional development. This lab is also used to demo various updated technology equipment and software. District curriculum leaders, Special Ed., and other department staff use the labs for training through out the year.

#### **Administration Building**

A PC environment is available at the district administration building to train district employees in the various administrative software programs in the district. These would include: GroupWise, Email, Genesis/Genesee (Student Information System), Payroll and Personnel (Human Resource Service) applications as well as for software demonstrations.

#### **Long Beach School for Adults – B2 Lab**

The Information Services Branch has partnered with our Long Beach School for Adults to develop a 41 station PC lab, complete with a file server, laser printer, and an LCD projector. Our agreement allows us to create the class offerings and the School for Adults provides the instructors. This lab is available to teachers and administrators for: Web Page Creation, MS Office- Word, Excel, PowerPoint, Access, Internet, ROP Offerings and Parent Training

#### **Other District Resources**

In addition to these non-school labs, most of our schools also have computer labs. These computer labs are also used for trainings after school and during the summer. Exploration of district needs, course requirements, and focus has occurred through survey and distance learning committee. Plans for future web-based coursework may be offered through articulation with community colleges and universities.

#### **Library Media Centers**

Virtually every Library Media Center in the district is an online environment. Every Library Media Center is connected to the district wide area network for filtered Internet access.

#### **Los Angeles County Office of Education (LACOE)/California Technology Assistance Project (CTAP)**

In addition to these resources, the District participates as a Sub-region of the Los Angeles County Office of Education (LACOE) to provide staff development in technology. The Instructional Technology Institute (ITI) and EETT Coaching/Mentoring collaboration for Professional Development are examples of intensive technology training to Long Beach teachers.

Technology Coordinators/Teachers from the district are encouraged to participate in professional development opportunities offered by LACOE. LACOE/CTAP also supports LBUSD in meeting Federal and State technology requirements.

**PROFESSIONAL DEVELOPMENT COMPONENT**

**2.1 Goal statements for professional development based on needs assessment:**

The district will conduct annual technology needs assessments to determine priorities for staff development activities using the CTAP<sup>2</sup> Assessment baseline data from Spring 2005.

2.1a The district will increase professional development offerings to focus on integration of technology in the classroom

**BENCHMARKS**

<b>Number of professional development offerings to focus on integration of technology in the classroom</b>				
<b>Measured by Professional Development Book offerings</b>				
<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
10	15	25	40	50

2.1b The district will increase the number of opportunities for teachers to participate in curriculum development projects to develop lesson plans that use technology for teaching and learning

<b>Number of opportunities for teachers to participate in curriculum development projects to develop lesson plans that use technology for teaching and learning</b>				
<b>Measured by Professional Development Book offerings</b>				
<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
5	10	15	20	25

**Benefits from professional development based on staff needs assessment:**

The Curriculum office will encourage teachers and administrators to use the CTAP<sup>2</sup> Assessment on an annual basis. This information will be used to design and implement appropriate training to meet the technology professional development needs. The District Educational Technology Action Plan will guide the course of the trainings and support activities to assist teachers in the effective integration of technology for instruction in the classroom.

## IMPLEMENTATION PLAN

Goal #	Implementation Plan/Activities	Responsible Dept. or Position	Timeline	Budget Source*	Monitoring and Evaluation activities
2.1	Continue to implement district technology assessment plan	Technology Curriculum Leader	Spring of each year	General/Site or Grant Funds	CTAP <sup>2</sup> online assessment and California School Technology Survey
2.1	Develop strategic plan to address needs indicated in technology assessment	Technology Curriculum Leader, district trainers, curriculum leaders	Spring of each year	General/Site Funds	CTAP <sup>2</sup> online assessment and California School Technology Survey
2.1	Provide staff development opportunities to address needs as determined by assessment	Technology Curriculum Leader	2005-2010	Varied funding sources	CTAP <sup>2</sup> online assessment and California School Technology Survey
2.1	Follow-up technology assessment	Technology Curriculum Leader	Spring of each year	General/Site Funds	CTAP <sup>2</sup> online assessment and California School Technology Survey

## PROFESSIONAL DEVELOPMENT COMPONENT

**2.2 Goal statement(s) for professional development based on curriculum component:**  
Staff development will be provided to support the integration of appropriate technology tools in a standards-based classroom.

2.2a By 2010, staff development will be provided to ensure that 80% will be proficient in using presentation software and instructional technology as measured by the CTAP2 Survey

## BENCHMARKS

Percentage of teachers using presentation software and instructional technology				
Measured by CTAP2 assessment				
2006	2007	2008	2009	2010
30%	40%	50%	60%	80%

- 2.2b By 2010, staff development will be provided to ensure that 60% will be proficient in using spreadsheet and/or database applications as measured by the CTAP2 Survey

### BENCHMARKS

Percentage of teachers using spreadsheet and/or database applications as measured by the CTAP2 Survey				
Measured by CTAP2 assessment				
2006	2007	2008	2009	2010
20%	30%	40%	50%	60%

- 2.2c By 2010, staff development will be provided to ensure that 50% will be proficient in using technology in their classroom for teaching and learning

### BENCHMARKS

Percentage of teachers technology in their classroom for teaching and learning				
Measured by CTAP2 assessment				
2006	2007	2008	2009	2010
10%	20%	30%	40%	50%

### IMPLEMENTATION PLAN

Goal #	Implementation Plan/Activities	Responsible Dept. or Position	Timeline	Budget Source*	Monitoring and Evaluation activities
2.2	Design and implement plan to increase technology integration professional development opportunities	Technology Curriculum Office	2005-2010	Grants/ Varied Sources	CTAP2 teacher proficiency assessment and staff development evaluations
2.2	Identify and/or develop grade level and content specific technology integration models	Curriculum Office	2005-2010	Grants/ Varied Sources	Database of Best Practices
2.2	Develop and implement plan to increase teacher use of technology in the classroom	Curriculum Office	2005-2010	Grants/ Varied Sources	CTAP2 Survey, Training Lists and Agendas

**2.3 Goal statement(s) for classroom management tools:**

Staff development will be provided to ensure that teachers and administrators will utilize appropriate technology to monitor, analyze, and communicate student performance.

**BENCHMARKS**

<b>Percentage of teachers and administrators who will use appropriate software to monitor, analyze, and communicate student performance</b>				
<b>Measured by CTAP2 assessment and the California School Technology Survey</b>				
<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
30%	40%	50%	60%	80%

**IMPLEMENTATION PLAN**

<b>Goal #</b>	<b>Implementation Plan/Activities</b>	<b>Responsible Dept. or Position</b>	<b>Timeline</b>	<b>Budget Source*</b>	<b>Monitoring and Evaluation activities</b>
2.3	Identify/develop appropriate software to monitor, analyze and communicate student performance	Curriculum Office, Research Office,	2005-2010	Varied funding sources	Research, Curriculum Office, Information Services
2.3	Establish district-wide expectations for teachers to use appropriate software to monitor, analyze and communicate student performance	District Level Administrators	2005-2010	Varied funding sources	Site level evaluations
2.3	Provide professional development to teachers and administrators in the use of appropriate software to monitor, analyze and communicate student performance	Technology Curriculum Office, Research office	2005-2010	Varied funding sources d	Teacher evaluations

- 2.4 Goal statement(s) for professional development based on curriculum component:**  
 A Teacher Technology Certification will be provided for teachers as models for effective use of technology within the content areas for teaching and learning. These teachers will serve as models for technology integration and will provide training and ongoing support to other teachers in the district.

**BENCHMARKS**

Number of teachers receiving Technology Certification				
Measured by awarding of certificates				
2006	2007	2008	2009	2010
10	30	50	80	100

**IMPLEMENTATION PLAN**

Goal #	Implementation Plan/Activities	Responsible Dept. or Position	Timeline	Budget Source*	Monitoring and Evaluation activities
2.4	Design and implement a Technology Certification option for teachers	Technology Curriculum Leader and Director of Professional Development	Spring 2005	Varied funding sources	Technology Curriculum Office and Office of Professional Development
2.4	Roll out the Technology Certification option	Technology Curriculum Leader and Director of Professional Development	Summer 2005	Varied funding sources	N/A
2.4	Offer support to teachers applying for Technology Certification	Technology Curriculum Office	Ongoing	Varied Funding Sources	Number of teachers receiving Technology Certification

# **Infrastructure, Hardware, Technical Support and Software**

## **INFRASTRUCTURE, HARDWARE, TECHNICAL SUPPORT, AND SOFTWARE**

### **CURRENT INFORMATION**

Long Beach Unified School District currently supports a technology environment that consists of approximately 225 administrative and instructional servers running Novell NetWare 4.11/5.1 at over 120 sites. These sites are connected to the District Data Center through a Wide Area Network.

The District believes strongly in standardization of hardware and software. By creating and enforcing standards, it permits the District to maintain spare parts inventories, to train support staff to effectively support these limited platforms, and to provide a higher level of user support with a limited staff.

The District is standardized on Novel NetWare as its primary network operating system. There are a number of application servers running other operating systems, including Windows NT 4.0, 2002, 2003, OS/390, SCO Unix and AIX and Linux. There are also a number of Apple servers providing site level authentication at classroom and lab level.

All networking equipment is Cisco, including all routers and switches. The District is standardized on Ethernet, providing 100Mb/Gigabit backbone services and at least 10Mb to the desktop. All current installations support Gigabit Ethernet backbone services and 100Mb to the desktop. There are a few AppleTalk networks still in place, but these are being replaced as they are encountered.

The District is also standardized on Compaq Proliant Servers. Specific applications may reside on different platforms, primarily where those applications were delivered from the vendor as a “turn-key” solution. In those cases where the vendor is not continuing to maintain the hardware, and where the choice of hardware is not integral to the functioning of the software, these servers are being replaced by Compaq servers.

The District uses both Windows-based PC and Apple Macintosh computers. The District is standardized on Gateway E-series computers and Solo laptops. All PC users are required to log into the network in order to use their computers. Network policies are enforced that prevent access to certain servers, prevent users from installing software, update virus protection files, and perform other tasks automatically.

The District currently supports Windows 95, Windows 98, Windows XP, Mac OS 7.5.3/ 8.6/9.2 and OS 10. Office97/98/2000/2001/XP/2003 is the supported office productivity suite. Netscape 7.6, Internet Explorer 6.0.27 and Safari are the supported browsers. GroupWise is the email platform used across the district.

## **WIDE AREA NETWORK**

All schools and administrative offices are connected to the District Data Center by a frame relay circuit. Six MB ATM circuits serve each high school. A single T1 circuit for each school serves 97 elementary and middle schools.

The school and administrative circuits are accumulated into a channelized T3 frame relay circuit terminating in the Data Center processed by a Cisco 7513 router.

All routers and switches in the Wide Area Network and in school Local Area Networks are Cisco equipment. This standardization permits the implementation of advanced communications strategies, such as traffic shaping, virtual private networks and selective multicasting.

## **LOCAL AREA NETWORKS**

Local Area Networks have been installed in all schools through a combination of E-Rate and local bond funds intended for the reconstruction of aging schools. Each school currently has a Gigabit Ethernet backbone, with 10/100Mbps switched connections to the desktop. All classrooms have a minimum of six network drops. Most schools have at least one computer lab connected to the district network.

All libraries are wired to serve as research centers, including the implementation of Winnebago Spectrum library management software. In addition to managing the books and magazines in the library, this software permits students to check the catalog from their classroom as well as request books from the libraries of other schools. Each student's parent signs the Guidance for Parents and Students handbook at the beginning of the school year which includes permission for Web Page and Internet Access by their child.

These Local Area Networks connect to the Internet through the District's Wide Area Network. Proxy, filtering and caching services are discussed in the Internet section of this plan.

As described above, all Local Area Networks are being powered with Cisco switches.

Electrical upgrades are being provided through the local bond funds for the reconstruction of aging schools.

## **DATA CENTER**

The District's Data Center is currently located at the main Administration Building. This Data Center contains the primary administrative servers and mainframes, the primary router, Internet connectivity, Web servers, and a variety of other servers and services. It is manned 24X5 by trained computer operators. This center serves as the hub for all data communications. It also houses the District's main telephone switch.

The Network Operations Center is also housed in this building. It includes monitors for all critical network operations, including switches, routers and circuits, as well as monitoring equipment for the firewall.

## **INTERNET ACCESS**

All Internet traffic in the District is centralized. LACOE provides ISP service to the district. The District currently has a 45Mbps fractional T3 frame relay circuit to the CALREN backbone through LACOE. Daily peak utilization of this circuit averages about 80% of capacity. This service will be upgraded to 60Mbps by 2006.

Intrusion protection is provided by a Gauntlet firewall server, which is monitored by network management staff. Virus protection is provided by McAfee VirusScan. All new virus patterns are downloaded automatically from the McAfee Web site and installed on the primary servers. All other servers automatically update themselves daily. User machines are updated regularly from an internal District FTP server using McAfee's built-in auto-update mechanism.

All Internet traffic is routed through the X-Stop R2000 filtering system provided by LACOE as part of the Internet Service bundle. The District runs two R2000 filters for load balancing and will be upgrading to R3000.

A pair of servers running Novell BorderManager in the Data Center provides proxy services for Internet access. The District employs a hierarchical caching strategy. A copy of BorderManager running on the administrative servers at each school provides local caching for that school. A request from a client machine first searches this cache to service the request. If the requested pages and/or images are not found locally, the request is next routed to the District cache. Only if the request cannot be served from one of these caches will the request proceed onto the Internet. Typically, sites will average a greater than 50% cache hit ratio. This strategy is largely responsible for the fact that peak utilization has not exceeded the capacity of the District's connection to the Internet.

## **EMAIL SERVICES**

Email services are currently provided only to administrative and teaching staff and the District Internet and Electronic Mail Guidelines and Procedures guide acceptable use.(APPENDIX G) Student email is routed to their teacher, who is responsible for reviewing that email to ensure that it is appropriate.

Email is provided through Novell GroupWise/NetMail. The SMTP mail server is currently a Novell GroupWise server, running the 6.5 Enhancement Pack version of the GroupWise Internet Agent (GWIA). Email accounts are available for student use based on administrative requests.

Administrative email is managed through the main District Post Office. Schools that have more than twenty email accounts are provided their own post office on their administrative server.

## VOICEMAIL SERVICES

Voice mail system cabinets are mounted next to the telephone system's central processing cabinet. A fiber optic cable joins each voice mail system. All elementary, K-8, and middle schools have Nortel Norstar fiber NAM systems. The elementary and K-8 schools get four or six-port systems; middle schools get eight-port systems. All seven major high schools have Nortel Meridian integrated eight-port fiber systems.

## VIDEO ENVIRONMENT

### Video Distribution:

The District provides television programming to all school classrooms. Programming is provided through two systems. District instructional programming is provided through a contract with Nextel on a closed-circuit system. Cable programming, including the "over-the-air" channels is provided through Charter Communications, Comcast, and Catalina CATV, the local cable providers. The District also originates its own television programming for the public over its channel on these cable systems.

### District-level Distribution:

In 1997, the District converted from an older analog system. Nextel transmits digital television signals of the five District channels via a digital microwave system. In addition to all our schools, the District's programming can be received at most locations in Los Angeles and Orange Counties with minimal equipment.

The District operates and maintains a remote field-production television vehicle. This fully equipped truck has four-camera capability, character generator, two slow-motion units, and two electrical generators. It is primarily used to video-tape high school sports and district-wide events.

### School Distribution

Schools are at varying stages in the implementation of video technology in the classroom. This depends on staff knowledge and skill in video usage/technological support of student learning. Several schools originate internal broadcasting to their classrooms.

Newly constructed schools have a single 750 MHZ cable system. This cable carries District programming to all classrooms. All classrooms have either wall-mounted or cart-mounted televisions in the classrooms for teacher use, as required.

### **Future video goals include:**

#### Master Control:

All district-wide classroom and cable television broadcasts originate from the Master Control equipment at the Office of Multimedia Services. The ¾ inch video tape decks have been in continual operation for approximately thirty-five years. The current equipment has become obsolete in addition to requiring labor-intensive maintenance and repair. An upgrade of the

district's television headend is needed. Additionally, microwave delivery could be affected due to new FCC Rulings (implementation deadline is 2008) and lease/contract negotiations with Nextel (Nextel is in process of acquisition by Sprint). Therefore, district technical support will be reviewing FCC rule changes and delivery systems available based on the outcome of negotiations. Finally, a video server for the cable channel would extend the District's broadcast schedule seen by the public.

#### Site Technical Support:

- New schools will have a single 750MHZ coax cable; older schools have 220 MHZ cabling.
- Upgrade master control playback facilities
- Add a video server for cable channel playout

#### Programming:

- Continue to improve/increase the multimedia library
- Incorporate streaming media of instructional materials
- Continue to update and increase teacher access of on-line video catalogue offerings
- Develop new series for public cable channel
- Develop a Request for Proposal (RFP) for corporate lease of unused air time
- Develop Distance Learning projects for both students and professional staff
- Increase usage of remote production van
- Explore alternative media forms of communication to convey district message to various publics (internal and/or external)

### **DATA SYSTEMS**

Develop automated systems across the various departments in the district (instructional, research, human resources, business, transportation, Special Education, etc.) to allow for an integrated data system. This will allow for key administrators and district personnel to access and analyze data that will

## INFRASTRUCTURE, HARDWARE, TECHNICAL SUPPORT, AND SOFTWARE

### 3.1 Goals to enhance the WAN capabilities within the district

The district will continue efforts to provide sites with appropriate access for instructional purposes.

#### Objectives:

- 3.1a By 2010, all district workstations will have enhanced network access using an expanded bandwidth of 60 MB

Percentage of district workstations that will have enhanced network access using and expanded bandwidth of 60MB				
Measured by district surveys				
2006	2007	2008	2009	2010
40%	60%	75%	90%	100%

- 3.1b By 2010, cable feeds to every classroom and office will be upgraded

Percentage of classrooms and offices with upgraded cable feeds				
Measured by district surveys				
2006	2007	2008	2009	2010
50%	65%	75%	90%	100%

- 3.1c By 2010, telecommunication equipment will be replaced as needed.

Percentage of telecommunication equipment replaced				
Measured by district surveys				
2006	2007	2008	2009	2010
20%	40%	60%	80%	100%

- 3.1d By 2010, upgrade of the master control facilities

Percentage of upgraded master control facilities				
Measured by district surveys				
2006	2007	2008	2009	2010
40%	60%	75%	90%	100%

3.1e By 2010, a video server will be added for the local cable channel

<b>Percentage of video servers added for local channel</b>				
<b>Measured by district surveys</b>				
<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
30%	50%	70%	90%	100%

3.1f By 2010, electrical resources will be upgraded to support classroom use of instructional resources

<b>Percentage of classrooms and offices with upgraded cable feeds</b>				
<b>Measured by district surveys</b>				
<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
40%	60%	75%	90%	100%

### **IMPLEMENTATION PLAN**

<b>Goal #</b>	<b>Implementation Plan/Activities</b>	<b>Responsible Dept. or Position</b>	<b>Timeline</b>	<b>Budget Source*</b>	<b>Monitoring and Evaluation activities</b>
3.1a	Upgrade network bandwidth	Information Services	Ongoing	Grants/ Varied sources	<ul style="list-style-type: none"> <li>• Help Desk</li> <li>• Information Services</li> </ul>
3.1b	Upgrade cable feeds to classrooms	Telecommunications	Ongoing	Grants/ Varied Sources	<ul style="list-style-type: none"> <li>• Help Desk</li> <li>• Telecommunications</li> </ul>
3.1c	Replace telecommunication equipment	Telecommunication	Ongoing	Grants/ Varied Sources	<ul style="list-style-type: none"> <li>• Help Desk</li> <li>• Telecommunications</li> </ul>
3.1d.	Upgrade master control facilities	OMS	Ongoing	Grants/ Varied Sources	<ul style="list-style-type: none"> <li>• OMS Tech Support</li> </ul>
3.1e	Add video server for cable channel	OMS	Ongoing	Grants/ Varied Sources	<ul style="list-style-type: none"> <li>• OMS Tech Support</li> </ul>
3.1f	Upgrade electrical resources	Information Services	Ongoing	Grants/ Varied Sources	<ul style="list-style-type: none"> <li>• Help Desk</li> <li>• Information Services</li> </ul>

**3.2 Goals to enhance and increase the amount of functioning instructional technology in the classrooms**

The district will seek a variety of funding sources to increase the amount of instructional technology available to school sites.

**Benefits from hardware:**

An integral part of meeting the goals of the District Technology Use Plan is to have functional workstations in each of the classrooms as well as Internet access for each station. Having the workstations in the classroom will offer more opportunities for students and teachers to benefit from technology use. Large screen projection devices would assist teachers in classroom instruction.

3.2a By 2010, all sites will increase the number of functioning instructional workstations in the classrooms as measured by the annual California Online Technology Survey.

**BENCHMARKS**

Percentage of classrooms with functioning instructional workstations				
Measured by California Online Technology Survey				
2006	2007	2008	2009	2010
60%	70%	80%	90%	100%

3.2b By 2010, 70% of sites will increase the number of classroom presentation devices by equipping each classroom with either large screen TV's or LCD projectors

**BENCHMARKS**

Percentage of sites with updated presentation devices				
Measured by district surveys				
2006	2007	2008	2009	2010
30%	40%	50%	60%	70%

## IMPLEMENTATION PLAN

Goal #	Implementation Plan/Activities	Responsible Dept. or Position	Timeline	Budget Source*	Monitoring and Evaluation activities
3.2a	Assess the number of functional instructional multi-media workstations in the classroom	Site personnel	Annually	Varied funding sources	California Technology Survey
3.2a	Apply for grants and partnerships to provide funding to purchase additional computers for sites	All concerned	Ongoing		Grant office data
3.2b	Assess the number of classroom presentation devices	Site/District personnel	Annually	General/Site funds	District survey

### 3.3 Goals to increase the amount of functional instructional technology in the classrooms.

The district will optimize available resources within the district to provide timely and efficient technical support to sites

#### Benefits from technical support:

By providing district standards for hardware acquisition, it provides uniformity at the sites. It assists the district since they would have to deal with only a select number of vendors and producers of equipment. By standardizing the images of all the instructional Mac and PC workstations, the training of the three levels of technical support is streamlined.

- The district will continue publish and update specifications for hardware acquisition by school sites.
- All district instructional workstations will be provided with a standard PC or Mac image as well as productivity tools

In order to ensure high functionality of technology in the classroom for teaching and learning, it is important for all levels of users to be trained in acceptable methods of using the equipment as well as simple troubleshooting tips. A process of acceleration at the site will enable end-users to seek additional assistance at the site level before sending a request to the HelpDesk.

#### Objectives:

To assist the meeting of this goal support will be provided using a three level approach:

- **Level 1** – Classroom teachers will be provided with training on the acceptable methods to use classroom technology as well as simple troubleshooting tips
- **Level 2** – Site technology personnel, identified by site administrators, will be trained to provide the next level of troubleshooting and maintenance of equipment
- **Level 3** – District personnel will be trained to provide additional troubleshooting and maintenance skills

## BENCHMARKS

Percentage of schools with Level 1 and Level 2 trained personnel					
Measured by district surveys and evaluations					
	2006	2007	2008	2009	2010
<b>Level 1</b>	50%	60%	75%	90%	100%
<b>Level 2</b>	75%	80%	85%	90%	100%

## IMPLEMENTATION PLAN

Goal #	Implementation Plan/Activities	Responsible Dept. or Position	Timeline	Budget Source*	Monitoring and Evaluation activities
3.3	Continue to publish hardware standards for the district	Information Services/Purchasing Department	Ongoing	Various funding sources	Purchasing Office survey
3.3	Standardizing image for Mac and PC platforms across the district	Information Services	Ongoing	Various funding sources	Calls to the HELP Desk
3.3a	Training for Level 1 Support	Information Services/ Tech. Curric. Office	Ongoing	Various funding sources	Calls to the HELP Desk
3.3a	Training for Level 2 Support	Information Services/ Tech. Curric. Office	Ongoing	Various funding sources	Calls to the HELP Desk
3.3c	Training for Level 3 Support	Information Services/ Tech. Curric. Office	Ongoing	Various funding sources	Calls to the HELP Desk

### 3.4 Goal statements for software:

The CLRN database of grade level and content appropriate instructional software will be used to inform purchase of instructional software. A district database of additional software will be developed to extend the CLRN resources.

### Benefits from database of educational software:

Having a database of grade level and content specific educational software will assist in creating consistency in instruction and training across the district. Schools will be able to use this database in purchasing the software that would meet their needs. Software on the CLRN site will be the primary database, with the district database being used to provide additional resources.

This database will be cost efficient for the schools since they will not be purchasing software that is instructionally appropriate for content, grade level and meets the needs of individual students. The district Purchasing Office, Information Services and Technology Curriculum Office will work towards competitive pricing for instructional software.

## IMPLEMENTATION PLAN

Goal #	Implementation Plan/Activities	Responsible Dept. or Position	Timeline	Budget Source*	Monitoring and Evaluation activities
3.4	Continue to use CLRN site to purchase instructional software	CLRN	Ongoing		
3.4	Evaluate educational software for the core content areas	Curriculum Office	Ongoing	Grants/ Varied Sources	Coordinator meeting surveys
3.4	Publish database of appropriate educational technology software in the core content areas	Technology Curriculum Office	Ongoing	Grants/ Varied Sources	Coordinator meeting surveys

### 3.5 Goal statements for support services:

Continue to upgrade support services for digital instructional content which includes educational portals at the school sites

### 3.6 Goal statements for technology cost cutting measures:

Develop and implement a long range plan for instituting cost cutting measures by integrating Voice and data networks

## IMPLEMENTATION PLAN

Goal #	Implementation Plan/Activities	Responsible Dept. or Position	Timeline	Budget Source*	Monitoring and Evaluation activities
3.5	Continue to upgrade support services for digital instructional content which includes educational portals at the school sites	Technology Curriculum Office, Information Services	Ongoing	Grants/ Varied Sources	Coordinator meeting surveys
3.6	Develop and implement long range plans for instituting cost cutting measures	Technology Curriculum Office, Information Services	Ongoing	Grants/ Varied Sources	Coordinator meeting surveys

# **Funding and Budget**

## FUNDING AND BUDGET

### **Data from the District Technology Survey:**

Funding for technology in the District is provided from a number of sources. The primary source of funding for Wide Area Network development and other district-wide initiatives has been the General Fund. Construction and modernization funds, both from the state and from bond revenues, have funded infrastructure development and network completion at new and reconstructed schools. E-Rate funds have funded infrastructure development and network completion at eligible schools. In addition, many categorical programs, such as IASA, Title II-D (Enhancing Education Through Technology), permit funding for technology. The district is constantly seeking grant funding, partnerships and donations to continue its endeavors to provide updated technology in the classrooms.

General fund support for the Information Services branch of the Business Services department maintains current resources as well as funds generic district-wide telecommunications and technology activities. Other specific projects are identified for funding (such as the completion of the Wide Area Network) on a case-by-base basis.

Some of the Grants utilized to support technology in the district include:

- Enhancing Education Through Technology – Formula and Competitive grants
- Digital High School Funding Grant
- AB 2882 High School Equipment Grant
- Technology Literacy Challenge Grants
- AB 1339 Staff Development Grant
- Regional Educational Technology (RETS grant from LACOE)
- SB 1510 Grant
- AB 825 Block Grant
- California Public Utilities Commission Grant
- Annenberg Grant
- Magnet Schools Assistance Project Grants

Opportunities for discounts, sharing and contributions are being pursued through membership in the Long Beach Community Partnership program. Specifically participation in the Technology Launch Initiative with the Partnership is underway and planned for the future.

The technology costs for Long Beach Unified School District are in the range of \$15,000,000 on a yearly basis. This includes funding for the day to day costs of maintaining and supporting the infrastructure of the technology systems in the district as well as costs incurred for professional development and purchasing of equipment. E-Rate and EETT Formula and Competitive funds have been used to meet these costs. Funding efforts of the LBUSD Technology Use Plan are an essential segment and are actively pursued at all the above levels. Plans are in place to pursue additional revenues through:

- Current and future private grants
- Discounts programs
- Contributions.

- Title II-D Formula and Competitive (Enhancing Education Through Technology)
- e-Rate
- K-12 Education Vouchers (Microsoft Settlement)

These funding sources will ensure that the systems function seamlessly enabling teachers to integrate technology for teaching and learning. General Fund support remains strong as the LBUSD Board recognizes the importance of technology in the delivery of educational services.

**Cost reduction options:**

The district will make efforts to reduce the overall cost for implementing and maintaining the goals of the Technology Use Plan. District licenses for widely used instructional and productivity software will be contracted. Pricing contracts with vendors of widely used hardware will also assist cost effective purchases.

**Ongoing technical support:**

A key component of successful technology implementation at the sites is dependent to a large extent on continuous functioning of the equipment. In order to do so, efficient means of technical support using levels of training, district support and partnerships within the community will be implemented.

The district currently has a HELP desk where operators take calls and either offer over-the-phone troubleshooting tips, or route it to the appropriate department/service area. The high schools each have a full time Instructional Technical Assistant who is responsible for maintenance of all the equipment at the sites. This support mechanism will continue to be offered to sites as well as additional training for teachers and other site support personnel.

Sites will be encouraged to assign technology coordinators to assist in enhancing the use of technology at the sites, as well as provide a link between the school and the district.

**Equipment obsolescence:**

The district has a standard for supported equipment at the sites. As equipment becomes obsolete, they will be placed on the non-supported lists and schools will be encouraged to upgrade the hardware or purchase updated equipment.

**Consistent funding streams/sources:**

The Office of Information Services, Technology Curriculum and school sites will coordinate efforts with the Grants office to apply for a variety of funding sources to meet the Curriculum, Professional Development and Hardware goals of the Technology Use Plan. Schools will also be encouraged and supported in grant applications to enhance the use of technology at the sites.

**Feedback loop:**

Long Beach Unified School District is focused on using technology to not only enhance teaching and learning, but to also support systems that will enable teachers, administrators and district staff access data to make informed decisions on student achievement. In order to provide the infrastructure to use these systems, annual data from the California Online Technology and

district surveys is used to identify area/s of need. Evaluations of professional development assist in the development of training to meet the needs of the teachers.

At the beginning of the school year the Technology Information Services Branch holds a District Technology Meeting to share the plans and vision for the school year. Throughout the school year, the Technology Curriculum Leader meets monthly with middle and high school technology representatives, and twice a year with elementary technology representatives. The intent of these meetings is to facilitate the flow of information between sites and the district.

The Technology Information Services Branch also conducts surveys to ensure high quality service to the school sites and offices.

The district Technology Standards Committee meets on a regular basis to address the needs of the sites and offices based on the concerns identified through the various forums in the district. This information is disseminated to the sites at the scheduled technology representative meetings.

**Benefits from funding priorities:**

Information Services will continue to seek funding sources to meet the upgrading needs equipment and bandwidth of the school sites as more and more sites access the Wide Area Network. E-Rate, General Funds, and Community Partnerships will be sources that will be followed. The Office of Curriculum, Instruction and Professional Development will seek grant funding to provide staff development to integrate technology into curriculum.

**Estimate of Annual Implementation Costs**

Item/Service	Amount
Connectivity	\$5,000,000
Hardware	*\$4,000,000
Professional Development	*\$500,000
Software	*\$500,000
Maintenance	\$2,000,000
District systems	\$2,000,000
Miscellaneous services and systems	\$1,000,000
<b>Total</b>	<b>\$15,000,000</b>

\* These figures vary based on grant funding and requirements

# **Monitoring and Evaluation**

## MONITORING AND EVALUATION COMPONENT

### 5.1 Goal statement

The district will use the results of assessments to monitor and evaluate the effectiveness of the plan and the impact of technology on students' learning.

#### Benchmarks:

- By 2010 the district will use the CTAP2 survey to evaluate technology proficiency and implementation levels
- By 2010, the district will evaluate student technology proficiency and implementation levels
- By 2010, the district will use a variety of assessments to determine the proficiency and implementation levels of teachers and students and communicate the results to the educational community

Goal #	Implementation Plan/Activities	Responsible Person	Timeline	Budget Source	Monitoring & Evaluation Activities
5.1	Assess teachers	School site technology representative/administrators	Annually	General Fund	CTAP2 Survey
5.1	Develop student technology assessment tools	Technology Committee	Annually	Grants/Varied Sources	Student assessment tools
5.1	Implement student technology assessment tools	School site technology representative/administrators	Annually	General Fund	Student assessment tools
5.1	Evaluate efficacy of technology plan	Technology Committee	Annually	Grants/Varied Sources	Final Report
5.1	Communicate results to educational community	Technology Committee	Annually	Grants/Varied Sources	Board & site reports Newsletters & Newspaper Forums District meetings Website
5.1	Assess impact of technology on student achievement	Technology Committee/ Research Office	Annually	Grants/Varied Sources	Standardized Test scores, District Assessments, Teacher and Student Surveys
5.1	Revise Technology Use Plan	Technology Committee	Spring 2010	Grants/Varied Sources	Technology Use Plan

**Benefits of Monitoring and Evaluation:**

Long Beach will continue to monitor the various components of the Technology Use Plan throughout the five years of implementation to ensure that the stated goals are being met. Annual surveys and assessments of technology use and proficiencies will determine the professional development offerings.

At the end of the five years, the Technology Committee will assess the overall success of the Technology Use Plan and focus the plan for the next five years. Research will be conducted at this time to determine the effect of technology on student achievement as well as teacher and administrator productivity.

# **Adult Literacy Providers**

## ADULT LITERACY PROVIDERS

### Needs:

Average parent education level for students in the district is between high school and some college level education. The ELL population in the district is close to 50%, signifying the need for language acquisition for the community. This directly conveys a need to prepare the community with skills to enter the work force as well as skills to be a successful community member.

## LONG BEACH SCHOOL FOR ADULTS

The Long Beach School for Adults is a one-stop adult education center designed to respond to the changing, challenging educational and vocational needs of the community. The School for Adults provides inexpensive, high quality, state-accredited education and vocational programs to prepare students for higher education and advanced training, as well as retraining for full or part time employment. They also provide professional counseling and guidance.

The mission of the School for Adults is to provide all adults in the community with educational opportunities that will help them improve their quality of life and assist them to become more productive community members. Their vision includes the use of technology to provide these educational opportunities.

Currently the Long Beach School for Adults offers various adult literacy services to the local community. Students scoring below 8.0 on the TABE come to the Literacy Center. Students needing math skills below pre-algebra and algebra are enrolled in the Math Center programs. They work independently or in small focus groups on improving their basic skills.

**Literacy Center:** The Literacy Center offers a variety of networked software geared to improving the literacy skills of the students. Some of the programs used in the center are:

Language Solutions: Software designed to support beginning English readers and speakers with a program that is interactive, auditory, and repetitive. This was provided with a grant from the Long Beach Public Library Foundation and is in all the Family Learning Centers in the Long Beach Libraries.

Learning 100 On-line: The Steck-Vaughn software is a comprehensive reading program for adults, starting at the most basic reading level to about a 9.5 level. Students are individually assessed and placed at the correct instructional level.

Mavis Beacon: Keyboarding software with instruction and drill on correct finger placements on the keyboard.

New Reader Bookstore: This software from Contemporary is a beginning phonics program that includes necessary sight words.

PLATO Reading: Comprehensive reading, writing and grammar software that is very flexible for classroom use. It has a good system for tracking student progress with appropriate reports. It is also available as a web access for students to use from home for added practice.

Reading Horizons: This is the newest version of the Intensive Phonics, a package included with the PLATO software. It instructs students in the phonemes of English and the phonics needed to read and spell words.

**Math Center:** The Math Center also offers various computer-based resources for the students. They include:

PLATO Math: This program begins with counting numbers and continues through basic geometry. Math Problem Solving, Applied Math, Data Skills, and Math Fundamentals in Spanish are also available.

Learning 2000: CD-ROM software with instruction with good video as well as auditory support.

Hot Dog Stand: Higher order thinking skills related to word problems that encourage students to work together to run a hot dog stand.

Graphers: Students learn how to make and read graphs.

Building Perspective: A challenging program designed to help students visualize hidden buildings from different perspectives.

**Vocational Education:** Many software programs are available to students to help prepare them for the workforce. They include keyboarding, MS Office Suite, job search skills, and work-related math skills, Cisco Networking, Customized Business Courses, Internet, Cosmetologist/Barber, as well as Radio and TV Production.

**High School Diploma and GED:** Beginning with the graduating class of 2004, all students in California public schools will be required to pass the High School Exit Exam. Long Beach School for Adults offers intervention programs for students failing to meet the exit requirements.

**English as a Second Language, CBET and Distance Learning:** These programs are open to adults who wish to use computers and other types of technology to improve their language and employment opportunities such as, Learning English Through Technology, ESL Workforce Preparation Program, Community-Based English Tutoring (CBET), ESL Distance Learning. The Distance Learning programs are located at Jefferson Leadership Academies, Jordan High School, and Cabrillo High School.

**Programs for Older Adults:** Diverse programs for older adults are available at various sites. These courses are designed to develop skills and interests that enhance the quality of life.

**Online Courses:** Long Beach School for Adults also offers a variety of online courses to meet the needs of the community. Some of the course offerings are MOUS certification, Business and Career Courses, Community Interests, Web site development, Programming Courses, Career Development, and Professional Development Management Series.

**ROP:** The Regional Occupational Program offers courses in Business and Marketing, Health and Medical Services, Consumer and Human Services, as well as Industry and Technology.

## COLLABORATION

**Current Collaboration:** Currently there is collaboration between the School for Adults, High School Office, and the Curriculum, Instruction & Professional Department, which includes the Technology Curriculum Office.

- The School for Adults uses several school sites in the district. The school offers after-school programs, like PLATO, at high schools for either credit recovery or intervention.
- Community-Based English Tutoring (CBET) trainers use the Mobile Laptop Lab at three elementary schools twice a week for two hours each. CBET students, usually parents, check out Keyboard Instructors or Brainchild instruments to practice their skills at home with their children.
- Career Education at the Long Beach School For Adults and the high schools collaborate to offer courses that meet the needs of students in the community, e.g. Mechatronics Automation Robotics Systems, CISCO, etc.
- The School for Adults is used for professional development for administrators, which includes voicemail and e-mail (GroupWise) training.

### **Proposed:**

- Intervention classes for students at their campuses. PLATO for math, reading and writing, will be one of the intervention resources used for this purpose.
- The School for Adults course offerings in Microsoft Office Suite and Web Development will be available for professional development by the classroom teachers.
- Coordination with the Career Education department to work with middle and high school students in career guidance using the Bridges.com online resource.
- Ongoing consultation and collaboration with the School for Adults to meet the needs of the Long Beach community.
- Collaboration with the 21<sup>st</sup> Century Learning Centers and the Even Start program to provide additional resources for the community.

The Long Beach School for Adults is an integral part of the Long Beach Unified School District's educational system. Efforts to collaborate with the two to increase access to technology within the community will be increased and sustained.

# Research

## Research-based Methods and Strategies

The goals identified in the Technology Use Plan include students acquiring technology literacy skills, using appropriate technology skills to collect, analyze, and present information as well as to understand the various applications of technology in society. Staff outcomes involve teachers, administrators, and paraprofessionals gaining proficiency in the use of technology. This includes understanding of the various applications of technology in the educational setting, using appropriate technology tools to enhance standards-based education, and support student use of technology in the classroom. All of this is based on effective, sustained professional development.

The following research-based strategies will be implemented to meet the goals and objectives stated in the district technology use plan.

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National Institute of Child Health and Human Development. (September, 2002). Report of National Reading Panel: Teaching Children to Read.

<http://www.nichd.nih.gov/publications/nrp/findings.htm>

Computers are now being considered an effective resource, as they are now able to use voice recognition technology and multimedia presentations to assess and offer students instruction in phonics. The National Reading Plan supports the use of computers as a means of delivering instruction; not as an instructional method in itself, but as an additional tool.

District implementation- With the focus of “Reading First”, it is becoming increasingly important for schools to find effective resources to assist in the acquisition of reading skills. Software and electronic resources that support phonics instruction will be used as an additional resource to improve student reading skills.

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Ringstaff, C., & Kelley, L. (2002). *The learning return on our educational technology investment: A review of findings from research*. California: Office of Educational Research and Improvement (ED), Washington, DC.

The authors of this paper start with the premise that schools have invested large sums of money into technology and have seen very little gains in return. They go on to state that technology is a tool to achieving instructional goals and not a goal in itself. They quote Thomas Reeves’ research on the difference between students learning “from” computers vs. “with” computers. Their article indicates that there are several variables that govern the effective use of technology in the educational setting. Using technology as one of the instructional components, training of teachers, change in beliefs about teaching and learning, sufficient access to technology and resources, long-term planning and support, and the integration of technology into the instructional framework are some of these variables.

District implementation- Schools have received various grants that have provided equipment and software for the classrooms. In order to ensure the effective use of technology for instruction,

professional development will first address change in beliefs about teaching and learning and then offer ongoing, sustained professional development.

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*North Central Regional Educational Laboratory. (2000). Critical Issue: Providing Professional Development for Effective Technology Use.*  
<http://www.ncrel.org/sdrs/areas/issues/methods/technlgy/te1000.htm>

Professional development for teachers is cited as one of the major issues in ensuring the effective use of technology to improve the quality of teaching and learning in the classroom. “Traditional sit-and-get training” and “one-time-only” workshops are not considered effective in providing teachers with the comfort level essential to use and integrate technology for instruction. Professional development that is “well-planned”, sustained, linked to curriculum goals, evaluated, and with financial and staff support, is the key to effective use of technology to promote student achievement.

District implementation: Based on the research, professional development will be planned to meet the needs of the teachers. Teacher leaders will provide support in integrating technology into standards-based lessons.

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Trilling, B., & Hood. P. (1999) *Learning, technology, and education reform in the knowledge age, or "We're wired, webbed, and windowed, now what?"* WestEd.

The article discusses skills essential for the Knowledge Age, modern learning theories, learning practices for the Knowledge Age, learning convergence, and new learning environments. It describes the challenges ahead for educational technology which includes having access to effective models of learning programs, simple tools for learning, high quality instructional programs, web-based databases of content knowledge, and better online collaboration and communication.

District implementation: Students leaving the K-12 educational system need to be prepared with skills to meet the changing and challenging needs of the workforce. Based on this research, schools will provides instruction in skills necessary for the Knowledge Age.

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Means, Barbara. (1996). Four Major Functions of Technology, North Central Regional Educational Laboratory Retrieved Spring 2005 online  
<http://www.ncrel.org/sdrs/areas/issues/methods/technlgy/te8lk3.htm>

Barbara Means, of SRI International, believes in categorizing technology for the way they are used for instruction: as a tutor, to explore, applied as tools, and to communicate, instead of the actual technology, e.g. fiber optics, microprocessors etc. She further provides details on how these work in the educational setting.

District implementation: The district will use the four categories of instructional technology when selecting software and electronic resources for use in the classroom.

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North Central Regional Educational Laboratory. (2000). Ensuring Equitable Use of Education Technology. <http://www.ncrel.org/sdrs/areas/issues/methods/technlgy/te400.htm>

This paper maintains that when an educational institution decided to implement education technology, they must first start with plans and policies for their staff to have equitable access and use of technology. Funding and professional development are essential in providing not only access to technology, but also in the ongoing use to provide learning opportunities for the students.

**District implementation:** Based on the research, the district will strive to update the technology use plan and develop policies that will assist the staff to use equitable access to technology.

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North Central Regional Educational Laboratory. (2000). Using Technology to Improve Student Achievement. <http://www.ncrel.org/sdrs/areas/issues/methods/technlgy/te800.htm>

Student achievement is gauged not only by how students perform on standardized tests but also on how they use higher-order thinking cells. Research indicates that technology can assist students in developing these higher-order thinking skills by providing complex tasks that require collaboration and communication.

**District implementation:** The district will endeavor to identify software and electronic resources that will assist students' in improving their higher-order thinking skills.

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McKenzie, Jamie. (2000) Beyond Technology, Questioning, Research and the Information Literate School. Bellingham, WA: FNO Press.

Jamie McKenzie offers a variety of strategies for professional development to empower them with skills to teach information literacy in the classroom. He believes that providing students with skills in information literacy can help them be better readers, writers, and communicators. One of the strategies that he discusses is the Big Six research skills.

**District implementation:** One of the goals in the technology use plan is to have students become aware of social, ethical and legal issues related to the use of technology in society. Teaching information literacy skills to students will provide them with not only the tools essential for them to be productive and law-abiding citizens, but also the literacy skills necessary to enter the challenging workforce of the future.

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Cassidy, Sheila and Lane, Carla Ed.D. (1996) Planned Change and the Adoption of Distance Learning. WestEd Regional Technology in Education Consortium, Retrieved Spring 2005online <http://www.wested.org/tie/dlrn/dl.html>

The authors discuss the importance of providing distance learning opportunities in order to provide students with the opportunities to have access to quality learning. They do stress the importance of planning before adopting educational technologies that support distance learning. Equity in terms of access to technology, facilitation by knowledgeable instructors, and student construction of knowledge, are the key components of successful distance learning programs.

Their article describes the four stages of change towards distance learning – Reactive, Inactive, Preactive, and Interactive.

District implementation: The need for distance learning opportunities is increasing in the district, especially for gifted students as well as students at Avalon High School, (on Catalina Island) who want to take accelerated programs. Currently only the School for Adults offers web-based access to PLATO for their students. In order to meet the growing need for distance learning, the district will develop a plan that will facilitate the offering of distance learning opportunities, keeping in mind the research presented by the authors of the article.

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Barnett, H. (2003). *Investing in technology: The payoff in student learning*. *Eric digest*.

Barnett asserts that technology can make a difference in how students learn. What is essential to make this happen is reform at the classroom, site and district level. He refers to certain conditions that need to be in place in order for this shift to take place: access, integration, broad-based reform, long term plan, professional development, teaching style and balance.

District implementation: In order to have technology affect student learning, it is important for the district to ensure that technology access and ongoing professional development is in place for teachers to be able to integrate technology in their classrooms.

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