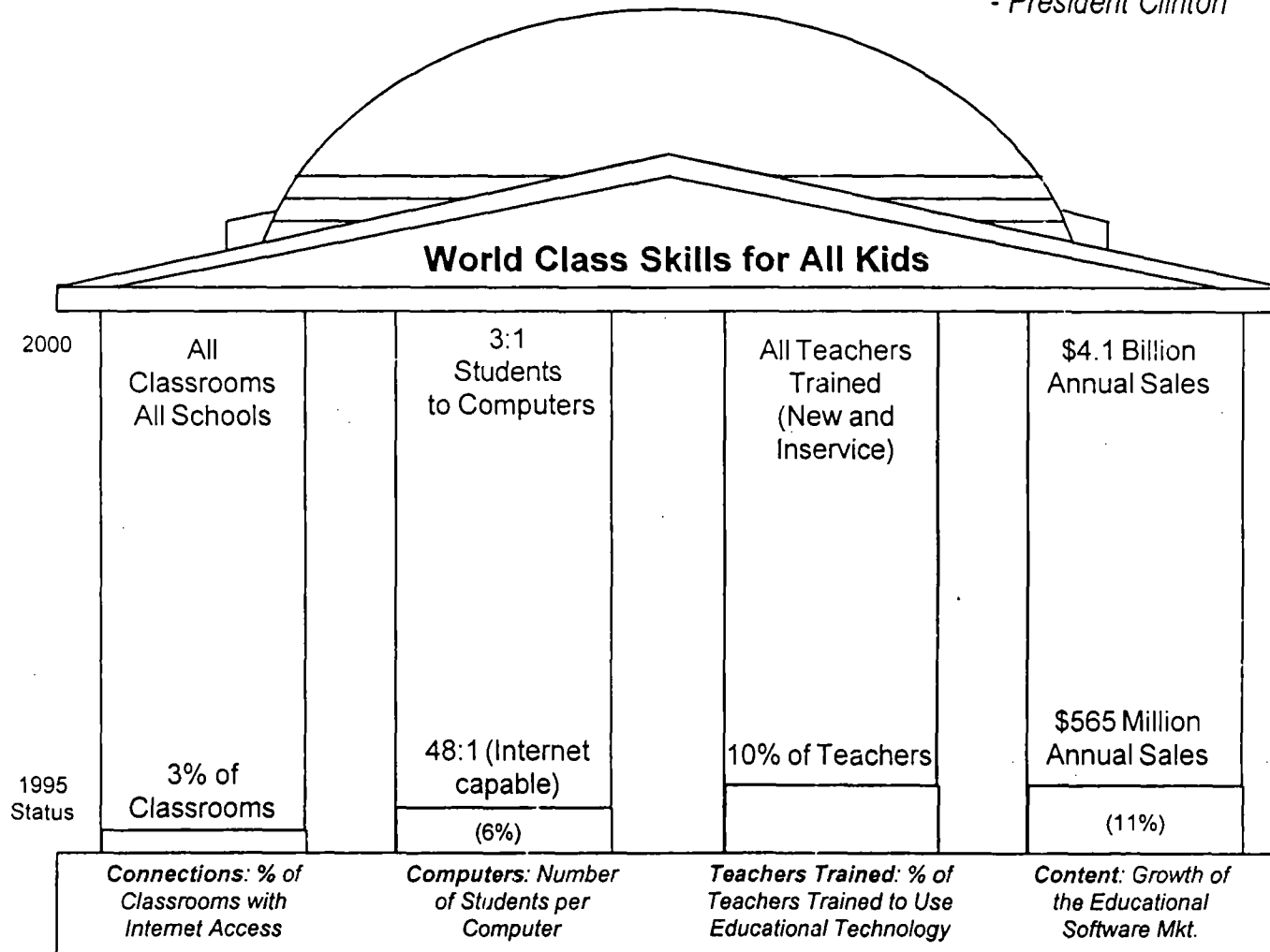


The link between a national commitment to excellence and a commitment to grassroots reform and a lot of individual efforts, in large measure, is technology. We are seeing a technological revolution in this country, and, indeed, all over the world... So what that means... is that we have to do what we can to make sure that technology is there for every student in every classroom... in the United States to hook into as much information and as much learning as possible.

- President Clinton



No one more sincerely wishes the spread of information among mankind than I do, and none has greater confidence in its effect towards supporting free and good government."

- Thomas Jefferson

Impacts of Republican Proposals On Educational Technology

The Republicans are threatening the federal commitment to educational technology in a number of ways.

- **Cuts Technology Learning Content Programs** -- Republicans are proposing a cut of 50% in the K-12 portion of the Technology Learning Challenge Grant Program and total elimination of funding for the adult programs. A \$50 million federal investment in 1996 will leverage hundreds of millions of dollars in private support.
- **Eliminates Distance Learning Programs** -- Republicans are proposing complete elimination of funding for both the Star Schools program and Ready to Learn TV. This will eliminate assistance for 1.6 million learners at 5,000 institutions, many in rural areas, who use learning communications technologies to help complete their education.
- **Slashes Funding for Wiring Schools** -- In spite of the fact that this program has 200 times more requests than it can fund, Republicans are proposing a cut of 60% for the TIIAP program that provides funds that support pilot projects by public institutions that foster widespread application and access to information technologies.
- **Cuts Learning Productivity Research and Development Activities** -- Republicans are proposing cuts in various learning productivity R&D programs. This will hurt R&D activities designed to improve teaching and learning and develop high-quality, affordable learning tools.
- **Ends Summer Training Courses for Teachers** -- Funding has been eliminated for programs which, during the past decade, have worked to help improve local schools -- particularly in areas of science education through summer training courses for teachers and other programs.
- **Reduces Program that Schools Can Use to Buy Computers** -- The President's budget completely protects Title I, which helps students from disadvantaged backgrounds and which schools can use to purchase computers with. Republicans would cut funding by \$1.1 billion in 1996, denying this crucial assistance to 1.1 million students nationwide.
- **Dismantles Americorps** -- Republicans want to dismantle Americorps, the President's signature service program, which expands opportunities for young people willing to give something back to their country. The Americorps program has provided essential support for programs that promote the use of computer technology in schools.
- **Goals 2000** -- President Clinton helped create this program that would provide \$867 million by the year 2002 to help 44 million children in 85,000 schools. Goals 2000 is designed to raise academic standards and encourage students to meet these standards. Republicans propose eliminating Goals 2000, undermining what was once a bipartisan effort to improve schools across the country.

DRAFT -- 9/18/95 -- 10:00 AM

CEO CALLS

VICE PRESIDENT

Michael Eisner

CEO

Walt Disney Company

500 South Buena Vista Street

Burbank, CA 91521

(818) 560-1000

Disney has promoted technology in schools and is creating "Celebration" a futuristic town which will be wired with fiber optic cable so residents will eventually have access to a range of telecommunications and interactive services if the future. Disney plans to bring high tech communications equipment to schools.

Lew Gerstner [attended 9/6 mtg. w/POTUS on education]

CEO

IBM Corp.

Old Orchard Road

Armonk, NY 10504

(914) 765-1900

IBM has teamed up with North Carolina's largest public school system in a \$2 million initiative to equip a proposed "education village" with the latest computer and communication systems. The proposed education village will include two elementary schools, a middle school and a high school and involve about 5,600 students. The first, an elementary school, is set to open in 1996. Some of the construction is contingent on passage of bond issues.

Bill Gates [recently met with Secretary Rubin]

Chairman & CEO

Microsoft, Inc.

One Microsoft Way

Redmond, WA 98052-6399

(216) 882-8080

Microsoft has announced a national campaign to get its Windows95 operating system installed on workstations throughout America's schools. For Bill Gates, Windows95 is just a small part of the software maker's plan to accomplish his primary goal: to see a computer on every desk and in

every home.

Microsoft, Elek-Tek Inc. and Compaq Corp. awarded 11 souped-up multimedia computers, valued at \$2,000 each, to 11 Chicago public schools in an effort to encourage students to use technology in education, particularly in schools with few or no computers available to students.

ERSKINE BOWLES

Robert Allen

CEO, AT&T

32 Avenue of the Americas

New York, NY 10013

(212) 387-5400

* AT&T will participate in 9/21 CA event.

AT&T Capital Corporation financing program helps link public elementary and secondary schools to the information superhighway. The program is a tax-exempt lease/purchase plan that lets qualified school districts lease building wiring systems and high tech equipment such as computers, software, multimedia and video equipment and satellite antennas.

Ted Turner

CEO

Turner Broadcasting System

One CNN Center

Atlanta, GA 30303

(404) 827-1700

Paul Allaire

CEO, Xerox Corporation

800 Long Ridge Road

P.O. Box 1600

Stamford, CT 06904

(203) 968-3000

* Xerox will participate in 9/21 CA event.

Mr. Allaire recently met with the President to discuss the President's balanced-budget plan.

Xerox is part of a coalition of organizations backing the "Smart Valley" initiative in California's Silicon Valley, is a non-profit, information technology pilot program in the Southern Bay Area. The initiative will facilitate the construction of a high-speed communications system and information service to benefit all sectors of the community - in education, healthcare, local

government, business and at home. Smart Valley has five main projects including Smart Valley Public Access Network (SVPAN), which provides Internet access to schools, libraries, hospitals and shops, and is free to users in Santa Clara; and Smart Schools Collaborative which expands network-based learning to all 328 schools in Santa Clara.

RON BROWN

Bert Roberts

Chairman and CEO

MCI Communications Corp.

1801 Pennsylvania Avenue, NW

Washington, DC 20006

(202) 887-2166

* MCI will participate in 9/21 CA event.

MCI recently formed a joint venture with PSB to develop new public TV programming and integrate it with Internet, on-line & CD-ROM media services. Funds will go toward new media programming initiatives that expand public TV's non-profit educational activities and services.

MCI is a partner in a TIIAP project with the Hueneme School District of Port Hueneme, CA which will act as the hub connection for three community schools to participate in a high quality video distribution tests using local cable networks within the schools.

Ray Smith

Chairman and CEO

Bell Atlantic Corp.

11th Floor, 1310 N. Court House Road

Arlington, VA 22201

(703) 875-8800

Bell Atlantic bid on a Maryland state government plan to bring two way audio/video distance learning to all state public high schools, community colleges and four year state colleges. Bell Atlantic won the bidding process, then made a contribution toward the non-network plan elements, such as classroom equipment.

Gerald Levin

Chairman and CEO

Time Warner, Inc.

75 Rockefeller Plaza, 29th Fl.

New York, NY 10019

(212) 484-8001

Time Warner is a corporate sponsor of Charlotte's Web, a coalition to establish a comprehensive infrastructure and network of services in the Charlotte-Gastonia (NC) - Rock Hill (SC) MSA to provide citizens and school children free access to information and educational resources.

Delano Lewis (Co-chair NIIAC)
President and CEO
National Public Radio
635 Massachusetts Avenue, NW
Washington, DC 20001

Ed McCracken (Co-chair NIIAC)
Chairman & CEO
Silicon Graphics, Inc.
2011 N. Shoreline Blvd.
Mountain View, CA 94043-7311
(415) 960-1980

*SGI will participate in 9/21 CA event.

The "Smart Valley" initiative in California's Silicon Valley, is a non-profit, information technology pilot program in the Southern Bay Area - backed by a coalition of organizations including Hewlett-Packard, Tandem, 3Com, **Silicon Graphics**, Pacific Bell and Stanford University. The initiative will facilitate the construction of a high-speed communications system and information service to benefit all sectors of the community - in education, healthcare, local government, business and at home. Smart Valley has five main projects including Smart Valley Public Access Network (SVPAN), which provides Internet access to schools, libraries, hospitals and shops, and is free to users in Santa Clara; and Smart Schools Collaborative which expands network-based learning to all 328 schools in Santa Clara.

SGI is participating with the EPA and Saginaw Valley State University in a program called Earth Vision. Earth Vision is a professional development and educational program for high school teachers and students. The program trains teachers and students to conduct environmental research using computational science, and establishes environmental research and computer science programs at high schools.

LAURA TYSON

Craig McCaw
Chairman and CEO
Teledesic Corp.
5400 Carillon Point
Kirkland, WA 98033

(206) 828-8440

Michael Spindler

President and CEO

Apple Computer, Inc.

One Infinite Loop

Cupertino, CA 95014

(408) 974-0642

* Apple will participate in 9/21 CA event.

Apple has sponsored the Apple Classrooms of Tomorrow (ACOT) Projects throughout the U.S. The program promotes use of technology in the learning process. Apple has been highly visible in supporting K-12 technology learning and staff development programs. In addition, the company has been one of the key sponsors of the PBS "Ready to Learn" Program.

Apple is part of a coalition of organizations backing the "Smart Valley" initiative in California's Silicon Valley, is a non-profit, information technology pilot program in the Southern Bay Area. The initiative will facilitate the construction of a high-speed communications system and information service to benefit all sectors of the community - in education, healthcare, local government, business and at home. Smart Valley has five main projects including Smart Valley Public Access Network (SVPAN), which provides Internet access to schools, libraries, hospitals and shops, and is free to users in Santa Clara; and Smart Schools Collaborative which expands network-based learning to all 328 schools in Santa Clara.

Lew Platt

CEO

Hewlett-Packard Co.

3000 Hanover Street

Palo Alto, CA 94304

(415) 857-2087

The "Smart Valley" initiative in California's Silicon Valley, is a non-profit, information technology pilot program in the Southern Bay Area - backed by a coalition of organizations including **Hewlett-Packard**, Tandem, 3Com, Silicon Graphics, Pacific Bell and Stanford University. The initiative will facilitate the construction of a high-speed communications system and information service to benefit all sectors of the community - in education, healthcare, local government, business and at home. Smart Valley has five main projects including Smart Valley Public Access Network (SVPAN), which provides Internet access to schools, libraries, hospitals and shops, and is free to users in Santa Clara; and Smart Schools Collaborative which expands network-based learning to all 328 schools in Santa Clara.

ALEXIS HERMAN

Bill Esrey

Chairman & CEO

Sprint Corp.

2330 Shawnee Mission Pkwy.

Westwood, KS 66205

(913) 624-3000

* Sprint will participate in 9/21 CA event.

Richard Notebaert

Chairman, President and CEO

Ameritech Corp.

30 S. Wacker Drive

Chicago, IL 60606

(312) 750-5102

Phil Quigley

Chairman, President and CEO

Pacific Telesis Group

130 Kearny Street

San Francisco, CA 94108

(415) 394-3990

* PacTel will participate in 9/21 CA event.

Phil Quigley announced (with Gov. Wilson) in April 94, that they would deliver up to 1 million refurbished computers to public schools throughout the states by the year 2000. Pac Tel committed \$125 million to wire classrooms. The Governors challenged Phil to lead the CEO effort to raise the balance of the funds necessary. Phil put together the effort to do this but has had limited success.

SECRETARY RILEY

George Lucas, Lucas Foundation

LucasArts has created several programs for schools on subjects that range from environmental science to geography. LucasArts President Jack Sorensen said that "George Lucas is very committed to enhancing the lives of children through technology."

John Hendricks

Discovery Channel

JACK GIBBONS

Norman Augustine (Member, PCAST)
Chairman and CEO
Martin Marietta Corporation

Diana MacArthur (Member, PCAST)
Chair and CEO
Dynamac Corporation

David Shaw (Member, PCAST)
CEO
D.E. Shaw and Co.

9/17/95

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TALKING POINTS FOR CEO CALLS

- * The President has asked me to talk with you about how we can effectively deploy and use educational technology in our nation's schools.
- * As you know, this issue is very important to the President. In his State of the Union Address in 1994, he called for all classrooms to be connected to the National Information Infrastructure by the year 2000. The Administration has been urging that the pending telecommunications bill include provisions that would help make that goal come true. And the President has consistently emphasized the importance of education to our children -- and to our nation.
- * I know that you understand the importance of making sure that our schools are not left out of the information revolution.
- * Let me explain why I've called you today. The President has instructed us to talk with American leaders on what all of us -- government, educators, state/local government, businesses -- can do to boost the use of education technology. We don't have a lot of time -- the President is eager to move forward with a national vision -- but we very much value your thoughts.
- * As we've considered the issue, we've identified four basic barriers that must be overcome before all K-12 students are in a position to use educational technology.
 - Teachers must be trained,
 - Computers must become a part of every classroom,
 - Those computers must be connected to each other and to the world, and
 - Educational software must be available to be used by teachers and students.

Out of our discussions like this one the President plans in the near future to offer a national vision of how to break down these barriers and to discuss what every American can do to help.

* So let me ask you:

(i) To designate someone on your staff to talk with us, so that you can be fully briefed on the full range of Administration's efforts,

(ii) To let us know, either directly or through our staff contacts, what you believe would be the most effective action that the federal government could take to move this effort forward, and

(iii) To let us know what you believe the private sector generally, and your company in particular, could do in addition to current efforts in order to demonstrate the importance of a national commitment to break down these barriers and to improve the education of every K-12 student.

* Thank you for your time. I hope that we can continue this discussion soon.

9/17/95

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EDUCATIONAL TECHNOLOGY -- CALL SHEET

CALL PLACED BY: _____

CALL PLACED TO: _____

TIME/DATE: _____

CEO's STAFF DESIGNEE _____

CEO's SUGGESTIONS ON EFFECTIVE FEDERAL
ACTION _____

CEO's SUGGESTIONS ON ADDITIONAL PRIVATE SECTOR/SPECIFIC COMPANY
ACTION _____

OTHER
COMMENTS _____

PLEASE RETURN CALL SHEETS TO: Jonathan Sallet 482-4127 (office)
482-4191 (office fax)

9/17/95

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CEO EDUCATIONAL-TECHNOLOGY CALLS

I. INTRODUCTION: As part of the Administration's effort to form and enunciate a national vision on the use and deployment of educational technology throughout our K-12 schools, we have attached materials to assist your principal in making CEO phone calls. Included are:

- (i) A call list with selected background information,
- (ii) Talking points for each call, and
- (iii) A call sheet, to be completed and returned.

BACKGROUND: The President and Vice President have emphasized the importance of providing all students with the advantages that come from the creative use of educational technology to enrich K-12 education. In 1993, the Administration initiated the TIAAP program in the Department of Commerce to assist communities learn to use advanced technology for education and other purposes. In his State of the Union Address in 1994, the President called on Congress and the nation to connect all classrooms to the National Information Infrastructure by the year 2000 (along with libraries, hospitals and clinics), thus repeating a challenge made by the Vice President earlier that year. This year, the Vice President announced the creation of the Technology Learning Challenge, which includes the award of grants to communities that are bringing new educational content into the schools. More recently, the Administration has supported inclusion in pending telecommunications legislation of the Snowe-Rockefeller amendment, which would offer preferential telecommunications rates to schools and libraries. And, of course, the President has repeatedly emphasized the importance of educational reform.

An effort is now underway within the Administration to focus on how best to achieve (and articulate) the goal of empowering all K-12 students with the advantages of educational technology. That effort includes surveying additional actions that the federal government, state/local governments, teachers, parent and students themselves can take.

A critical portion of that effort is outreach to American corporate leaders. Corporate America has not only invented much of the technology that is leading us into an information revolution, but corporate leaders have been increasingly involved in finding ways of supporting the use of educational technology. As such they are an important source of ideas and creativity about how to accomplish our aim. Moreover, especially in times of restricted governmental budgets at all levels, corporate participation is necessary to deploy educational technology as far and as fast as possible.

We plan on enlisting their assistance through a quick, three-part process.

First, we are asking you to make three CEO calls to people whom we believe can offer us valuable support. As you will see from the talking points, this initial call does not seek a specific commitment of resources.

Second, on a staff-to-staff level, we will provide a full briefing to each CEO of the background and basic themes of the Administration effort, and

Third, follow-up CEO calls will be made in which we seek a specific endorsement of Presidential action and a specific commitment of corporate resources.

It is important to note that we have not yet found a single form of corporate action that would be appropriate. Following, however, are a series of corporate actions that are under internal discussion now. We are not asking you to seek a corporate pledge to engage in one or more of these actions in the initial conversation; the following is for illustrative purposes only:

Endorsement: Specific endorsement and pledge to further the President's vision statement and specific federal actions set forth by the President

Concrete Action: Potential Corporate Actions

General

- Support "TechCorps" to connect schools and classrooms and to assist students and teachers in using educational technology.
- "Adopt or sponsor" school in each state or community in which it has a corporate presence,
- Establish and support "LearningNet" (a proposed inter-active interchange between educators, parents and students about educational technology), "KidsNet" (a similar proposal for

students) in conjunction with "TeacherNet" (establishing easy access to the federal government's teacher-training activities and materials) on the Internet

- Support specific media effort, including free video made available to parents, on educational technology in support of POTUS goal

Computers

- Specific pledge to provide and/or refurbish equipment to a specific number of schools and/or to offer special rates to schools and/or support re-furbishing efforts

Connections

- Voluntary wiring of schools
- Pledge to offer and/or seek preferential rates for schools and similar institutions
- Proposal of "social compacts" to regulatory authorities

Content

- Pledge to devote (5?)% of content development to institution-based educational content
- Private sector commitment, expertise and matching funds for TLC grants
- Pledges on "cable in the classroom", and Internet home pages

Teacher Training

- Bringing teachers into technology companies for training
- Funding of resource centers

STATE TECHNOLOGY GRANTS

States would submit a state technology plan for bringing educational technology to all elementary and secondary schools in the state. The state can use its Goals 2000 state technology plan or submit a revised plan. This work could be carried out under the state grant program, slightly modified, in the Improving America's Schools Act of 1994. The statutory language is attached.

The proposed state grant would require a match by the state of \$4 for every \$1 of state grant funds. The state would indicate the amount of funds it will spend and where the funds will come from (federal, state, etc). The state's matching requirement would not be subject to a Department audit in order to reduce the paperwork burden for the state. A ceiling for a state grant might be set at some percentage of its Title I funding.

The state technology plan would need to address five topics:

- 1) connecting up schools and classrooms
- 2) getting hardware into schools and classrooms
- 3) training teachers to incorporate technology into classroom instruction
- 4) developing and using software tied to state and local academic standards
- 5) establishing timelines for implementation with performance indicators and benchmarks

The state plan would be submitted to the U.S. Department of Education and the state would submit evidence of yearly progress.

Performance indicators

In its plan, the State would describe the goals it will reach by 2002, a set of performance indicators to measure progress toward the goals, and yearly benchmarks of progress toward the goals.

The state would define its goals and select its indicators and benchmarks. The goals and indicators would need to be in the four program areas described in the plan.

1. Connecting up schools and classrooms

Possible goals and indicators:

- Goal: connecting every classroom to the Internet by 2002
Indicator: number of connected classrooms
- Goal: establishing a LAN in every school
Indicator: the percentage of schools with LANs
- Goal: connecting home computers to school computer networks
Indicator: the percentage of schools that allow for home hook up

2. Getting hardware into schools and classrooms

Possible goals and indicators:

- Goal: adequate number of computers for students in every school
Indicator: 1 computer for every 4 students
- Goal: access of teachers to computers
Indicator: 1 computer for every teacher
- Goal: access to computers to run sophisticated software
Indicator: capacity of computers (number of 386s); number of CD-ROMS

3. Training teachers in how to incorporate technology into classroom instruction

Possible goals and indicators:

- Goal: all teachers will be trained in the use of technology
Indicator: percentage of teachers with technology training
- Goal: extensive use of technology in instruction
Indicator: percentage of teachers using technology in daily instruction
- Goal: improvement in technology aided classroom instruction
Indicator: increase in student achievement

4. Developing and using software tied to state and local academic standards

- Goal: availability of software tied to state or local standards
Indicator: number of schools with software programs available
- Goal: use of software tied to state or local standards
Indicator: percentage of teachers using software

than one year after the date of enactment of the Improving America's Schools Act of 1994.

"Subpart 2—State and Local Programs for School Technology Resources

"SEC. 3131. ALLOTMENT AND REALLOTMENT.

"(a) ALLOTMENT.—

"(1) **IN GENERAL.**—Except as provided in paragraph (2), each State educational agency shall be eligible to receive a grant under this subpart for a fiscal year in an amount which bears the same relationship to the amount made available under section 3114(a)(1)(C) for such year as the amount such State received under part A of title I for such year bears to the amount received for such year under such part by all States.

"(2) **MINIMUM.**—No State educational agency shall be eligible to receive a grant under paragraph (1) in any fiscal year in an amount which is less than one-half of one percent of the amount made available under section 3115(a)(1)(C) for such year.

"(b) REALLOTMENT OF UNUSED FUNDS.—

"(1) **IN GENERAL.**—The amount of any State educational agency's allotment under subsection (a) for any fiscal year which the Secretary determines will not be required for such fiscal year to carry out this subpart shall be available for reallocation from time to time, on such dates during such year as the Secretary may determine, to other State educational agencies in proportion to the original allotments to such State educational agencies under subsection (a) for such year, but with such proportionate amount for any of such other State educational agencies being reduced to the extent such amount exceeds the sum the Secretary estimates such State needs and will be able to use for such year.

"(2) **OTHER REALLOTMENTS.**—The total of reductions under paragraph (1) shall be similarly reallocated among the State educational agencies whose proportionate amounts were not so reduced. Any amounts reallocated to a State educational agency under this subsection during a year shall be deemed a subpart of such agencies allotment under subsection (a) for such year.

"SEC. 3132. SCHOOL TECHNOLOGY RESOURCE GRANTS.

"(a) GRANTS TO STATES.—

"(1) **IN GENERAL.**—From amounts made available under section 3131, the Secretary, through the Office of Educational Technology, shall award grants to State educational agencies having applications approved under section 3133.

"(2) **USE OF GRANTS.**—(A) Each State educational agency receiving a grant under paragraph (1) shall use such grant funds to award grants, on a competitive basis, to local educational agencies to enable such local educational agencies to carry out the activities described in section 3134.

"(B) In awarding grants under subparagraph (A), each State educational agency shall ensure that each such grant is

t of the Improving Ameri-

Programs for School Resources

T.

provided in paragraph (2),
shall be eligible to receive a
grant in an amount which
does not exceed the amount
made available for such
year as the amount such
for such year bears to the
such part by all States.

ional agency shall be eligi-
ble (1) in any fiscal year in
half of one percent of the
on 3115(a)(1)(C) for such

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of any State educational
agency (a) for any fiscal year
shall not be required for such fis-
cal year all be available for reallocat-
ion during such year as the
State educational agencies in
to such State educational
agency each year, but with such pro-
vided State educational agen-
cies amount exceeds the sum
of funds and will be able to use

the total of reductions under
reallocated among the State
educational amounts were not so
State educational agency
shall be deemed a subpart
of section (a) for such year.

CE GRANTS.

its made available under
the Office of Educational
State educational agencies
section 3133.

State educational agency
(1) shall use such grant
on a competitive basis, to local edu-
cational agencies to
section 3134.

subparagraph (A), each
that each such grant is

of sufficient duration, and of sufficient size, scope, and quality,
to carry out the purposes of this part effectively.

"(b) TECHNICAL ASSISTANCE.—Each State educational agency
receiving a grant under paragraph (1) shall—

"(1) identify the local educational agencies served by the
State educational agency that—

"(A) have the highest number or percentage of children
in poverty; and

"(B) demonstrate to such State educational agency the
greatest need for technical assistance in developing the ap-
plication under section 3133; and

"(2) offer such technical assistance to such local educational
agencies.

"SEC. 3133. STATE APPLICATION.

"To receive funds under this subpart, each State educational
agency shall submit a statewide educational technology plan which
may include plans submitted under the Goals 2000: Educate Amer-
ica Act or other statewide technology plans which meet the require-
ments of this section. Such application shall be submitted to the
Secretary at such time, in such manner, and accompanied by such
information as the Secretary may reasonably require. Each such ap-
plication shall contain a systemic statewide plan that—

"(1) outlines long-term strategies for financing technology
education in the State and describes how business, industry,
and other public and private agencies, including libraries, li-
brary literacy programs, and institutions of higher education,
can participate in the implementation, ongoing planning, and
support of the plan; and

"(2) meets such other criteria as the Secretary may establish
in order to enable such agency to provide assistance to local
educational agencies that have the highest numbers or percent-
ages of children in poverty and demonstrate the greatest need
for technology, in order to enable such local educational agen-
cies, for the benefit of school sites served by such local edu-
cational agencies, to carry out activities such as—

"(A) purchasing quality technology resources;

"(B) installing various linkages necessary to acquire
connectivity;

"(C) integrating technology into the curriculum in
order to improve student learning and achievement;

"(D) providing teachers and library media personnel
with training or access to training;

"(E) providing administrative and technical support
and services that improve student learning through en-
riched technology-enhanced resources, including library
media resources;

"(F) promoting in individual schools the sharing, dis-
tribution, and application of educational technologies with
demonstrated effectiveness;

"(G) assisting schools in promoting parent involvement;

"(H) assisting the community in providing literacy-re-
lated services;

"(I) establishing partnerships with private or public educational providers or other entities to serve the needs of children in poverty; and

"(J) providing assurances that financial assistance provided under this part shall supplement, not supplant, State and local funds.

"SEC. 3134. LOCAL USES OF FUNDS.

"Each local educational agency, to the extent possible, shall use the funds made available under section 3132(a)(2) for—

"(1) developing, adapting, or expanding existing and new applications of technology to support the school reform effort;

"(2) funding projects of sufficient size and scope to improve student learning and, as appropriate, support professional development, and provide administrative support;

"(3) acquiring connectivity linkages, resources, and services, including the acquisition of hardware and software, for use by teachers, students and school library media personnel in the classroom or in school library media centers, in order to improve student learning by supporting the instructional program offered by such agency to ensure that students in schools will have meaningful access on a regular basis to such linkages, resources and services;

"(4) providing ongoing professional development in the integration of quality educational technologies into school curriculum and long-term planning for implementing educational technologies;

"(5) acquiring connectivity with wide area networks for purposes of accessing information and educational programming sources, particularly with institutions of higher education and public libraries; and

"(6) providing educational services for adults and families.

"SEC. 3135. LOCAL APPLICATIONS.

"Each local educational agency desiring assistance from a State educational agency under section 3132(a)(2) shall submit an application, consistent with the objectives of the systemic statewide plan, to the State educational agency at such time, in such manner and accompanied by such information as the State educational agency may reasonably require. Such application, at a minimum, shall—

"(1) include a strategic, long-range (three- to five-year), plan that includes—

"(A) a description of the type of technologies to be acquired, including specific provisions for interoperability among components of such technologies and, to the extent practicable, with existing technologies;

"(B) an explanation of how the acquired technologies will be integrated into the curriculum to help the local educational agency enhance teaching, training, and student achievement;

"(C) an explanation of how programs will be developed in collaboration with existing adult literacy services providers to maximize the use of such technologies;

"(D)(i) a description of how the local educational agency will ensure ongoing, sustained professional development

for teachers, administrators, and school library media personnel served by the local educational agency to further the use of technology in the classroom or library media center; and

"(ii) a list of the source or sources of ongoing training and technical assistance available to schools, teachers and administrators served by the local educational agency, such as State technology offices, intermediate educational support units, regional educational laboratories or institutions of higher education;

"(E) a description of the supporting resources, such as services, software and print resources, which will be acquired to ensure successful and effective use of technologies acquired under this section;

"(F) the projected timetable for implementing such plan in schools;

"(G) the projected cost of technologies to be acquired and related expenses needed to implement such plan; and

"(H) a description of how the local educational agency will coordinate the technology provided pursuant to this subpart with other grant funds available for technology from State and local sources;

"(2) describe how the local educational agency will involve parents, public libraries, business leaders and community leaders in the development of such plan;

"(3) describe how the acquired instructionally based technologies will help the local educational agency—

"(A) promote equity in education in order to support State content standards and State student performance standards that may be developed; and

"(B) provide access for teachers, parents and students to the best teaching practices and curriculum resources through technology; and

"(4) describe a process for the ongoing evaluation of how technologies acquired under this section—

"(A) will be integrated into the school curriculum; and

"(B) will affect student achievement and progress toward meeting the National Education Goals and any challenging State content standards and State student performance standards that may be developed.

"(d) FORMATION OF CONSORTIA.—A local educational agency for any fiscal year may apply for financial assistance as part of a consortium with other local educational agencies, institutions of higher education, intermediate educational units, libraries, or other educational entities appropriate to provide local programs. The State educational agency may assist in the formation of consortia among local educational agencies, providers of educational services for adults and families, institutions of higher education, intermediate educational units, libraries, or other appropriate educational entities to provide services for the teachers and students in a local educational agency at the request of such local educational agency.

"(e) COORDINATION OF APPLICATION REQUIREMENTS.—If a local educational agency submitting an application for assistance under this section has developed a comprehensive education improvement

plan, in conjunction with requirements under this Act or the Goals 2000: Educate America Act, the State educational agency may approve such plan, or a component of such plan, notwithstanding the requirements of subsection (e) if the State educational agency determines that such approval would further the purposes of this subpart.

"SEC. 3136. NATIONAL CHALLENGE GRANTS FOR TECHNOLOGY IN EDUCATION.

"(a) GRANTS AUTHORIZED.—

"(1) IN GENERAL.—From amounts made available under section 3115(b)(1) for any fiscal year the Secretary is authorized to award grants, on a competitive basis, to consortia having applications approved under subsection (d), which consortia shall include at least one local educational agency with a high percentage or number of children living below the poverty line and may include other local educational agencies, State educational agencies, institutions of higher education, businesses, academic content experts, software designers, museums, libraries, or other appropriate entities.

"(2) DURATION.—Grants under this section shall be awarded for a period of 5 years.

"(b) USE OF GRANTS.—Grants awarded under subsection (a) shall be used for activities similar to the activities described in section 3134.

"(c) PRIORITY.—In awarding grants under this section, the Secretary shall give priority to consortia which demonstrate in the application submitted under subsection (d) that—

"(1) the project for which assistance is sought is designed to serve areas with a high number or percentage of disadvantaged students or the greatest need for educational technology;

"(2) the project will directly benefit students by, for example, integrating the acquired technologies into curriculum to help the local educational agency enhance teaching, training, and student achievement;

"(3) the project will ensure ongoing, sustained professional development for teachers, administrators, and school library media personnel served by the local educational agency to further the use of technology in the classroom or library media center;

"(4) the project will ensure successful, effective, and sustainable use of technologies acquired under this subsection; and

"(5) members of the consortia or other appropriate entities will contribute substantial financial and other resources to achieve the goals of the project.

"(d) APPLICATION.—Each local educational agency desiring a grant under this section shall submit an application to the Secretary at such time, in such manner, and accompanied by such information as the Secretary may reasonably require.

"SEC. 3137. FEDERAL ADMINISTRATION.

"(a) EVALUATION PROCEDURES.—The Secretary shall develop procedures for State and local evaluations of the programs under this subpart.

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"SEC

DRAFT

September 12, 1995

MEMORANDUM FOR

FROM:

PD

Clinton Reform
agenda

SUBJECT:

OPTIONS FOR TECHNOLOGICAL LITERACY TRUST FUND

Introduction. At the President's request, representatives of the NII and NEC- DPC Education Working Groups have been meeting jointly for the past six weeks to develop a proposal for making educational technology a defining issue for the nation -- now, through the State of the Union Address, the 1996 Campaign and the Second Clinton-Gore Term. Our review has surfaced at least one major budget, policy and political issue that requires your immediate attention: as a part of a major public-private campaign to bring the information technology revolution to all students, should the President propose some form of a Technological Literacy Trust Fund?

Background. As depicted in Diagram 1, the ultimate goal of such a Presidential initiative is to equip all American children with the skills they need to thrive in the knowledge intensive, information age that is sweeping the global economy at the dawn of a new century. In order to do so, by the year 2000 all pre-school, elementary, middle and high school students must have the opportunity and technological literacy necessary to use computers and associated technology to enrich their education and learn the skills essential to thriving in the 21st century. We believe this goal can be reached if the President can lead an on-going grass-roots, public-private campaign to use emerging educational technology to achieve four intermediate objectives: (1) make modern computers an integral part of every classroom; (2) connect these computers so they provide a pathway to our emerging National Information Infrastructure; (3) train teachers and provide the on-going support they need to engage all students in active learning by doing; and (4) make available education software that is as engaging as the best video game and as inspiring as learning with an expert tutor.

A quick review of the attached diagram shows that schools have a long way to go in achieving the intermediate objective on the rough indicators shown. Businesses and homes are both arguably much further along than schools in getting in position to integrate each of the components of the information technology revolution into their daily work and lives. See diagrams 2 and 3 attached.

Background for Recommendations on Options. As in every such national challenge, money is an issue -- even if we do everything that we can to craft this as a grass-roots -- and largely state-local, private sector revolution. Based on the studies of the Rand Corporation for Secretary Riley's draft National Education Technology Plan, the McKinsey for the NII Advisory Committee, and our own best guesstimate, it appears that a "steady state" budget to achieve the four ambitious intermediate objectives would require approximately \$12.4 billion

annually. These analyses provide different amounts for each of the four, but the cumulative total is the same under all three of the analyses. (Summaries of the analyses are available for your review.)

By way of comparison, it is estimated that schools now spend approximately \$3.3 billion on education technology. For purposes of analysis in considering alternative options for the Trust Fund, we assume that the \$12.4 billion funding objective could be achieved from three sources: \$8.0 billion from K-12 budgets (including current federal programs like Chapter 1), \$2.4 billion from private sector commitments, and \$2.0 billion from a new matching Trust Fund.

The rate of ramp-up also needs to be considered. McKinsey estimates that schools now spend about 1.3% of their total budgets on educational technology, and that this percentage has been and, without additional federal support, will continue to rise rapidly -- to 2.1% by 2000 and to 3.6% by 2005. McKinsey also estimates that this funding would be sufficient in 2005 to achieve the four ambitious intermediate objectives in most of the schools in the country (assuming, of course, schools are transformed in the process into high performance learning centers). As a result, any decision on establishing a Trust Fund must be premised on a judgement that it is important to increase the rate of growth in funding, to advance the date of achieving the goals from 2005 to 2000, and/or to assure that the technological revolution(a) actually helps to increase student learning in all schools or (b) at least does not leave out poor schools.

Finally, if the President of the United States is to succeed in leading this education technology revolution, we need to consider how he can best demonstrate his authority. The gut issue is whether a President has sufficient credibility if he fails to propose some major federal financial support to assist in paying for the revolution in learning technology. A related issue is whether there is an alternative federal commitment that the President could make that would better demonstrate his credibility and capture the imagination of the country. To date out list of ~~alternative federal~~ commitments that the President can make without legislation do not include such an option; we will therefore be looking for additional options for legislative and non-legislative commitments.

need to explain the trust fund first

Option 1: No Trust Fund.

Pros: [Does the Trust Fund serve no purpose -- because states, districts, and schools will do it anyway as rapidly as advances in the related technologies reasonably permit? Is there another more important and captivating commitment that the President can better propose? Do the sources of funding described below raise such political or budget problems as to outweigh the potential benefits of the Trust Fund? Will the idea of a Trust Fund be perceived as "old wave" -- and, if so, is there a "new wave" public-private alternative, perhaps with 50 State Education Technology Fund counterparts, e.g., with a defined term of 5 years mission and a time-limited 5-year source of funds? Or are such structural suggestions just window-dressing for federal matching funds? Will it deflate the President's credibility if the Republican Congress rejects such a proposal?]

Cons: [Does the Trust Fund provide instant national credibility for the campaign and for the President? Is it a capstone that all will agree will -- if implemented -- help all aspects of achieving the interim objectives and, if properly structured, the ultimate goals? Does the proposal of the Trust Fund put the Congress to the choice of either following the President's lead or losing credibility? Is the education technology revolution a defining issue for the nation and for the President?]

Option 2: Trust Fund

a. Sources of Funds:

1. Budget Priority. [Apfel and Litan fill out basic description and pros and cons]

or

2. Spectrum Sales. As reported in the Wall Street Journal on 9/12, Senator Pressler is considering a proposal to auction off the digital broadcast spectrum in major markets; estimates of revenues are substantially in excess of the \$10 billion needed to fund a five-year Trust Fund (and any Endowment for PBS). Pressler's proposal responds both to balanced *budget* pressures and to the outcries of many other telecommunication companies, think tanks and interest groups that, as the Wall Street Journal editorializes, providing the digital spectrum to TV Broadcasters for free now is a "GOP Giveaway." If the Senate Commerce Committee is ready to embrace a sale of the Digital TV Spectrum for major markets now, we could condition our approval on the sale on the use \$2 billion of the proceeds per year for five years to finance the Trust Fund. [Sallet, Litan, Deich and (Treasury?) fill out basic options, and pros and cons.]

and(?)

3. "Voluntary" Contributions [Litan, Sallett, and (Treasury?) fill out basic options and pros and cons. Is there an analogy here to the Fish and Game Industry volunteering to a a "fee" on fishing rods for Breaux's Fish and Game Trust Fund? Given the far greater financial wherewithal of the entire telecommunication, entertainment, computer, and software industries and their arguably common interests in educating children and in building bigger markets in schools (and homes) is there any "fee" or "voluntary tax" or "contribution" that might involve \$2 billion per year? Is there a chance that whatever it is that it could win the support of major industry champions, who might be able to shame their competitors into "volunteering" as well?]

b. Uses of Funds:

1. \$4 in State-local match (including all sources of federal funding except the Trust Fund) for each \$1 from the Trust Fund. This would provide matching funds for the level of current expenditures and a strong incentive for increasing State-local expenditures on education technology. Current evaluations indicate that Title I schools have more access to computers. [Smith and Apfel fill out basic details and pros and cons.]

and

2. Permissible Uses of Fund and Accountability for Expenditures. [Smith and Apfel fill out basic options, and pros and cons].

c. Organizational Structure of Fund:

[Litan, Deich, and Sallett fill out basic options, including any joint Public-Private Venture -- e.g., with strong representation on a governing board of those who put up financing; with 50 State Education Technology Trust Funds, etc.]

model or \$B5

1. Expansion of the Universal Service Fund (USF).

Both the House and Senate telecommunications bills would expand the Universal Service Fund, now administered by the states and overseen by the FCC, to include paying for wiring to and inside of schools for computers and advanced communications. The Administration and the FCC have quietly worked with sympathetic members to have these provisions included in the telecommunications bills. Although the Administration has threatened to veto the bills in their present form, you are on record as supporting the use of the USF for these purposes.

More specifically, the USF provisions would require all telecommunications providers -- not just telephone companies -- to contribute to the USFs. CBO has scored these provisions as raising a total of \$7.1 billion over the 1997-2000 time period, as follows:

	(\$ in millions)				Total
	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>(1996-2000)</u>
Expansion of USF.....	600	1,400	2,200	2,900	7,100

CBO has not indicated what portion of these funds would be devoted just to the wiring of schools and classrooms, but has indicated in staff conversations the number is "significant". OMB believes the total is in the range of \$2-3 billion.

Bear in mind, that these funds are conditioned would flow directly to the states and would not require a match. In addition, the bills would limit the spending of the funds just for the wiring of schools and classrooms. Nevertheless, even \$2-3 billion would make a significant contribution toward the total funding requirements of this initiative. the President is on record as supporting the expansion of the USF to provide connectivity for schools.

3. Broadcast Spectrum Auctions

Finally, the Administration could use some of the revenues from auctioning broadcast spectrum to fund any remaining funding requirements. To understand these options, however, some background is useful.

The Federal Communications Commission (FCC) is currently planning to give the television broadcasters additional spectrum to allow them to begin transmitting in a digital format. The FCC's plan is to provide this new spectrum for free, to allow broadcasters and consumers 10 to 15 years to buy the equipment necessary to send and receive digital signals, and to reclaim the broadcaster's current spectrum allocation at some as yet undefined future date. In the 10-year balanced budget, the Administration proposed an auction in 2002 of the spectrum currently used by the broadcasters after they migrate to the digital channel and return the analog

spectrum to the government. OMB estimated the receipts from an auction of the reclaimed analog broadcaster spectrum at \$27 billion in 2002-2005; CBO has scored this proposal so far at only \$17 billion. OMB has discussed this proposal with staff of various members of the Senate Commerce Committee. Senator Lieberman initially had expressed some interest in introducing the concept, but in light of recent developments described below, has stepped back and continues to assess his position. In any event, an analog spectrum auction could provide no revenues for any educational initiative since the auction cannot practically take place until after 2000.

The alternative to auctioning the analog spectrum much later is to begin auctioning now (or very soon) the digital spectrum, which CBO has scored thus far at \$11 billion over the next five years; the FCC has recently issued a much higher estimate of \$37 billion. There is mounting support for auctioning digital among Republicans in the Senate Commerce Committee, including Sen. Stevens, who has sharply criticized the broadcasters for opposing this idea, and most recently, Chairman Pressler, who has just endorsed the concept and offered to devote \$4 billion of the proceeds to a trust fund to finance the Corporation for Public Broadcasting. The House Commerce Committee has rejected the digital auction, although it has voted for the auction of additional spectrum for wireless communications, which the CBO has just scored at \$14 billion (up from an earlier estimate of \$8.3 billion, a figure we used in our budget plan).

For purposes of reconciliation, you will have to decide which of the two broadcast spectrum options -- analog or digital -- we will want to support for purposes of deficit reduction. The choice must be made because, given the strong opposition of the broadcasters to both auctions, it will be politically impractical to insist upon both.

A key advantage of auctioning the digital spectrum is that it can be done in the 1997-2000 time frame, and thus some of the revenues could be available for financing a portion of this educational initiative. In addition, authorizing the digital spectrum auction now would assure that some auction revenues are actually realized. In contrast, even if we persuaded Congress to adopt the analog auction, it is so far away -- not beginning until 2002 -- that there would be plenty of time for the broadcasters to try to get that decision reversed.

We have identified two digital spectrum funding options:

Automatic Funding of the Educational Initiative: Under this option, you could decide that some portion of the digital spectrum proceeds automatically fund the initiative. Of course, any such amounts would not then be available for deficit reduction. For example, if the Pressler approach that funds CPB out of the spectrum proceeds were accepted, \$7 billion in CBO-scorable proceeds would be available for the initiative. If, say \$5 billion, of this amount were channelled to the initiative, this would mean that the remaining \$2 billion would be available to reduce the deficit. Combining this amount with the \$14 billion in CBO-scorable revenues from the wireless spectrum would produce a total of \$16 billion in deficit reduction that would be scored by CBO. Of course, if the FCC is correct that the digital auction would raise \$37 billion rather than the CBO level of \$11 billion, then the deficit would be reduced by an additional \$26 billion (although we could not score this for reconciliation purposes).

Contingent Funding: Alternatively, you could decide to make the funding from the digital auction contingent on the auction raising more than the \$11 billion scored by CBO -- an outcome you could proclaim as highly likely, given the FCC's estimate of \$37 billion. This option would enable you and the Congress to claim a total of \$25 billion in deficit from all auctions (\$14 billion from the wireless and \$11 billion from digital) if CPB is not funded through the auction proceeds (or a lower \$21 billion if CPB is funded in this manner). Note that under the original CBO scoring, our proposals -- wireless and broadcast -- also would have reduced the deficit by a combined \$25 billion (although most of that reduction would have come in "out years" because the analog spectrum cannot begin until 2002).

Option 2: Establish a \$200 million trust fund in 1996. Increase the Department of Education investment to \$800 million by 1999.

There is authority that could accomodate the kinds of activities contemplated for the trust fund in the options papers in the Technology title of the Elementary and Secondary Education Act (Title III). Using this authority, it may be possible to derive funds from existing Department of Education programs for the trust fund. A list of these programs is described below and on the attached table.

For FY 1996, there are two scenarios for providing funds from existing education programs:

a) Reprogramming. Reprogramming allows funds that are not earmarked for specific purposes to be moved administratively to another program in the same appropriations account. If the Title III ESEA authority is used, between \$247 million and \$323 million (House mark, and Senate subcommittee mark, respectively) would be available under the appropriation for the Office of Educational Research and Improvement, which funds activities authorized under this title. These funds already support the Technology Learning Challenge Grant program at \$25 million; the remaining \$222 funds Research, Statistics, Assessment, and other small demonstration programs. A reprogramming to support a \$200 million initiative in FY 1996 would virtually eliminate these other activities. The extent to which reprogramming is viable is not clear.

b) Budget Amendment. A more realistic approach would be for the administration to submit a budget amendment to Congress redirecting resources pending before Congress. Even though floor action is over in both Houses, this amendment could be the basis for an amendment to the Conference Report, or an amendment after final action.

The attached tables list possible programs as offsets for a \$200 million trust fund. Each of these programs has vocal congressional supporters and public constituencies who would likely object to diverting money from these for a technology initiative.

Ramp-Up in the Outyears. In order to increase the trust fund to a level of \$800 million by 1999, the fund would require a \$200 million increase each year. (The \$800 million level represents approximately 5 percent of the Federal Government's contribution to elementary and secondary education, and relates to the share of total elementary and secondary education resources experts believe should ultimately be devoted to educational technology.) The President's June balanced budget provides an increase for federal elementary and secondary programs of approximately \$250 million annually, on top of the FY 1996 request. Thus, the trust fund could increase by the \$200 million per year and still fall within the balanced budget guidelines. However, as a result, the priority programs slated for increases -- Goals 2000 and Title I Education for the Disadvantaged, for example -- would be straightlined in the outyears at the FY 1996 request levels, or other lower priority programs would be significantly reduced or eliminated. The decision to reduce amounts from current programs in favor of this initiative presumes that benefits to students will be as great or greater than from these other programs.

Option 2: Establish an education trust fund as part of the President's FY 1997 budget proposal.

Under this option, first year funding of the trust fund would begin in FY 1997; the fund would be fully funded at \$800 million by FY 2000. Here, the issues associated with reprogramming or redirecting existing resources through a budget amendment fall away. Policy for funding the initiative parallels that of the "ramp-up" discussed in Option 1. The fund could be announced ahead of the release of the FY 1997 budget.

Possible ED Budget Offsets for the Education Technology Trust Fund

SEP 15 1995

Option 1A: Reprogramming 1996 funds totalling \$200 million

Reprogrammed funds can only move within the same appropriations account and so must come from the Office of Educational Research and Improvement programs.

	House	Senate	House Total	Senate Total
Demos and Dissemination				
50% of the Fund for the Improvem't of E	19	23		
21st century		1		
Civic Ed.	3	4		
Regional M/S Cons.		15		
Javits	3	3		
Writing Project		3		
NDN		10		
Research				
Research, Statistics, and Assessment	182	167		
Technology				
TLC	25	25		
Star Schools		25		
Ready-to-Learn		6		
Math Demo		1		
OPTION 1 TOTAL			232	283

SEP 15 1995

Possible ED Budget Offsets for the Education Technology Trust Fund

Option 1B: Budget Amendment for 1996 funds totalling \$200 million

With a budget amendment, funds may be taken from programs in a variety of appropriations accounts

	House	Senate	House Subtotals	Senate Subtotals
Demos and Dissemination				
50% of FIE	19	23		
21st century		1		
Civic Ed.	3	4		
Regional M/S Cons.		15		
Javits	3	3		
Writing Project		3		
NDN		10		
Research				
30% of Research	34	30		
Technology				
TLC	25	25		
Star Schools		25		
Ready-to-Learn		6		
Math Demo		1		
Libraries	102	132		
OPTION 1 SUBTOTAL			186	278

—Summary: 1970 to 1992

on public nursery school and kindergarten programs.
urrent Population Survey; see text, section 1)

15	1988	1989	1990	1991	1992
733	10,994	11,038	11,207	11,370	11,544
865	5,977	6,026	6,659	6,334	6,403
477	2,621	2,825	3,378	2,824	2,857
846	852	930	1,202	986	1,074
631	1,770	1,894	2,177	1,827	1,764
388	3,356	3,201	3,281	3,510	3,546
847	2,875	2,704	2,767	2,968	2,996
541	481	496	513	543	550
757	4,891	4,911	5,388	5,104	5,137
919	814	872	964	928	968
498	544	520	642	675	728
1,028	1,005	1,205	1,075	1,081	
765	1,768	1,882	2,086	1,983	1,982
065	3,183	3,139	3,367	3,266	3,340

14.8	54.4	54.6	59.4	55.7	55.5
14.7	55.4	55.0	59.7	56.2	55.8
15.8	48.2	54.2	57.8	53.1	55.1
13.3	44.2	41.6	49.0	46.4	48.4
28.8	27.6	27.1	32.6	28.2	27.7
19.1	49.1	51.0	56.0	53.0	52.1
16.5	86.6	86.4	88.8	86.0	87.2

ns of Hispanic origin may be of any race. The method
on status of mother to status reported for each child.

-474.

f Enrollment and Labor Force Status
l 1992

37]

ENT ENROLLED IN—					PERCENT NOT ENROLLED	
Total		Kindergarten		Full day		
Full day	Total	Total	Full day			
'8	1992	1978	1992	1992	1978	1992
3.9	7.7	30.3	30.7	13.2	49.7	44.6
3.8	7.7	30.4	30.4	12.8	49.8	44.5
1.4	10.3	31.0	31.6	14.0	47.0	41.6
1.7	10.5	31.0	31.8	13.8	46.5	40.8
5.2	13.3	31.2	31.4	14.5	46.5	42.3
5.2	4.6	30.5	32.6	12.6	46.4	37.9
7.8	8.8	30.8	29.7	15.1	52.0	49.2
2.9	4.1	29.9	28.8	11.3	52.2	48.5
5.2	6.4	30.1	30.2	11.6	50.5	44.3
5.1	6.6	30.1	30.2	11.6	50.5	43.8
3.2	9.3	30.4	30.8	12.2	48.5	41.1
3.4	9.7	30.7	30.9	12.2	48.0	40.4
2.6	12.8	31.0	30.1	12.6	48.9	42.4
4.1	4.0	30.2	32.3	11.6	46.5	38.7
6.4	3.5	27.1	30.3	12.1	55.0	49.4
1.9	3.0	29.8	29.4	10.8	52.2	47.4
5.3	13.6	31.0	34.6	22.5	46.9	44.8
5.5	13.1	31.3	32.8	21.1	47.1	47.2
0.6	15.0	32.5	36.5	24.3	41.6	43.8
2.8	14.1	31.7	38.5	25.0	40.3	42.2
4.8	14.6	32.0	38.5	24.8	38.4	42.4
5.8	12.4	30.7	38.0	25.5	47.0	41.6
0.6	18.2	35.7	29.3	21.5	47.8	49.7
9.4	10.5	29.8	27.6	16.6	53.5	51.9
5.0	4.9	29.1	34.5	11.9	59.1	51.5
5.0	5.1	28.9	33.7	13.8	59.4	51.9
7.1	7.4	27.5	35.3	14.9	56.2	47.7
6.7	7.7	26.0	36.8	16.2	56.9	45.5
7.5	9.9	25.9	36.9	14.8	57.2	44.1
(B)	12.8	(B)	37.6	20.3	(B)	48.1
(B)	4.8	(B)	26.9	9.6	(B)	58.7
3.5	3.2	29.9	32.4	12.3	61.7	55.3

ility of derived figure. ¹ Includes races not shown

-474.

No. 239. Public Elementary and Secondary Schools—Summary: 1980 to 1993

[For school year ending in year shown, except as indicated. Data are estimates]

ITEM	Unit	1980	1985	1989	1990	1991	1992	1993
School districts, total	Number	16,044	15,812	15,530	15,449	15,439	15,360	15,218
ENROLLMENT								
Population 5-17 years old ¹	1,000	48,041	44,788	45,052	44,948	45,311	45,923	46,654
Percent of resident population	Percent	21.4	19.0	18.4	18.2	18.2	18.2	18.3
Fall enrollment ²	1,000	41,778	39,354	40,207	40,527	41,198	41,956	42,659
Percent of population 5-17 years old	Percent	87.0	87.9	89.2	90.2	90.9	91.4	91.4
Elementary ³	1,000	24,397	23,830	25,752	26,397	27,075	27,582	28,008
Secondary ⁴	1,000	17,381	15,524	14,455	14,130	14,123	14,374	14,651
Average daily:								
Attendance (ADA)	1,000	38,411	36,530	37,178	37,573	38,181	38,828	39,578
High school graduates	1,000	2,762	2,424	2,468	2,327	2,232	2,233	2,249
INSTRUCTIONAL STAFF								
Total ⁵	1,000	2,521	2,473	2,652	2,685	2,745	2,784	2,811
Classroom teachers	1,000	2,211	2,175	2,324	2,362	2,409	2,431	2,464
Average salaries:								
Instructional staff	Dollar	16,715	24,666	30,850	32,638	34,412	35,550	36,431
Classroom teachers	Dollar	15,970	23,600	29,564	31,367	33,090	34,064	35,027
REVENUES								
Revenue receipts	Mil. dol.	97,635	141,013	193,235	208,656	224,080	235,250	246,199
Federal	Mil. dol.	9,020	8,533	12,342	13,184	14,180	15,703	16,973
State	Mil. dol.	47,929	69,107	93,796	100,787	107,970	111,784	115,168
Local	Mil. dol.	40,686	62,373	87,096	94,685	101,931	107,763	114,058
Percent of total:								
Federal	Percent	9.2	6.8	6.4	6.3	6.3	6.7	6.9
State	Percent	49.1	49.0	48.5	48.3	48.2	47.5	46.8
Local	Percent	41.7	44.2	45.1	45.4	45.5	45.8	46.3
EXPENDITURES								
Total	Mil. dol.	96,105	139,382	191,378	209,898	227,422	238,884	251,706
Current expenditures (day schools)	Mil. dol.	85,861	127,230	171,527	186,583	200,963	210,358	220,604
Other current expenditures	Mil. dol.	1,859	2,109	3,146	3,341	3,683	4,653	5,438
Capital outlay	Mil. dol.	8,504	7,529	13,310	16,012	18,289	18,935	19,896
Interest on school debt	Mil. dol.	2,081	2,514	3,395	3,762	4,487	4,937	5,769
Percent of total:								
Current expenditures (day schools)	Percent	89.1	91.3	89.8	89.0	88.4	88.1	87.6
Other current expenditures	Percent	1.9	1.5	1.5	1.6	1.6	1.9	2.2
Capital outlay	Percent	8.8	5.4	6.9	7.6	8.0	7.9	7.8
Interest on school debt	Percent	2.2	1.8	1.8	1.8	2.0	2.1	2.3
In current dollars:								
Revenue receipts per pupil enrolled	Dollar	2,337	3,583	4,806	5,149	5,439	5,607	5,771
Current expenditures per pupil enrolled	Dollar	2,050	3,233	4,266	4,604	4,878	5,014	5,171
In constant (1993) dollars: ⁷								
Revenue receipts per pupil enrolled	Dollar	4,373	4,918	5,758	5,886	5,898	5,891	5,771
Current expenditures per pupil enrolled	Dollar	3,837	4,437	5,111	5,284	5,290	5,268	5,171

¹ Estimated resident population as of July 1 of the previous year. Estimates reflect revisions based on the 1990 Census of Population. ² Fall enrollment of the previous year. ³ Kindergarten through grade 6. ⁴ Grades 7 through 12. ⁵ Full-time equivalent. ⁶ Current expenses for summer schools, adult education, post-high school vocational education, personnel retraining, etc., when operated by local school districts and not part of regular public elementary and secondary day-school program. ⁷ Compiled by U.S. Bureau of the Census. Deflated by the Consumer Price Index, all urban consumers (for school year) supplied by U.S. National Center for Education Statistics.

Source: Except as noted, National Education Association, Washington, DC, *Estimates of School Statistics*, annual (copyright); *Rankings of the States*, annual (copyright); and unpublished data.

separate school districts which ad-
ter public schools within most mu-
al areas. Variations in the assign-
of governmental responsibility for
assistance, health, hospitals, pub-
using, and other functions to a less-
gree also have an important effect
reported amounts of city expendi-
-venue, and debt. Therefore, any
ity comparisons based upon these
s should be made with caution and
ue recognition of variations that ex-
ong urban areas in the relative role
municipal corporation.

yment and payrolls.—These
re based mainly on mail canvases
State and local governments.
l includes all salaries, wages, and
ual fee payments for the month
ed, and employment relates to all
s on governmental payrolls during
period of the month covered—in-
paid officials, temporary help,
less otherwise specified) part-
well as full-time personnel. Be-
1986, statistics for full-time equiv-
employment have been computed
ormula using hours worked by
e employees. A payroll based for-
as used prior to 1985. Full-time
ent employment statistics were
puted for 1985. Figures shown
idual governments cover major
ent agencies such as institutions
r education, as well as the basic
epartments and agencies of the
ent.

al reliability.—For a discussion
ical collection and estimation,
procedures, and measures of
I reliability applicable to Census
lata, see Appendix III.

al statistics.—Tabular head-
vide cross-references, where
e, to *Historical Statistics of the
ates, Colonial Times to 1970.*
endix IV.

No. 460. Number of Governmental Units, by Type: 1942 to 1992

TYPE OF GOVERNMENT	1942	1952 ¹	1957 ¹	1962	1967	1972	1977	1982	1987	1992
Total	155,116	116,807	102,392	91,237	81,299	78,269	79,913	81,831	83,237	86,743
U.S. Government	1	1	1	1	1	1	1	1	1	1
State government	48	50	50	50	50	50	50	50	50	50
Local governments	155,067	116,756	102,341	91,186	81,248	78,218	79,862	81,780	83,186	86,692
County	3,050	3,052	3,050	3,043	3,049	3,044	3,042	3,041	3,042	3,043
Municipal	18,220	16,807	17,215	18,000	18,048	18,517	18,862	19,076	19,200	19,296
Township and town	18,919	17,202	17,198	17,142	17,105	16,991	16,822	16,734	16,691	16,666
School district	108,579	67,355	50,454	34,678	21,782	15,781	15,174	14,851	14,721	14,556
Special district	8,299	12,340	14,424	18,323	21,264	23,885	25,962	28,078	29,532	33,131

¹ Adjusted to include units in Alaska and Hawaii which adopted statehood in 1959.

No. 461. Number of Local Governments, by Type—States: 1992

[Governments in existence in January. Limited to governments actually in existence. Excludes, therefore, a few counties and numerous townships and "incorporated places" existing as areas for which statistics can be presented as to population and other subjects, but lacking any separate organized county, township, or municipal government]

STATE	All govern- mental units ¹	County ²	Muni- cipal ²	Town- ship ²	School district	Special district			
						Total ³	Natural resources	Fire protection	Housing and com- munity develop- ment
U.S.	86,743	3,043	19,296	16,666	14,558	33,131	8,564	5,354	3,863
Alabama	1,134	67	440	-	129	497	68	4	153
Alaska	178	12	149	-	-	14	-	-	-
Arizona	598	15	86	-	228	268	71	130	-
Arkansas	1,473	75	489	-	324	584	230	48	130
California	4,495	57	480	-	1,080	2,897	489	395	92
Colorado	1,828	62	268	-	180	1,317	170	247	96
Connecticut	575	-	30	149	17	378	1	59	85
Delaware	281	3	57	-	19	201	192	-	4
Dist. of Columbia	22	-	1	-	-	1	-	-	-
Florida	1,041	66	390	-	95	489	138	60	107
Georgia	1,321	157	538	-	185	442	38	6	207
Hawaii	21	3	1	-	-	16	16	-	-
Idaho	1,105	44	199	-	116	745	170	130	13
Illinois	6,810	102	1,282	1,433	997	2,985	928	813	117
Indiana	2,976	91	566	1,008	310	1,000	132	1	62
Iowa	1,904	99	953	-	445	408	242	72	19
Kansas	3,918	105	627	1,355	324	1,508	261	-	207
Kentucky	1,345	119	438	-	177	610	128	93	24
Louisiana	461	61	301	-	66	32	2	-	1
Maine	799	16	22	468	88	204	13	-	27
Maryland	416	23	155	-	-	237	165	-	21
Massachusetts	851	12	39	312	88	401	14	15	255
Michigan	2,727	83	534	1,242	587	280	82	2	-
Minnesota	3,616	87	854	1,804	477	393	111	-	172
Mississippi	898	82	294	-	176	345	258	-	57
Missouri	3,368	114	933	324	553	1,443	175	208	159
Montana	1,305	54	128	-	544	578	129	150	18
Nebraska	2,997	93	534	452	842	1,075	96	422	137
Nevada	212	16	18	-	17	180	33	14	17
New Hampshire	531	10	13	221	168	118	10	16	23
New Jersey	1,625	21	320	247	550	488	17	171	83
New Mexico	494	33	99	-	94	267	220	-	5
New York	3,319	57	620	929	714	898	2	909	-
North Carolina	954	100	518	-	-	335	150	-	104
North Dakota	2,795	53	368	1,351	284	740	79	277	38
Ohio	3,534	88	942	1,317	665	521	98	41	59
Oklahoma	1,822	77	589	-	614	541	102	18	124
Oregon	1,487	36	240	-	340	870	202	268	22
Pennsylvania	5,397	66	1,022	1,548	516	2,244	10	1	88
Rhode Island	128	-	8	31	4	84	3	38	26
South Carolina	705	46	270	-	91	297	48	85	46
South Dakota	1,803	64	310	971	184	273	109	51	42
Tennessee	960	93	339	-	14	513	117	-	96
Texas	4,919	254	1,171	-	1,101	2,392	432	96	402
Utah	635	29	228	-	40	337	77	20	18
Vermont	690	14	50	237	278	110	14	22	9
Virginia	461	95	230	-	-	135	44	-	-
Washington	1,798	39	268	-	298	1,192	160	410	51
West Virginia	708	55	231	-	55	368	15	-	38
Wisconsin	2,752	72	583	1,287	430	399	179	-	168
Wyoming	578	23	97	-	58	399	128	62	-

- Represents zero. ¹ Includes the Federal Government and the 50 State governments not shown separately. ² Includes "town" governments in the six New England States and in Minnesota, New York, and Wisconsin. ³ Includes other special districts not shown separately.

Source of tables 460 and 461: U.S. Bureau of the Census, 1992 Census of Governments, *Government Organization*.

No. 462. County, Municipal, and Township Governments: 1992

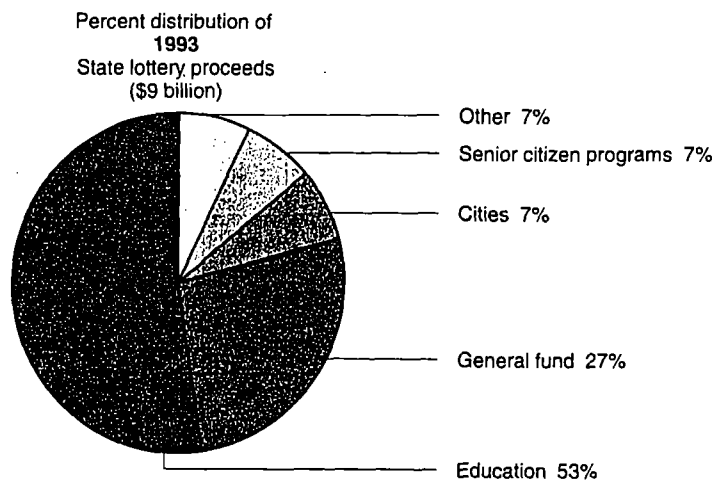
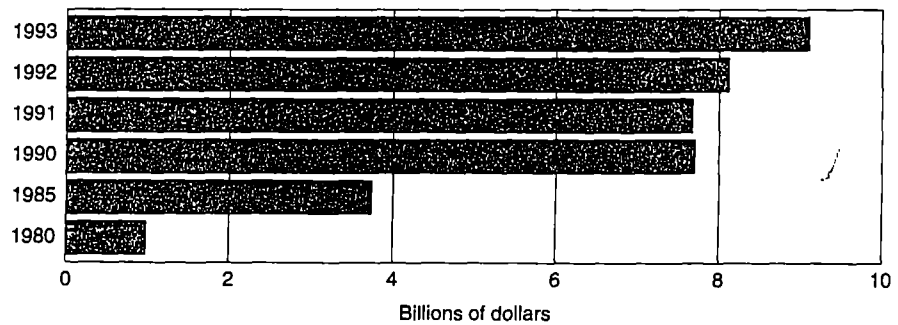
[Number of governments as of January 1992. Population enumerated as of April 1, 1990. Consolidated city-county governments are classified as municipal rather than county governments. Township governments include "towns" in the six New England States, Minnesota, New York, and Wisconsin]

POPULATION-SIZE GROUP	COUNTY GOVERNMENTS			MUNICIPAL GOVERNMENTS			TOWNSHIP GOVERNMENTS		
	Number, 1992	Number (1,000)	Percent	Number, 1992	Number (1,000)	Percent	Number, 1992	Number (1,000)	Percent
Total	3,043	224,924	100	19,279	153,819	100	16,656	53,051	100
200,000 or more	174	120,551	54	76	47,809	31	6	2,140	4
100,000 to 199,999	244	237,336	217	119	16,390	11	27	3,554	7
50,000 to 99,999	377	26,555	12	310	21,282	14	77	5,214	10
25,000 to 49,999	612	21,510	10	566	19,877	13	249	8,461	16
10,000 to 24,999	908	14,851	7	1,290	20,324	13	728	11,225	21
5,000 to 9,999	3728	34,121	32	1,566	11,135	7	1,019	7,112	13
2,500 to 4,999	(NA)	(NA)	(NA)	2,036	7,238	5	1,800	6,301	12
1,000 to 2,499	(NA)	(NA)	(NA)	3,670	5,894	4	3,626	5,796	11
Less than 1,000	(NA)	(NA)	(NA)	9,646	3,874	3	9,124	3,251	6

NA Not available. ¹ For population group of 250,000 or more. ² 100,000 to 249,999. ³ Less than 10,000.

Source: U.S. Bureau of the Census, 1992 Census of Governments, vol. 1, No. 1, *Government Organization*.

Figure 9.1
State Lottery Proceeds: 1980 to 1993



Source: Chart prepared by U.S. Bureau of the Census. For data, see table 483.

BY COURIER

September 8, 1995

Ed, Julie et al,

Attached are a disk (Wordperfect 6) and hard copy describing Labor Department programs in California which may be appropriate for the K-12 event in September. In addition, I have included a hardcopy description of a DC-area program, The Lazarus Foundation, which accepts, refurbishes and then donates surplus computer hardware to deserving third parties.

We will be meeting on Monday with Lou Finch and his crew to discuss the lifelong learning initiative.

Let me know what else you may need in the interim.

Regards,

Jon Low
219-6045
jlow@dol.gov

Paul Dimond
Johnathan Sallet
Mike Schmidt
Our Life Long Learning
team is MOVING out
fast.

Any of these
would be good adds
to the 21st Visit.
Ed

U.S. Department of Labor
Employment and Training Administration

Selected Descriptions:

California School-to-Work Projects / Related Initiatives

September 8, 1995

Project / Initiative Index:

Economic Development Network of California Community Colleges (Statewide; Fresno)	1
Burnett Academy: Accelerated Schools Project (San Jose)	3
Berkeley Biotechnology Education, Inc. (Berkeley)	5
Don Bosco Technical Institute (Rosemead)	7
Apparel and Accessories Marketing Program (West Covina)	9
King/Drew Medical Magnet School (Los Angeles)	10
Los Angeles Telecommunications Academy	18
Workforce Los Angeles Youth Academy - LAUSD	20
Youth Service Academy	22
Health and Bioscience Academy (Oakland)	24
Pasadena Health Careers Academy	32
Graphics Arts Academy (Pasadena)	35
Sequoia High School (Redwood City)	38
San Diego Partnership: Consortium and PIC	40
Scripps Ranch High School	42
Shell Youth Services Academy (Los Angeles)	44
Project Riverbank (Modesto)	46

ED-Net utilizes the flexibility of California's community colleges to meet the training requirements of a rapidly growing workforce across the state. In this way, the community college system makes a practical partner with business, industry, and government as well as economic development agencies.

ED-Net has a fully operational telecommunications system to facilitate the identification and coordination of customized training from around the state. An electronic bulletin board and mail system also provides access to ED-Net's database of information about economic development programs, resources, and profiles of the 107 California community colleges.

Burnett Academy
Accelerated Schools Project
850 North Second Street
San Jose, CA 95112

Frank Howseman-Cabral
Principal
(408) 998-6267

Criteria:

Cited as an exemplary high school dropout prevention program in a Brandeis University report of Youth Research and Technical Assistance Project.

Source of Information:

Center for Human Resources, Brandeis University Burnett Academy IN Practitioner's Guide to Program Options/Dropout Prevention Strategies for In-school Youth. pp. 56-58. Waltham, MA: Center for Human Resources, Brandeis University, Heller Graduate School, December 1992. This information has since been reviewed by the contact person listed. (Prepared for the U.S. Department of Labor, Employment and Training Administration, by the Youth Research and Technical Assistance Project.)

Date of Information: 1995 Type of Document: Report

Description of Program:

Editor's Note: The following synopsis is based on materials extracted directly from the document.

Burnett Academy is the nation's first accelerated middle school, an extension of the Accelerated School program started in elementary schools by Henry Levin of Stanford University. The essential elements of this approach include:

- Participatory decision-making;
- Development of a unifying purpose;
- School/community input; using the school-as-a-whole concept, all staff, teachers, administrators, students, and parents work together on issues affecting the school;
- Accelerated learning, abolishing the practice of "tracking," focusing on real-life situations, and grouping students cooperatively on projects; and
- Using teachers as resources.

The Instructional Cadre used student surveys and other information to create a database that tracks instructional strategies that prove successful for both teachers and students. The database also contains individual teachers' strengths and interests so that they

can contact one another for ideas or suggestions.

In 1991-92, the Accelerated School project at Stanford started a second and third pilot middle school, and several Accelerated Middle School Satellite Centers have established accelerated middle schools in other parts of the country. The Accelerated Schools Project demonstrates how de-tracking may lead to an enriched and challenging environment for young people, rather than a remedial one. The change also helps bring all students into the educational mainstream.

Last Revision of Information:
February 27, 1995

Berkeley Biotechnology Education, Inc.
P.O. Box 2586
Berkeley, CA 94702

Mary Alice Rathbun
Executive Director
(510) 705-5149 FAX (510) 705-5237

Criteria:

A school-to-work program intended to provide the necessary science and math training and specific technical skills appropriate for jobs in the biotechnology industry.

Source of Information:

This information was obtained from the contact person listed. (Information about this program can also be found in the document entitled "New Century Workers: Effective School-to-Work Transition Programs" by the Center for Workforce Preparation.)

Date of Information: 1995 Type of Document: Project Profile

Description of Program:

Editor's Note: The following synopsis is based on materials obtained from U.S. Department of Labor personnel. The information has been updated by the contact person listed.

Berkeley Biotechnology Education, Inc., grew out of a need to meet the changing demands of the industry of biotechnology--the science of growing and nurturing living cells in the development of medicines and food products--and to provide students with hands-on experience in this field. Area biotechnology companies and science educators have partnered with the Berkeley Unified School District and the Peralta Community College District in this highly specialized school-to-work effort. The program is funded largely by Miles Inc.'s Berkeley-based Biological Products Division.

The program is intended to provide the necessary science and math training and specific technical skills appropriate for jobs in this emerging industry. The program includes a Biotech Academy within Berkeley High Schools, summer jobs and career days for program participants, and mentoring and tutoring by volunteers at Miles and other companies. Further, Berkeley Biotechnology Education, Inc., provides for special teacher training through paid summer positions in the biotechnology industry and funding for elementary and junior high school projects to encourage students in the study of science and mathematics. This multi-faceted program has outlined educational objectives in 13 areas:

- The history of biotechnology;
- Scientific concepts;
- Analysis and problem solving;
- Ethics;

- Business organization;
- Career paths;
- Regulation of the biotechnology industry;
- Industrial safety;
- Industrial equipment;
- Instrumentation and automation;
- Computer literacy;
- Communication skills; and
- Interpersonal skills.

WORK-SITE TRAINING

An integral part of the program is the provision of practical, hands-on work experiences in the biotech industry. This experience is planned to occur midway in the Academy and the Institute training cycles. The high school internship, already completing its second year has been key to uncovering the core issues that need to be addressed at both the workplace and the schools as the program develops.

PROGRESS TO DATE

During the summer of 1992, 19 high school students began the first of 30 years of summer internships offered with Miles Inc. In the summer of 1993, the program expanded to include 24 students at three different companies. A high percentage of students continued the biotech training experience by entering the first Biotech Academy class in September 1993.

Last Revision of Information:
July 19, 1995

Don Bosco Technical Institute
1151 San Gabriel Boulevard
Rosemead, CA 91770

Susan G. Bowers
Director of Development
(818) 307-6527

Criteria:

Semi-finalist, U.S. Department of Labor "Labor Investing for Tomorrow" Award, 1992

Source of Information:

Washington, DC: U.S. Department of Labor, Labor Investing for Tomorrow Award Application, 1992

Date of Information: 1992 Type of Document: Award application

Description of Program:

Editor's Note: The following synopsis is based on materials extracted directly from the award application.

Don Bosco Technical Institute is an independent private, non-profit, fully accredited high school and junior college for young men located on a 35-acre campus in Rosemead just east of downtown Los Angeles, California. The school, which has 1,000 students and 5,300 alumni, is the only one of its kind in the Western United States. Its successful niche comes from the combination of offerings in college preparatory academics including science, mathematics, and the liberal arts with highly specialized, rigorous training in one of seven technological disciplines. Students enter in the freshman year of high school and then choose whether to graduate in four years with a high school diploma or to stay for five years and earn an Associate in Science degree. Don Bosco Tech has a 40-year tradition of success in preparing employees for the workforce. The school's success, measured by the number of graduates who gain employment each year, and by the number of successful, productive alumni, is due to the innovative use of technology education and close partnership with a variety of employers throughout the Los Angeles basin.

Bosco Tech's results-oriented program requires that all students learn traditional academic and technology work place skills as well as the newly recognized, non-traditional abilities to manage resources; use interpersonal skills, acquire, interpret and evaluate data; understand various systems; and apply a range of modern technologies. This combination of science, technology and the liberal arts is viewed by many educators as the requisite first step in helping to remedy some of the nation's educational skills.

Of timely interest is the diversity of our students. They come from 56 different communities in Los Angeles, Orange and Riverside

counties. Our student body is 67 percent Hispanic and 15 percent Asian/Pacific. A recent survey of our graduating class showed that 73 percent of the students plan to major in math, science, engineering or technology.

All students, whether college bound or preparing to go directly to work, major in technology. Their choices include Power and Transportation, Construction, Design, Electronics and Computer Graphics Communications, Manufacturing or Materials Science Technologies. To graduate, every AS degree candidate must complete one semester of Cooperative Education, which means full-time, supervised work with a local company. Bosco Tech integrates academics and technology across the curriculum, and the junior college program requires cooperative education for every student.

Each technology has an advisory board whose members represent a number of industries and meet twice annually as well as informally throughout the year. These individuals provide advice on curriculum, employment opportunities, equipment purchases and program design and secure donations of cash, equipment and supplies. Also, associations and individual businesses provide scholarships to students and employment for both graduates and cooperative education participants. Members of the advisory boards lecture in technology classes or provide on-site tours and experiences throughout the school year.

Last Revision of Information:
February 22, 1993

**Apparel and Accessories Marketing Program
East San Gabriel Valley Regional Occupational Program (ROP)
1024 W. Workman Ave
West Covina, CA 91790**

Dr. Laurel Adler
(818) 960-3625

Criteria:

Noteworthy program identified by the Department of Labor,
Employment and Training Administration, Regional Office.

Source of Information:

This information was originally obtained from a regional office
of the Employment and Training Administration (ETA), U.S.
Department of Labor (DOL). The information has since been reviewed
by the contact person listed.

Date of Information: 1994

Description of Program:

The Apparel and Accessories Program (AAP) provides a broad
introduction to retail marketing and management skills. Students
study store layout and merchandise arrangements and produce their
own fashion promotion events on video. Throughout the program,
academic skills and critical thinking are reinforced by applying
them to hands-on learning and practical tasks.

In a geographical area with a high-school dropout rate of nearly
40%, the AAP program has had a marked effect on drop-out rates and
has increased the percentage of students pursuing higher education.
More than 50% of program completers continue with higher education,
and 70% are able to pass the employment readiness tests.

A recently completed agreement with Los Angeles Trade and Technical
College and the California State University, Los Angeles, offers
educational opportunities through the baccalaureate degree to all
students. Under this agreement, students completing one level of
the program are automatically accepted into the next level.

WHAT THE VISITOR WILL SEE:

The program has incorporated the SCANS material in all of their
training programs relating individual competencies to the overall
goals of each training component being taught. In 1990, the AAP
received the Secretary of Education's award as an outstanding
vocational-technical education program.

SDA CONTACT PERSON:

Robert G. Medina, (213) 485-5019

Last Revision of Information: March 24, 1994

King/Drew Medical Magnet High School
1656 East 118th Street
Los Angeles, CA 90059

Ms. Edna Malbrough, Coordinator
(213) 566-0420

Criteria:

A magnet high school including grades 10, 11, and 12 that promotes college aspirations for all of its students and ensures that all entrants graduate from high school qualified to enter the college program of their choice.

Source of Information:

Jobs for the Future From High School to High-Skilled Health Careers. New Models of Work-and-Learning in Health Care Cambridge, MA: Jobs for the Future, December 1992 Information has since been updated by the contact person listed.

Date of Information: 1994 Type of Document: Report

Description of Program:

Editor's Note: The following synopsis is based on materials extracted directly from the document.

King/Drew is a magnet high school including grades 10, 11, and 12. The high school is on the grounds of the Charles Drew University and next door to the University's College of Allied Health. Across from the school is the Martin Luther King, Jr. General Hospital, the program's main hospital partner. The school is located in Watts, one of the poorest communities in Los Angeles.

Work-based learning is part of the curriculum for all students. There are currently approximately ninety work experience sites. The various departments of the hospital and university supply the majority of placements. A coordinating teacher works with worksite supervisors to develop learning activities and to act as a "teaching coach."

The King/Drew High School promotes college aspirations for all of its students. It aims to ensure that all entrants graduate from high school qualified to enter the college program of their choice. While the school expects all students to complete the prerequisites for higher education health courses, it does not attempt to train students in specific health professions.

Program leaders describe themselves as using the resources of the health industry to improve college preparatory education. They see this mission, rather than a vocational one, as the best way to restore parental support for inner city schools. They believe that with a vocational mission, the political consensus needed to sustain a quality educational program in the inner city would not have been possible, as middle and upper class families would not

send their children to a vocational school. The health professions focus was chosen only to make coordination with worksite manageable. It would have been too difficult to arrange work experience placements at a wide range of sites across different industries.

Service to the community is a major motive for Martin Luther King, Jr. Hospital's involvement. Many of the students are from the local community and the hospital wants to give them a chance to understand and experience working in this environment. There are several occupations for which the hospital finds it difficult to recruit qualified staff, such as radiology technicians, and the staff hopes that some students will become interested in these fields. Some students have returned to work at the hospital, but the program has no accurate count.

HISTORY

Dr. Ronald Bloom, a neonatologist and assistant professor at Martin Luther King, Jr. General Hospital and Drew University, was instrumental in developing the idea for the school and turning that idea into reality. A 1980 report on the situation in Watts 15 years after the riots prompted him to think about how to improve the life chances of a child growing up in this economically distressed community. Bloom saw that young people in Watts rarely had access to educational programs that developed links to rewarding careers. The King/Drew program, therefore, exposed students to a structured combination of learning and work, giving them access to institutions of higher learning and hospital careers.

The hospital's chief administrator strongly supported the idea of using the hospital as a place for students to learn believing it would be good for the children, the hospital and the community. He wrote and distributed a letter to all hospital staff asking them to support the program and then invited teachers to start working in the hospital.

The first year of operation for the King/Drew program was 1982.

THE STUDENTS

There are no academic or behavioral prerequisites for entry to King/Drew. Any student may choose to attend the magnet based solely upon his or her interest in health careers. The school's 207 student spaces quickly fill each year. Students may choose to enter or leave the magnet after any grade. Approximately five to ten students transfer every year after 10th grade from the King/Drew magnet to another school.

As King/Drew is a magnet high school, students from anywhere in the Los Angeles Unified School District may enroll. The School District provides transportation to and from the school for all

students. Currently, approximately 20 percent to 30 percent of the students are from the local Watts community. During the program's first years, local students made up a large share of the student body. As a result of the program's success, it now attracts a city-wide applicant pool. However, local community leaders are still very much involved in the program.

Approximately 60 percent of students are poor enough to receive free lunches. Sixty five percent of students are African American, and 22 percent are Latino. The majority are female.

STRUCTURE AND MANAGEMENT OF PARTNERSHIPS

Coordinators

The school has a principal along with a coordinator who develops new work experience placements and monitors students' experiences at the hospital, colleges, and other health care sites. The hospital and other health care organizations do not employ administrators to manage the partnership. Individual site supervisor participation is voluntary. These site "mentors" work with the coordinator to arrange work experience placements for students and resolve problems as they arise.

Post-secondary institutions

Medical faculty involved in research at Drew University accept juniors and seniors and train them in the methods of scientific investigation. Students are required to complete a science project every year. They are expected to draw on their work experience and use the Drew University medical library as a resource for their projects. Students involved in independent research activities also have access to faculty and facilities at the Cal State Los Angeles and Dominguez Hills campuses, as well as UCLA.

The school is currently negotiating with the College of Allied Health (which offers both two-year and four-year programs) to develop a curriculum in which high school students would take classes at the College in midwifery, physical therapy, and other allied health fields. The school has a close relationship with Southwest Community College, but the magnet schedule is too tight for students to take classes there. Southwest Community College has offered scholarships to magnet graduates.

CURRICULUM DESIGN

King/Drew Medical Magnet is not a vocational school and there is no voc-tech track within the school. The goal of the school is high school graduation for all, and every student is encouraged to go to college. The work experience component of the program is very time consuming, and therefore the school does not offer electives or programs such as fine arts, home economics, shop, or athletics. In addition, courses in certain practical subjects (such as typing)

are not offered. Students are expected to learn such skills during their work experience. The teacher/student ratio is approximately one to twenty, and half of the staff teaches math or science.

Grade 10: In addition to English, biology, algebra or geometry, and Spanish, students complete one semester of Education and Career Planning and one semester of Health, which are work experience courses conducted at four sites.

Grade 11: In addition to chemistry, algebra or geometry, US history and Spanish, and one-semester courses in American literature and contemporary composition, students do two semesters of Hospital Careers. This is a work experience course conducted at three sites.

Grade 12: In grade 12, students take two semesters of advanced placement English or one semester courses in world literature and expository composition. They also take physics or physiology, algebra 2 or trigonometry or calculus, and two semesters of Hospital Occupations. This is a work experience course which involves completing two full research papers based on investigations conducted at the senior-year work experience sites. For example, a student working in a blood bank might do a project on sickle cell anemia. Senior students may do their research projects individually or in teams. Seniors also select from the following one semester offerings: introduction to psychology, drama, U.S. government, and economics.

All teachers use worksite experiences as a foundation for vocabulary building, oral presentations and journal writing, especially in 10th grade English, Health, Education and Career Planning, and Spanish. In the 11th grade, the social studies teacher requires the students to select a topic related to their work experience for a term paper; she then teaches the students all the steps required to write an interdisciplinary paper. The Spanish teacher sends her students to the hospital to serve as translators. Career options and explorations are continued in 11th grade English classes. Work and learning are integrated in the senior year through the two research projects.

WORK-BASED LEARNING

Work experience is a part of the curriculum for all students. They are not paid a stipend. Over the course of the year, students work at a number of different sites. In 10th and 11th grades students cover four sites over one academic year; in 12th grade, two sites. Students attend work experience on the same day each week. In 10th grade, students spend three hours a week at their sites; in the 11th and 12th grades students spend five hours.

At any one time, the majority of students have their work experience placement at Martin Luther King, Jr. General Hospital. It is a 480-bed teaching hospital with a full range of clinical

services. All hospital departments are invited to take students, but each department head must decide whether his or her unit has the time and energy to participate in work-based learning. The hospital does not make special allowances for departments that take students. There are 87 work experience sites altogether, including many outside of the Hospital (for example, Kaiser Permanente Learning Center, child care centers, doctors' offices). The most popular placements are Drew University's veterinary department and the labor and delivery room at the Hospital.

At the beginning of each year, students choose (from the list of available sites) the six to eight sites where they would like to work; the program is able to accommodate most student requests. Seniors are placed first, then juniors, then sophomores, so that seniors have the opportunity to work on their research projects in the areas that interest them. Sophomores are placed in departments where the work experience is introductory in nature.

Before a site takes students, the coordinator, a teacher, and the mentors meet to develop student learning objectives which define what the students are to learn during their placements. The objectives are not narrowly vocational, technical or scientific, but are designed to help students gain a broad understanding of hospital work. Students are expected to understand the sociological, financial, and political aspects of their work experience.

The first site visit by a student involves more observation than action. In subsequent visits students are expected to participate in the work. For example, in labor and delivery, first time students job shadow and watch deliveries. Second and third time students wait with expectant mothers who are in labor, taking their blood pressure and monitoring instruments.

Students record what they observe in a journal each time they go to a worksite. Students are expected to interview workers about their jobs, and to develop vocabulary by writing down and learning new words related to their work placement.

Examples of work-based learning activities:

1. In a genetics lab, students learn the basics of chromosome preparation, such as how to stain slides, make cell culture, and count chromosomes under a microscope, as well as the social impact of chromosomal problems such as Down's Syndrome.
2. In the Respiratory Therapy department, students are expected to understand respiratory physiology, to know how to use the machinery, and to know about the career paths and associated educational requirements of this field.
3. In an adult day care center, students are expected to understand the services that are provided, what the

responsibilities of various employees are, and what the clients' needs are. For example, they would be expected to understand the problems of social isolation for the elderly and the importance of appropriate exercise.

4. In the trauma department, students learn about triage and emergency first aid, but they are also expected to reflect on the costs of violence to society.

Either the coordinator or a teacher briefly visits every student worksite daily -* this means about thirty site calls are made each day. Every day one teacher is designated the rollbook carrying teacher. He or she collects and grades the day's journals.

The first period of each day is always spent at the school, and during this time students are required to get dressed and ready for work. They are checked before they leave the school: they must wear socks, shoes, smock, no shorts, have an i.d. badge, a notebook, and an evaluation form.

Each day they go to a site, students are graded on a scale of one to five by their mentor. They are graded on attendance, application to duty (doing what they were told to do), ability to comprehend and follow directions, and asking smart questions. Mentors also formally evaluate students at the end of the students' work experience.

The school helps students arrange summertime learning and work experience. Grants allow some students to do summer research programs at UCLA and Cal State, as well as Drew University. Martin Luther King, Jr. General Hospital does not hire students, but Kaiser Permanente Hospital does. Some students go to special college programs for high school students (this summer one student went to Egypt). The school has placed students in programs all over the country including Harvard University, Howard University, and private college preparatory schools like Exeter.

STAFF SELECTION AND PROFESSIONAL DEVELOPMENT

Teachers do not have to have a health care background or interest to work at the high school. However, most have some type of health background.

The school's developers have found that many teachers have difficulty using worksites and the knowledge students obtain from worksites in their curriculum. Often teachers are inclined to see work as separate from the academic process. To encourage the integration of students' site experiences into the curriculum, the program provides teachers with many opportunities to visit the worksite, and recognizes those who develop integrated curriculum units. Science teachers, as well as some teachers from other disciplines, have worksite visits included in their regular duties. The program provides release time to teachers who do not have a

regular opportunity to observe students' worksite learning.

Formal training for work experience supervisors consists of a brief introductory session given by the school's coordinator. At the beginning of the program, supervisors felt that student problems were not really their business, but now they make sure that a student who is not performing up to expectations gets counselling help from the coordinator. Each supervisor is encouraged to take only one or two students at any one time.

RESOURCES AND EXPENSES

The high school began with a three-year grant from the Robert Wood Johnson Foundation for curriculum development.

The hospital and other participating employers make substantial "in kind" contributions of staff time. Their employees provide students with structured learning opportunities in their offices and laboratories and offer supervision and mentoring.

Transportation and coordination of student placements are major costs of the work-experience component of the program. The school uses at least one shuttle bus every day, sometimes two, to transport students to and from their work experience or research sites in the community. The school employs a full-time coordinator to develop student work experience sites. These expenses are covered by school district funds. In addition, the school has received private funding for some of its special activities, such as the science fair, and for equipment.

EVALUATION AND FUTURE PLANS

Seven classes have graduated from the King/Drew Magnet (the first class graduated in 1985). Over these years, the graduating class has ranged in size from 28 to 62. Altogether, 333 students have graduated from King/Drew; all but ten of these have continued to higher education or entered military training. Graduate students at UCLA, through the auspices of the State Department of Education, are currently conducting a formal follow-up study of program graduates. The administration and faculty at King/Drew feel strongly that the school is indeed accomplishing its goal of exposing minority students to the various careers in health care. Many of its graduates have entered health care training programs sponsored by colleges, professional training facilities, and the military.

The Los Angeles Board of Education approved the construction of a new expanded facility for King/Drew. The facility, scheduled to open in 1995, will be located within a few yards of the present site. The new school will house approximately 1,700 students from 9th grade to 12th grade.

FOR MORE INFORMATION CONTACT:

Ms. Julia Richmond, Assistant Hospital Administrator, &
Dr. Ronald Bloom, Assistant Professor of Pediatrics
King Drew Medical Center
12021 South Wilmington Avenue
Los Angeles, California 90059
Ms. Richmond: (213) 603-8176
Dr. Bloom: (213) 563-4820

Last Revision of Information:
September 27, 1994

Los Angeles Telecommunications Academy
644 West 17th St.
Room 203
Los Angeles, CA 90015

Ella Franklin
(213) 742-7513

Criteria:

A cooperative education program designed to provide the basic academic and life skills needed to succeed in today's world of work. The mission of the Youth Academies Program is to prepare students for success in school and in the workplace.

Source of Information:

This information come from material obtained from Telecommunications Academy.

Date of Information: 1994 **Type of Document:** Promotional

Description of Program:

Editor's Note: The following synopsis is based on materials extracted directly from the document.

The Los Angeles Telecommunications Academy is a partnership program sponsored by Pacific Bell in cooperation with the U.S. Department of Labor and the Los Angeles Unified School District. The Telecommunications Academy is part of the Youth Academies Program, which is a cooperative education program designed to provide the basic academic and life skills needed to succeed in today's world of work. The Academy consists of three areas: the worksite, the high school/adult school diploma program, and the cooperative vocational education class.

The mission of the Youth Academies Program is to prepare students for success in school and in the workplace. Each Academy serves students who meet the eligibility requirements and are motivated and willing to participate in all activities of the academy.

Applicants must be:

- U.S. citizens or eligible non-citizens with proper documentation;
- 16 through 20 years old;
- Enrolled in an LAUSD school or options program; and
- Identified as having the potential to benefit by participation in an Academy.

Benefits of the Academy Programs are:

- An employee mentor on the worksite;
- Paid on-the-job training four afternoons per week;

- Diploma credit for the required cooperative vocational education class;
- Career guidance and counseling for vocational training, college, or employment seminars; and
- Involvement of parents and guardians.

Telecommunications Academy members must:

- Maintain regular attendance at their school, the worksite, and the weekly cooperative vocational education class;
- Make satisfactory progress toward the completion of diploma class requirements;
- Attend pre-employment testing, interview, and training sessions;
- Have good reading and math skills. Students who need assistance will be given the opportunity to reapply later; and
- Agree to participate in the Academy for a minimum of one year.

Applications may be obtained from, and returned to, the high school Career Adviser or the Counselor/Coordinator of the high school/adult options programs.

Last Revision of Information:
September 6, 1994

**Workforce Los Angeles Youth Academy
Los Angeles Unified School District
450 North Grand Avenue
Los Angeles, CA 90012**

Lynne Porter
Project Director
(213) 625-6251

Criteria:

Cited as an exemplary high school dropout prevention program in a Brandeis University report of Youth Research and Technical Assistance Project.

Source of Information:

Center for Human Resources, Brandeis University Workforce Los Angeles Youth Academy IN Practitioner's Guide to Program Options/Dropout Prevention Strategies for In-school Youth. pp. 51-53. Waltham, MA: Center for Human Resources, Brandeis University, Heller Graduate School, December 1992 (Prepared for the U.S. Department of Labor, Employment and Training Administration, by the Youth Research and Technical Assistance Project.)

Date of Information: 1992 Type of Document: Report

Description of Program:

Editor's Note: The following synopsis is based on materials extracted directly from the document.

A joint project of the Los Angeles Community College District, the Los Angeles Unified School District, and local industry and government, Workforce LA Youth Academy is a component of the collaboration being generated through Workforce LA. The proposal for the Youth Academy resulted from the changing skill requirements at the workplace and the lack of qualified entry-level workers to fill these positions. The Academy developed three alternative, work-based training models in three areas: telecommunication, banking services, and public service.

The Youth Academy's mission is to prepare 1,000 young people, between the ages of 14 and 20, for success not only in school but also in the workplace. The main elements of the project include: recruitment and selection, assessment and counseling, parental approval, enrollment into the Academy, assignment to a City mentor and job, certification of academic and work performance, and referral to post-secondary employment and educational opportunities. The School District's role includes: targeting students who can benefit from a structured work-school experience, coordinating the activities of schools and the City departments and agencies, arranging flexible scheduling and individualized instruction, and evaluating the Youth Academy's influence on student academic achievement and career preparation. The City of

Los Angeles refers students to jobs, assigns a City employee to serve as mentor to each student, and connects education with real workplace demands.

Student participation progresses in accordance with educational grade levels. The program incorporates a full-time educational program with a 12-30 hour work experience schedule. Regular school attendance and satisfactory performance is required of all students participating in the Youth Academy program. The academic and personal support system provided to the students is a critical component for success of the program. In addition to financial incentives and job training benefits, students receive concurrent academic credit towards graduation as an incentive for participation in the program. Each student is also assigned to a mentor/supervisor on a one-on-one basis during the program. There is also a support system for students who wish to continue their education and training through college.

Last Revision of Information:
January 26, 1994

**Youth Service Academy
Los Angeles Youth Service Academy
Los Angeles Unified School District
Senior High School Division
644 West 17th Street, Room 202
Los Angeles, CA 90015**

Dawn Hopkins
Coordinator
(213) 765-3494

Criteria:

Cooperative education program designed to provide the basic academic and life skills needed to succeed in today's world of work.

Source of Information:

Youth Service Academy Office Youth Service Academy
Application Los Angeles, CA: Youth Service Academy Office, 1993
(Document is an application for students to enter the program.)

Date of Information: 1993 Type of Document: Promotional

Description of Program:

Editor's Note: The following synopsis is based on materials extracted directly from the document.

The Los Angeles Youth Service Academy (YSA) is a partnership program sponsored by the City of Los Angeles in cooperation with the Los Angeles United School District and funded by the Department of Water and Power. YSA is a cooperative education program designed to provide the basic academic and life skills needed to succeed in today's world of work. The Academy consists of three areas: the worksite, the high school/adult school diploma program and the cooperative vocational education class.

POPULATION SERVED:

The mission for the Youth Service Academy is to prepare a maximum of 1,000 students for success in school and the workplace. The Academy will serve students who meet the eligibility requirements and are motivated and willing to participate in all activities of the academy.

ELIGIBILITY CRITERIA:

- Resident of the city of Los Angeles;
- U.S. citizens or eligible non-citizens with proper documentation;
- 16 through 20 years old;

- Enrolled in a Los Angeles Unified School District (LAUSD) school or options program;
- Identified as having the potential to benefit by participation in the Academy; and
- Considered to be at risk of not earning a diploma.

ACADEMY BENEFITS:

The benefits of participation in the YSA are numerous. One of the most important is the demonstration of job skills and positive employee behaviors and attitudes by a City of Los Angeles employee mentor. There is also compensation for the on-the-job training at a City of Los Angeles work site four afternoons per week. Work hours are paid at a salary range of \$5.21 - \$7.01 per hour. The students do receive diploma credit for the required cooperative vocational education class which meets one afternoon a week. The students also receive career guidance and counseling for vocational training, college or employment and attend workshops and seminars that promote leadership skills.

ACADEMY REQUIREMENTS:

- Maintain regular attendance at their school, the worksite and the weekly cooperative vocational education class;
- Make satisfactory progress toward the completion of diploma class requirements;
- Perform 30 hours of community service a year; and
- Agree to participate in the YSA for a minimum of one year.

Last Revision of Information:
October 15, 1993

**Oakland Health and Bioscience Academy
Oakland Technical High School
4351 Broadway
Oakland, CA 94611**

Patricia Clark
Director
(510) 658-5300

Criteria:

A school-to-work program that targets at-risk students, operates as a school-within-a-school, aims to optimize the students' academic achievements, and provides work experience in health and bioscience career opportunities.

Source of Information:

Jobs for the Future From High School to High-Skilled Health Careers. New Models of Work-and-Learning in Health Care Cambridge, MA: Jobs for the Future, December 1992

Date of Information: 1992 **Type of Document:** Report

Description of Program:

Editor's Note: The following synopsis is based on materials extracted directly from the document.

The Oakland Health and Bioscience Academy follows the model originally developed in Philadelphia and extended in the California Peninsula Academies. It targets at-risk students, operates as a school-within-a-school, aims to optimize the students' academic achievements, and provides work experience. The Academy places a strong emphasis on academic-technical integration; the curriculum has an applied orientation, yet a very strong emphasis on academic subjects.

The goal of the program is to expose students to, and nurture their interests in, health and bioscience career opportunities while, at the same time, preparing them academically and technically for both postsecondary education and skilled, entry-level jobs. All students are expected to complete the prerequisites for higher education health courses. Some students seek entry-level jobs in the health industry after graduating. Many students combine postsecondary study and health/bioscience work. The Academy helps with both postsecondary applications and job placements.

The Health and Bioscience Academy Serves as a demonstration project for both the California Academic Partnership Program (CAPP) and the California Partnership Academies. In both roles, the program provides technical assistance to other partnership projects and Academy replication efforts.

HISTORY

The Oakland Health Academy began in 1985 in response to the critical need to increase the number of under-represented minorities in the health professions. Local hospital CEOs approached the Oakland Unified School district with their concern that few Oakland graduates were qualified for even the most basic hospital positions and that only a handful had the education needed to enter a health career path. Start-up funding was obtained through a Peninsula Academies Replication grant from the state Department of Labor. The Academy's director and teachers were recruited from the staff at Oakland Tech and worked through the summer of 1985 on curricula for the new program.

THE STUDENTS

The Academy recruits from 9th grade, and students participate in the program from grades 10 through 12. It is one of nine academies in the Oakland Unified School district; several more are planned. The program can accommodate approximately 175 students (that is, 50 - 60 students per grade). Classes are small with an average size of 26 students.

Most students enter the Academy after the 9th grade; however, some students enroll as entering or repeating 9th graders. The Academy serves as a magnet program and recruits students through a series of district-wide presentations and home mailings to at-risk 9th graders. The primary consideration for acceptance is interest in the Academy program and in the health/medical/bioscience fields. The Academy targets students considered at-risk because of a past record of underachievement and low test scores, poor attendance, low family income, or disinterest in the regular school program. Students must submit a written application and a form indicating parental and/or supporting adult consent; students are also interviewed prior to acceptance.

Most students enter the Academy with a history of academic failure and a lack of employment-related skills. However, the Academy accepts a full range of students to avoid at-risk labeling, to provide academic role models, and to continue its commitment to a heterogeneous, non-tracked approach. All Academy students are perceived as students with potential. Because of student performance at the Academy, Oakland Tech and the Oakland Unified School District are moving away from tracking and toward a system of district-wide Academies, each with a different career focus.

The Academy student body reflects the ethnic composition of the district: approximately 70 percent are African American, 22 percent are Asian, 4 percent Latino, 3 percent white European, and 1 percent from other ethnic groups. The program strives for gender balance and, in contrast to many other health programs, succeeds. Males constitute 40 percent to 50 percent of each grade.

STRUCTURE AND MANAGEMENT OF PARTNERSHIPS

Coordinators

A lead teacher serves as Director of the Academy, and two other teachers act as Assistant Directors. Additionally, all core Academy teachers share administrative responsibilities. The Academy also employs a part-time industry liaison to help coordinate student job placements and the mentor program; a parent is employed as parent liaison. A computer consultant is used to work with staff and students on developing multimedia learning. At the District level, there is also a Magnet Programs Office which further supports and coordinates Academy activities.

Industry, community, and post-secondary partners help guide Academy program operations and development through an Advisory Board which has been in existence since the early planning stages of the program.

Employers

Several local hospitals and bioscience industry employers provide the Academy with mentoring, student internship placements and part-time jobs, assistance with curriculum and staff development, financial support, and equipment. These employers include Kaiser Permanente Hospital, Children's Hospital, Highland Hospital, West Oakland Health Center, Piedmont Gardens (Senior Care Facility), Merritt-Peralta-Providence Medical Center, Lawrence Berkeley Laboratories, Bay Area Bioscience Center, Hillcrest Clinic, American Red Cross, the Human Genome Project, and others.

Post-secondary institutions

Local post-secondary institutions assist with instruction, mentoring, tutoring, and curriculum and professional development. Post-secondary partners include Samuel Merritt College, Peralta Community Colleges, California State University at Hayward, St. Mary's College, University of California at Berkeley, University of California San Francisco Medical Center, and Life Chiropractic College.

A partnership project between the Academy and Samuel Merritt College and St. Mary's College, to improve life science instruction and student achievement in math and science, is particularly noteworthy. Through a series of faculty and student symposia, classroom presentations and visits, peer tutoring and study workshops, shadowing and role modeling experiences, the partnership encourages the development of new teaching materials and strategies and improved student learning in math and science. A project-centered, inquiry approach to life science instruction is stressed.

Community partners

Academy staff have cultivated a wealth of community resources to help them meet program needs. The Career Training Institute oversees the Academy student internships at Highland Hospital and provides employability training that is health-industry based. The director of the East Bay Black Quality Care Consortium divides her time between the Academy and the Consortium. Her goal is to make sure that more African American students enter into academic training and jobs in the health field. The American Red Cross trains students to lead AIDS awareness discussions, and the Center for Living Skills provides leadership training. IBM provides technical assistance (a loaned consultant) and training for Academy faculty and students. In 1990, the Academy received a grant of \$90,000 plus equipment from IBM in exchange for the production of computer-based biomedical and hospital employability curriculum units. This product will be available in December, 1992.

Other cooperating institutions

In 1990, the City of Oakland/Oakland Redevelopment Agency and the Oakland Unified School District formed a partnership to support the Oakland Academies program. The City of Oakland and its Redevelopment Agency saw upgrading the quality of its schools and the skills of its graduates as key to the area's economic growth and, in particular, to the revitalization of depressed neighborhoods. The Oakland Redevelopment Agency provides approximately \$1.2 million each year to the nine Academy programs in the district. In addition, the Agency provides technical assistance to the academies in curriculum and staff development and helps to broker new partnerships with employers. Recently, the Oakland Academies were awarded a Youth Apprenticeship grant from the U.S. Department of Labor, and the Health and Bioscience Academy will be one of the pilot sites involved.

CURRICULUM DESIGN

Block scheduling, or the grouping of students in special Academy classes, makes the Academy a small, cohesive community within the school: it allows students and staff to form supportive networks and creates a "family" atmosphere. Parents are involved through frequent contacts and activities. Classes are small, and ample tutorial assistance for those who need it is provided by peers or by students from University of California at Berkeley. Adult mentors from the health industry and from community organizations also play an important role.

Rather than "dumbing down" the curriculum for at-risk students, the Academy escalates them, requiring an additional unit of math, four additional units of science, and a half unit of computer education beyond the minimum graduation requirements at Oakland Tech. The curriculum integrates a demanding college track program with hands-on experience in school laboratories. Academy students are

enrolled in three to five Academy courses, one of which is a technical lab course. Students take double periods of science, along with English, math, and social science.

The Academy is a leader in the development of integrated curriculum and hands-on discovery approaches to learning. It has produced a Partnership Health Academies Curriculum Binder and a series of life science mini-units. An updated version of the binder and the mini-units will be available in December, 1992; revised editions of Health and Bioscience Integrated Curriculum for 10th, 11th and 12th grades by June, 1993.

One of the more exciting curriculum initiatives is an experiment with a problem-based learning approach to clinical instruction developed by Dr. Harold Barrows of Southern University Medical School. Working in teams and relying on self-directed research in a medical library, students must diagnose and come up with a treatment plan for a simulated patient. Teachers take on the role of coach, not lecturer, in this curriculum. Trained by Dr. Barrows in Spring 1991, Academy staff are field testing their first problem-based units this year.

The themes of health and medicine are woven through all subjects. Units in the academic subjects -* English, math and science -* relate to health careers, and are designed to reinforce what is taught in the vocational sections of the course. For example, in English classes, students learn medical terminology, explore questions of medical ethics, and read and write about medical issues. History classes include a recently developed unit on the history of medical science.

Students do extensive laboratory and project work in science classes which stress a hands-on, discovery approach to learning science, and include special health science and medical laboratory technique training. Academy science offerings include biology, biology lab, chemistry, conceptual physics, anatomy and physiology, physiology lab, advanced biology (with a biotech slant), and beginning and advanced health occupations.

Community service and paid internships in health care facilities, field excursions, industry-loaned instructors, summer jobs and other experiential learning opportunities reinforce and extend the lessons of the formal school-based curriculum. The Academy curriculum encourages students to integrate their learning at school and work through individual and group projects which relate classroom and clinical experiences.

Advanced Health occupations, a senior year class which includes laboratory work and a semester-long paid hospital internship, also encourages students to integrate academic and experiential learning. Topics covered in the class and laboratory include the role of community-based providers in the health care delivery system; ethical and legal issues of the health care worker; medical

terminology; death and dying; principals of body mechanics; medical asepsis; moving, lifting, and transporting patients; and other technical skills required to deliver basic patient care.

Eleventh and twelfth grade students also have the chance to learn technical skills and have academic enrichment through community college classes. Peralta Community College offers some of its classes at Oakland Tech to 11th and 12th grade Academy students, allowing them to gain advanced standing upon graduation in Peralta's Allied Health programs. Recently, Peralta Community Colleges were awarded a Tech Prep grant, and the Academy is a major partner in this project.

WORK-BASED LEARNING

During grades 10 and 11, students do volunteer work in hospitals and community centers after school and weekends for approximately 75 hours per semester. Between grades 11 and 12, summer internships are arranged for students, usually in local hospitals or laboratories. In grade 12, many students work in paid clinical placements and/or in community-based senior health projects.

The community service and hospital field placements provide students with leadership, communication and social skills, and a familiarity with working environments in the health industry. The primary value of these activities seems to lie in their motivational effects. While working in these settings, students are able to imagine what careers might result from their studies. Further, students contribute community work of real value and gain a terrific boost from the mentoring they receive.

In most cases, students get significant hands-on training in technical skills during their internships. In other cases, student learning opportunities are in service-related areas.

The Academy would like to see structured work-based learning become the heart of its curriculum and is working with its partners to develop the instructional objectives and experience-based curriculum for the student internships. The National Economic Development and Law Center, the Career Training Institute, and Highland Hospital are helping the Academy make its internships high value learning experiences. Twenty five Academy students are participating in a model internship program at Highland Hospital. Another twenty-five students are employed at Kaiser Permanente through a summer youth employment program; aspects of the summer program are being institutionalized year round. Other hospitals, labs, and clinics participate.

STAFF SELECTION AND PROFESSIONAL DEVELOPMENT

Academy teachers meet twice a week; once to review students' progress and general program concerns and once to work on integrated curriculum and professional development. They also

participate in several staff workshops and retreats each year. The Academy's growing network of community and business partnerships continues to produce new staff development opportunities. Recently the Academy received funding for a model professional development partnership project in science and mathematics. This project involved a number of the Academy's post-secondary education partners and supported training in problem-based learning and hands-on approaches to teaching science and mathematics.

Due to high turnover in both district and school administration in the last few years, the Academy has had less control than it would like over the assignment of all its teachers and the scheduling of all Academy classes. The Oakland University Forum, a coalition of business and university leaders, is working with the district to resolve this concern.

RESOURCES AND EXPENSES

Start-up funding for the program came from the state's Peninsula Academies replication grant: \$25,000 for the planning phase, and \$50,000 for implementation in each of the first three years. The grant required both a district and business match, and funding was performance-based. The Oakland Unified School District covered costs of remodelling the classroom/work-space for the program and the additional teaching staff required to reduce class sizes. Local hospitals provided speakers, instructional supplies, and summer job opportunities. In 1987, the Academy received a three year grant from the California Academic Partnership Program (CAPP) of \$165,000 to develop life science curriculum and improve post-secondary access for Academy students.

In 1988, the California legislature extended funding for state Partnership Academies and increased the amount to approximately \$60,000 each year. As part of its partnership agreement with the school district, the Oakland Redevelopment Agency provides approximately \$150,000 each year to the Health and Bioscience Academy to fund student internships, industry and parent liaisons, curriculum development, and the extra staff required to operate smaller class sizes and provide two-period release time for the Academy director. School district funds also support additional teaching staff. The Academy continues to garner contributions of equipment and money from industry, private foundations, and other sources.

EVALUATION AND FUTURE PLANS

The Academy maintains a 96 percent or better attendance rate; the program's retention rate is equally high. More than 80 percent of its graduates meet the entrance requirements of the University of California State System, compared with less than 20 percent of the Oakland School District's graduates.

The program has been, and continues to be, the subject of numerous formal evaluation studies. A 1987-88 study by PACE, School of Education, University of California at Berkeley, compared outcomes for Academy students with outcomes for a comparison group (examining seniors, juniors, and sophomores separately). The study used attendance, credits, GPA, courses failed, and dropout probability as outcome measures. Academy students outperformed the control group on 21 of the 25 outcome measures.

The program is currently under evaluation by Far West Laboratories, the Oakland Metropolitan Forum under contract with the Oakland Redevelopment Agency, and the California Academic Partnership Program. Academy funding from both the Oakland Redevelopment Agency and the state is performance-based and thus tied to evaluation results.

Program development plans for the next few years emphasize further enhancement of integrated curriculum, further bridging of school and work-site learning, greater involvement of local hospitals and bioscience industry employers in the day-to-day Academy operations, and a movement from student health and bioscience internships into true youth apprenticeships. The Academy Advisory Board is serving as a catalyst to help the program develop clear career paths with health internships at their core.

Last Revision of Information:
November 18, 1993

Pasadena Health Careers Academy
1201 South Marengo
Pasadena, CA 91106

Marla Keeth
(818)441-2201

Criteria:

A Academy that offers a three-year program which integrates academics with the health care field through a series of health courses that prepare students with the knowledge, experience, and skills to evaluate their interest and aptitude in the health care field.

Source of Information:

Jobs for the Future From High School to High-Skilled Health Careers. New Models of Work-and-Learning in Health Care Cambridge, MA: Jobs for the Future, December 1992

Date of Information: 1992 **Type of Document:** Report

Description of Program:

Editor's Note: The following synopsis is based on materials extracted directly from the document.

Grades: 10 to 12

Start Date: 1990/91

Enrollment: Total enrollment is 104

THE STUDENTS

The Pasadena Health Careers Academy is located on the campus of Blair High School in Pasadena. The Health Careers Academy shares the campus with the comprehensive high school and the High Tech Academy. The Health Academy is open to all students in the school district. Pasadena's student population comes from varied socio-economic and ethnic backgrounds: 43 percent Latino; 34 percent African American; 12 percent white European; 8 percent Asian; and .4 percent Native American.

STRUCTURE AND MANAGEMENT OF PARTNERSHIPS

The Health Academy is a partnership between the school district, the California Department of Education, Los Angeles County Regional Occupational Program, Pasadena City College, Foothill Private Industry Council, Huntington Memorial Hospital, and Kaiser Permanente.

Throughout the year, students are provided the opportunity to visit hospitals, clinics, long-term care facilities and education institutions. In addition, representatives from the health care industry make presentations to students about health careers on a regular basis.

CURRICULUM DESIGN

Beginning in the students' sophomore year, the Academy offers a three-year program which integrates academics with the health care field. The subject matter is presented in a manner which demonstrates the relevance of education to life experiences and health care careers.

Health Occupations is a series of health courses that prepare students with the knowledge, experience, and skills to evaluate their interest and aptitude in the health care field. It is required for all three years of the Academy program. In Health Occupations I, students apply relevant academic knowledge to job competencies. In this course, students are exposed to realistic employment environments through community site training and visitations. Health Occupations II and III are in-depth studies of career options in health care. Students research job functions, career outlooks, and academic preparations required for a variety of entry-level positions. Regular visits to health facilities to observe different occupations complement academic work and small group projects in Health Occupations II and III.

WORK-BASED LEARNING

Throughout the school year, Huntington Memorial hospital provides a clinical rotation every week with 30 to 40 students rotating through 10 different hospital departments. Initially, the rotations were designed to expose students to a variety of occupations and careers in health care through job shadowing. Increasingly, however, the emphasis of the rotations is on skill acquisition. After the first year of rotations, students will be placed in departments to gain entry-level skills that will prepare them for employment in health care facilities upon graduation. Students will be placed in a variety of departments including medical records, ambulatory care, central sterile processing, clinical lab, nursing, pharmacy, radiology respiratory care and telecommunications.

Academy students who are "work-ready" are placed in paid internships during the summer. Students are employed by Huntington Memorial Hospital, Kaiser Permanente and Pasadena Unified School District where students work as health clerks at school sites. Thirty students were placed in summer internships this summer (1992).

All juniors and seniors in the Health Academy are paired with mentors who are employees at local health care institutions. The mentoring experience provides students with a professional role model and gives health care employees an understanding of what transpires in the Academy and a chance to contribute to the education program.

EVALUATION

Academy students' average daily attendance exceeds 90 percent, with attendance skyrocketing since the beginning of the program. Of the 24 Academy graduates in 1992, 20 enrolled in two-year or four-year college programs.

Last Revision of Information:
November 18, 1993

**Graphic Arts Academy
Pasadena High School
2925 Sierra Madre Blvd.
Pasadena, CA 91107**

**Mark Hall
Graphic Arts Instructor
(818) 398-6784**

Criteria:

The Graphic Arts Academy is a three-year program which operates as a school-within-a-school on the campus of Pasadena High School.

Source of Information:

Information was obtained from the program's promotional materials.

Date of Information: 1994 **Type of Document:** Fact Sheet

Description of Program:

Editor's Note: The following synopsis is based on materials extracted directly from the document.

The Graphic Arts Academy is a three-year program which operates as a school-within-a-school on the campus of Pasadena High School. The academy is a partnership between Pasadena Unified School District (PUSD), the Printing Industries Association of Southern California (PIA/SC), Pasadena City College (PCC), Los Angeles County ROP, and California State University, Los Angeles (CSULA).

The printing industry is a vital sector of the economy of California. There are 5,910 firms which employ 81,400 in the state, and indications are that these numbers will continue to rise in the foreseeable future. As with many industries, technological change is altering the skills needed to succeed in the graphic arts field. There is an increasing demand for employees with strong skills in communication, computation, and computer literacy. The Graphic Arts Academy hops to produce students who have competency in these areas and are prepared to step into entry-level jobs or further their education upon graduation.

GRAPHIC ARTS COURSES

All sophomores and juniors receive a minimum of seven hours per week of graphic arts instruction in the state-of-the art lab facility on campus. Students receive instruction and experience in a wide range of graphic arts competencies, which are determined by the Education Committee of PIA/SC. These competencies are integrated with the academic course work. Seniors attend PCC to receive graphic arts instruction while continuing their academic course work at the high school.

ACADEMIC COURSES

Students in the Graphic Arts Academy receive instruction in core academic classes from a team of academy teachers. In the tenth and eleventh grades, students receive instruction in English, history, mathematics and science. In the twelfth grade, students take government and economics as academy courses. Academy courses are intended to be rigorous and integrated with each other, as well as with the graphic arts curriculum. All elective courses are taken outside of the academy.

MENTORSHIPS

In their junior year, all student receive mentors who are active in the printing industry. These mentors are recruited by the industry partners and help to expose their student proteges to the graphic arts industry. Mentors remain matched with their proteges through graduation and beyond.

INTERNSHIPS

Internships are a key component of the school-to-work transition model in the Graphic Arts Academy. All students are required to complete an unpaid internship at a graphic arts facility in order to graduate from the academy; most students complete this requirement in the spring semester of their junior year. This internship is designed to expose students to a wide range of potential career paths within the printing industry and to introduce them to the world of work in a structured manner. Students who complete this component are eligible for an optional paid summer internship prior to beginning their senior year.

PASADENA CITY COLLEGE

Academy students are eligible to further their graphic arts education in their senior year through courses at PCC. Students are enrolled into courses in the Printing Technology program at PCC based on their interest, abilities, and career objectives. Upon establishing residency at PCC, students may petition to receive college credit for the graphic arts courses that were previously completed at the high school. Students may continue at PCC following graduation and earn a technical certificate and transfer to CSULA, their university partner, or any other four-year university.

SENIOR PROJECT/PORTFOLIO

All seniors are required to complete a senior project as a requirement for graduation from the academy. This is a research project based on an issue significant to the printing industry. In addition, seniors are required to compile a portfolio of their best work from their three years in the academy.

COMMUNITY SERVICE

All students are required to complete 100 hours of community service in order to graduate from the academy. The idea of "community" is broadly defined; some students work for local social service agencies, while others do work for the school or academy community. All community service must be unpaid and not a part of the student's normal school or work day.

SUPPLEMENTAL ACTIVITIES

Because of the support of the various academy partners, students in the Graphic Arts Academy benefit from a number of enrichment activities. Among these are frequent field trips and guest speakers, summer social activities, and a special graduation ceremony for academy seniors.

Last Revision of Information:
September 6, 1994

Sequoia High School
1201 Brewster Avenue
Redwood City, CA 94062

Leslie Hurdy
Department Chair/Industry Liaison
(415) 365-6367 FAX (415) 367-7593

Criteria:

Winner, U.S. Department of Labor "Labor Investing for Tomorrow"
Award, 1992.

Source of Information:

Washington, DC: U.S. Department of Labor, Labor Investing for
Tomorrow Award Application, 1992

Date of Information: 1994 **Type of Document:** Award
Application

Description of Program:

Editor's Note: The following synopsis is based on materials
extracted directly from the award application.

The Peninsula Academies is an industry/school partnership program situated at two high schools on the San Francisco Peninsula: Sequoia High School in Redwood City and Menlo-Atherton High School in Atherton. The program services students who are educationally and economically disadvantaged and are "at risk" of not graduating from high school. Of the total enrollment in the Peninsula Academies, more than 75% are minority. The Academies engage the students in a three-year curriculum, beginning with their sophomore year and continuing until graduation and eventual job placement or continued education. Motivation for the students to succeed and complete high school is primarily supported through three program components: a school-within-a-school structure, an academic/vocational interdisciplinary curriculum, and a vital and energetic partnership with such industries as Apple Computer, Claris Corporation, Hewlett-Packard, Lockheed Missiles and Space Company, Tandem Computers, and Varian Associates. The Peninsula Academies are the first of forty-five California Partnership Academies programs and presently serve as the designated exemplary model for existing and proposed Academies.

Menlo-Atherton and Sequoia High Schools each enroll approximately fifty new sophomores each year, with more than 150 sophomores at both schools qualifying for placement and indicating interest in the program. Each of the high schools runs a program of 130 students, with the minority population running 75-90%.

Because the Academies was and is designated to serve at-risk students, the primary goal of the program is to graduate each of the students with a high school diploma. Additional objectives include: 1) preparing the students with specific career or

vocational skills (in either computers or electronics); 2) readying students for employment following high school graduation; and 3) educating each student for entrance into a post-secondary institution, technical school, junior college, or four-year college or university.

Peninsula Academies, in partnership with their industries, have determined four necessary school-to-work program elements:

- Educate the students in the basic skills and terminology of the career field (computers and electronics) such that the students can gain successful entrance into that career upon completion of the three-year high school Academies program.
- Require proficiency in the academic areas of math, science and English so that the students have the basic communication and computation skills necessary to adjust to the rapidly changing technology of today.
- Instruct the students in basic employability skills (e.g. the cover letter, job application, personal resume, and interview)
- Assist students in becoming better workers by teaching desirable on-the-job skills (e.g. being able to stay on task).

In order to ensure that the Academies curriculum, both academically and technically, is current, both the schools and the industry partners assume active roles in the curriculum design/redesign. The Academies team at each school meets weekly, at the minimum, in order to discuss and evaluate curriculum projects. In addition, the staff are involved during the summer in ongoing curriculum work and research.

Because the Peninsula Academies is being replicated at the state and national levels, the program has recognized the necessity of developing and printing numerous replication materials. Among these are two Hewlett-Packard produced video tapes and a five-minute

Lockheed video, that give an overview of the Peninsula Academies. In addition, there are numerous brochures and handbooks:

- A 112 page Replication Guide for the Peninsula Academies.
- Three binders of practical and replicable resource and curriculum materials: "California Partnership Academies Employability Skill, English and California Partnership Academies Computer Curriculum."
- A 28 page California Partnership Academies Handbook: "A Guide to Success."

Last Revision of Information:
December 1, 1994

**San Diego Partnership
San Diego Consortium and Private Industry Council
1551 Fourth Avenue
Suite 600
San Diego, CA 92101**

Brene E. Patrick
Asst. Chief Executive, Youth Division
(619) 238-1445 FAX: (619) 238-6063

Criteria:

1995, National Local School-to-Work Grantee that emphasizes business, marketing, industrial technology, consumer science, and health occupational areas.

Source of Information:

U.S. Departments of Labor and Education School-To-Work Opportunities Locality Fact Sheets Washington, DC: U.S. Departments of Labor and Education, 1995

Date of Information: 1995 Type of Document: Fact sheet

Description of Program:

Editor's Note: The following was extracted directly from the document.

The San Diego Partnership combines and enhances the efforts and resources of several existing projects into a comprehensive school-to-work system. Such existing projects include: New Beginnings, integration of public agency services; San Diego Youth Opportunities Unlimited, a comprehensive demonstration program for at-risk youth; and the San Diego Career Centers, a network of one-stop centers providing single access points to all education, job training, and support services countywide.

Emphasis is being placed upon business, marketing, industrial technology, consumer science, and health occupational areas. Strong linkages exist between secondary and postsecondary educational institutions. In the area of work-based learning, a variety of experiences are available to students, such as internships, workplace mentorships, job shadowing, and workplace-exploration field trips.

LOCAL PARTNERSHIP

Members of the partnership include: San Diego Unified School District, San Diego Consortium and Private Industry Council, San Diego Community College District, San Diego Chamber of Commerce Business Roundtable for Education, San Diego and Imperial Counties Labor Council, University of California at San Diego, San Diego State University, San Diego County Department of Social Services, Parent Teacher Association, Poway Unified School District, and Sweetwater Union High School District.

Projected Outcomes

Development of an employer involvement clearinghouse, community awareness plan, and teacher and staff training.

Grant Type: Locality

Grant Amount: \$946,405

Duration: 1 year (subject to renewal)

Program Year: 1995

Last Revision of Information:
August 11, 1995

Scripps Ranch High School
10410 Treena Street
San Diego, CA 92131-1126

Barbara Brooks, Ed.D, Principle
Virginia Eves, Vice Principal
(619) 621-9020 FAX (619) 621-0646

Criteria:

A high school entirely dedicated to school-to-work transition programs that include the career paths of Biotechnology and Health Services; Business; Engineering; Technology and Design; or Liberal Arts and the Humanities. This is a U.S. Department of Labor Grantee.

Source of Information:

Center for Workforce Preparation New Century Workers: Effective School-to-Work Transition Programs Washington, DC: Center for Workforce Preparation, 1994

Date of Information: 1995 Type of Document: Report

Description of Program:

Editor's Note: The following synopsis is based on materials extracted directly from the document.

Scripps Ranch High School looks like any new high school servicing 1,700 students. The only difference is that the entire school is dedicated to school-to-work transition programs as they can be incorporated into curriculum content standards. Scripps Ranch High School worked with businesses and industries throughout San Diego County in developing the school-to-work curriculum, and the U.S. Department of Labor provided financial assistance. Scripps Ranch offers a variety of paths district students can choose to prepare for the world of work. Called Career Paths, students select either Biotechnology and Health Services; Business; Engineering; Technology and Design; or Liberal Arts and the Humanities. Each Career Path addresses the current and future employment needs of the local business community. To assure that students develop the necessary skills required of each Career Path, business/industry advisory groups and councils representing local, state, and federal employers promise to provide job opportunities to Scripps Ranch High School students.

Beginning their freshman year, students work with counselors to develop personalized written learning plans, which are revised annually. Career aspiration surveys during the first two years at Scripps Ranch help students define career interests. The plan and the student's coursework are included in the portfolio of academic work. Through the sophomore year, the principal focus is the development of strong core curriculum knowledge.

In addition to portfolio development, students work with the high school staff in determining which of the school's career paths is suited to the student's skills and interests. After choosing paths, students attend advisory groups that correspond to the chosen career path. Meetings are scheduled four days a week for half an hour each day, and are designed to assist the students in developing specific employability skills. Students receive instruction in resume writing, job applications, interviewing techniques, problem solving, written and oral communications, and other topics. Advisory meetings continue throughout the four-year program.

Students are held to high academic standards. Students sign a Youth Apprenticeship Agreement, which outlines attendance, academic, and skills development expectations. Assessments undertaken every six weeks gauge progress for individual students, the apprenticeship program, and the school as a whole. Students who consistently do not meet performance requirements will be assisted in various support programs until mastery is achieved.

During the final two years of high school, students will have the opportunity of working with business mentors in their chosen career paths.

Students begin internships/apprenticeships with local companies and organizations and continue to develop work-related competencies.

Last Revision of Information:
May 25, 1995

**Shell Youth Services Academy
Shell Oil Company
Community Relations, Los Angeles
8611 So. Western Ave.
Los Angeles, CA 90019**

Melba Jackson Carter
(213) 751 5050

Criteria:

A school-to-work program preparing students for the transition from high school to jobs with career potential that may not require a college degree. U.S. Department of Labor School-to-Work Grantee.

Source of Information:

(Information about this program can also be found in the document entitled "New Century Workers: Effective School-to-Work Transition Programs" by the Center for Workforce Preparation. The TTTC document identification number is 01289.)

Date of Information: 1995 **Type of Document:** Project Profile

Description of Program:

Editor's Note: The following synopsis is based on materials obtained from U.S. Department of Labor personnel.

The Shell Youth Services Academy (SYSA) is a partnership program sponsored by Shell Oil Company, in cooperation with the Los Angeles Unified School District, and supported by the U.S. Department of Labor. SYSA is a cooperative education program designed to improve the employment opportunities for South Central Los Angeles youth through business education partnerships. The Academy consists of a one semester program that provides occupational and employability skills training and structured workplace learning. Its curriculum focuses on employability skills including computers and Spanish.

The mission of the Shell Youth Services Academy is to provide a program for the transition of students from high school to jobs with career potential that may not require a college degree. The Academy will serve students who meet the eligibility requirements and are motivated and willing to participate in all activities of the Academy.

Students in the SYSA are introduced to the requirements of today's workplace, receive paid on-the-job training 12 to 16 hours per week for one semester, earn ten diploma credits for the required cooperative vocational education class which the student attends one afternoon each week at the Shell Training Center, and is assigned to a workplace employee mentor who demonstrates job skills and models positive employee behaviors and attitudes.

Participating students are required to maintain regular attendance and satisfactory performance at their high school, the worksite, and the cooperative vocational education class. In addition, they must maintain their existing grade point average and attain work habits and cooperation grades of satisfactory or better.

Last Revision of Information:
May 24, 1995

**Project Riverbank
Stanislaus County
Stanislaus County Office of Education
Modesto, CA 95355**

Henry Bakker
(209) 525-6602

Criteria:

1995, National Urban and Rural School-to-Work Grantee that will incorporate California's Model Curriculum Standards, block scheduling, integrated subjects, and hands-on learning into career majors including Industrial Technology, medical Occupations and Business.

Source of Information:

U.S. Departments of Labor and Education School-To-Work Opportunities Locality Fact Sheets Washington, DC: U.S. Departments of Labor and Education, 1995

Date of Information: 1995 **Type of Document:** Fact sheet

Description of Program:

Editor's Note: The following was extracted directly from the document.

The project is restructuring Riverbank's high school program by incorporating California's Model Curriculum Standards, block scheduling, integrated subjects, and hands-on learning. The school reform effort includes a career majors program which targets high-skill, high wage jobs in the areas of Industrial Technology, medical Occupations and Business. Each career major is integrated into a challenging program involving work-based and school-based learning addressing all aspects of the career. The program provides ongoing career awareness and guidance activities, the development of individual career plans by grade 8, industry instructors, and paid and summer work experience.

Project Riverbank's school-to-work continuum culminates in a senior "Capstone" project, two-hour daily apprenticeship experiences throughout the senior year, the development of senior portfolios, credit transfers to local postsecondary institutions, and certificates of competency based on national, state and local standards. The program is targeted to the needs of all students including minority, academically talented, limited English proficient, and at-risk students, learners with disabilities and out-of-school youth.

LOCAL PARTNERSHIP

The project has evolved from a dedicated existing partnership, Stanislaus Partners in Education. Riverbank's broad-based coalition includes Stanislaus County K-12 and post-secondary

education, business, labor, government, area non-profit organizations, teachers, career counselors, and students.

Grant Type: Urban/Rural

Grant Amount: \$650,000

Duration: 1 year (subject to renewal)

Program Year: 1995

Last Revision of Information:

August 11, 1995

Tulare County Office of Education

County Civic Center

Visalia, CA 93291

Randy Wallace, Project Director

(209) 733-6301 FAX: (209) 627-4670

Criteria:

1995, National Local School-to-Work Grantee that will broaden existing tech prep, Apprenticeship, job shadowing/mentoring, work study, and career exploration programs while developing skills standards for the agricultural sector and standard curriculum for five employment areas.

Source of Information:

U.S. Departments of Labor and Education School-To-Work Opportunities Locality Fact Sheets Washington, DC: U.S. Departments of Labor and Education, 1995

Date of Information: 1995 Type of Document: Fact sheet

Description of Program:

Editor's Note: The following was extracted directly from the document.

This initiative will broaden existing tech prep, Apprenticeship, job shadowing/mentoring, work study, and career exploration programs while developing skills standards for the agricultural sector and standard curriculum for five employment areas. Efforts will be made to replicate the County's Grass Roots Partnership Initiative that has been successful in creating school-to-work partnerships.

The curriculum initiative will focus on health care, the service sector, technology, business, and agriculture. Further, emphasis will be placed on developing skill standards and increasing students' pursuit of employment in the agricultural industries prevalent in Tulare County.

The Coalition has a broad-based membership including 41 elementary

and middle school, 19 secondary school, 87 businesses, 31 community-based organizations, three elected officials, and three labor organizations. These participants include: Kraft General Foods, Ruiz Food Products, Kaweah Delta Hospital, Sunkist Real Estate, KSEQ-FM, United Way, UC Agricultural Extension, the NAACP, Central Labor Council, College of the Sequoias, and California State University.

Projected Outcomes

Specific goals include: further developing the components of existing school-to-work programs, replicating successful school-to-work partnerships, encouraging students' pursuit of agricultural careers, and implementing a plan to sustain funding for the County's school-to-work system.

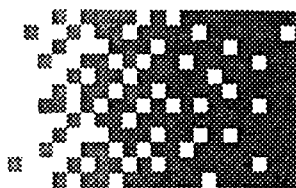
Grant Type: Locality

Grant Amount: \$655,549

Duration: 1 year (subject to renewal)

Program Year: 1995

Last Revision of Information:
August 11, 1995



THE LAZARUS
FOUNDATION

*If you have computers
wasting valuable
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*...we have people
who can find them a
good home!*

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At the same time, there are many educational institutions and community service organizations that can't even afford yesterday's computer technology. They lack not only the technology, but more than that, the modern technical skills and knowledge to efficiently serve their constituents and keep pace with today's changing world. To us, the solution is obvious: collect those computers that are unused or going to be thrown away, repair them and give them to those who need and can use them.

The Lazarus Foundation collects working and non-working computers from area businesses and individuals. Our volunteers conduct workshops to refurbish, repair and resurrect the computers and train others to do the same. In donating the computers, we select recipients who are best able to make a difference in their community or have the greatest need: social service organizations, hospitals, educators, after-school programs, and other qualified organizations.

Requests have been steadily growing; we can use your assistance in meeting those needs.

The Lazarus Foundation is a non-profit, charitable organization, ruled tax-exempt by the Internal Revenue Service under I.R.C. 501(c)(3), (EIN # 52-1822095)

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- ❖ Volunteer to conduct or assist in providing basic computer training for organizations and individuals receiving the recycled computers.
- ❖ Donate your unwanted, obsolete, or defective computers, software and peripherals.
- ❖ Make a monetary contribution. Even though the equipment and volunteers' time is donated, we have other operating expenses.
- ❖ Volunteer and learn to repair computers at one of our hands-on workshops. We now hold them throughout Maryland, Virginia and the District of Columbia.
- ❖ Identify needy organizations in your community who can benefit from receiving recycled computers.
- ❖ Become part of the Lazarus family and start your own Lazarus recycling project. We will help you get started and provide technical expertise, support materials and share experiences.

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LAZARUS FOUNDATION, call:**

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Howard County, MD.....Paul Demmitt.....(410) 381-4762
Baltimore County, MD.....Larry Medoff.....(410) 997-5924
Fairfax County, VA.....Dan Shaw.....(703) 255-0799
Prince William County, VA.....Ron Hall.....(703) 680-2364
Richmond/Tidewater, VA.....Dane vonBreichenruchardt.....(804) 874-5341
*Or write to Don Bard at the Lazarus Foundation, 10378 Eclipse Way,
Columbia, MD 21044 or call him at (410) 740-0735*



*Front and back photos:
Volunteers refurbishing
donated computers*

The Lazarus Foundation responds to requests for refurbished computers and donates them to recipients who maximize the benefits to the community. We try to serve the largest number of people and help those with the greatest needs. We are based in Columbia, Maryland but serve organizations throughout the Baltimore-Washington and Virginia area.

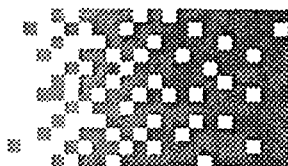
In addition, we have formed partnerships with area high schools (Cardozo in Washington, DC and Oakland Mills in Columbia, MD), as well as other organizations in Maryland, Virginia and Washington, DC.

*Some of the more than 350 recipients we have been
proud to give computers...*

Howard Co. Assn. for Retarded Citizens
Kennedy Krieger Institute
The Cedar Lane School
The Woodbourne Center
Voices for Children
Maryland Therapeutic Horsemanship Ass'n
Housing Opportunities Commission/Mont. Co.
Clifton T. Perkins Hospital Center
Northern Virginia Family Services
Springfield Hospital Center
The Florence Baln Senior Center

Black Education AIDS Project, Inc.
World Federalist Association
People With AIDS Coalition
HIV/AIDS Volunteer Enrichment Network
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Learning Independence Through Computers
The Carpenter's Shelter

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FOUNDATION**

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Diamond

To: Ed Fitzsimmons, Julie Swisshelm - White House OSTP
 From: Brenda Kempster - NCC-TET
 (Former Commissioner, Calif. Planning Commission for Education Technology)
 RE: California Business Challenge for Education Technology & Training
 Date: September 14, 1995

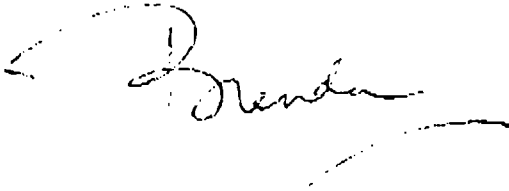
Ed and Julie,

In follow up to our discussion this morning regarding an education technology initiative with California business leaders, I thought the following background points may be of interest in a briefing packet. These points are not to discourage a business effort, which I enthusiastically support, but rather to indicate my own perspective on some of the political issues and activities around educational technology which are at best fragmented and complex in California. The information is intended as background piece to any new discussions you may have with key players.

- Over the last three years California has had a proliferation of planning committees and task forces around these issues - mostly convened along partisan lines. Business leadership has been involved in all of them. They include: California Planning Commission, Public Utilities Education Technology Task Force, the Governor's Technology Task Force, Industry Council for Technology in Learning, and the Education Council for Technology in Learning, etc. Even though recommendations from all of the efforts are very similar there has been an inertia regarding implementation and funding. There is a perception that all we do is plan and get nowhere with a substantive action agenda.
- In February of 1994, a bi-partisan media event was held attended by Pete Wilson, Willie Brown, Delaine Eastin (then Chair of Assembly Ed. Committee), Gwen Moore (Chair of Assembly Utilities Committee) and Phil Quigley, CEO of Pacific Telesis Group. Pac Tel committed \$125M to wire classrooms. The Governor challenged Phil to lead CEO effort to raise balance of funds needed to provide ed-tech for state (estimated at \$1.5B by the Commission). Phil put together mechanisms to do this. To date it has had limited success as a joint effort. Meetings have been held w/CEO's of major technology companies. Some joint advocacy efforts have been undertaken with minimal success.
- Business effort did support \$35M of "spin dollars", a Public Utilities fine levied against Pac Telesis for the Airtouch Cellular spin off, to be put in special education infrastructure fund to wire schools (rather than rebate to rate payers). The Public Utilities Commission (all Wilson appointees) voted to do that, but allocated the disbursement of the majority of the funds (85%) to the Office of Public School Construction (agency controlled by Wilson) rather than State Department of Education (Delaine Eastin controlled). To date the funds have been in holding pattern pending legislation to determine final disbursement. Willie Brown has also filed suit with California Supreme Court on decision.

- The Governor allocated some funds to computer donations in the schools from 1996 budget. No significant funds were allocated by Legislature to support education technology. Local initiatives are moving in some areas. Businesses have been supporting demonstration projects and some collaboratives. But, for the most part, most that are actively involved (Pac Bell, GTE, Cable Companies, Apple, Intel, IBM, ATT) have individual efforts going on at an implementation level. They have not yet agreed to a broader strategic effort, particularly on the advocacy front.
- I have had several meetings with Delaine Eastin. She is very supportive of a joint CEO effort and will be convening a group to develop a broad strategy. She has asked me to help develop this plan and assist in recruiting CEO's. We already have commitments from some companies to work on this effort.
- Business members of the various groups and major California education associations have held a couple of meetings this year to see how they can better collaborate. The atmosphere is looking brighter, but there is a frustration that in the "Silicon Valley State" are schools are still at the bottom of the pile in terms of actual implementation.

Hope this gives you an idea of the landscape.

A handwritten signature in cursive script, appearing to read "Brenda", followed by a horizontal line.

Districts with "Greatest Need for Educational Technology"
By State
Prepared by Quality Education Data, Inc.

SI	District Name	Students per Computer	No. Students	No. Computers	No. Schools	Title I Students	Pct.	Multicultural	
								Students	Pct.
AZ	Yuma Union High School Dist 70	34.7	7,138	206	3	1,428	20%	4,497	63%
AZ	Crane Elem School District 13	31.4	5,300	169	6	954	18%	2,544	48%
AZ	Santa Cruz Valley H S Dist 840	30.0	480	16	1	202	42%	427	89%
AZ	Mohave Valley Elem Sch Dist 16	28.5	1,565	55	3	141	9%	297	19%
AZ	Mohawk Valley School Dist 17	27.3	273	10	1	76	28%	150	55%
AZ	Fowler School District 45	27.1	1,355	50	2	81	6%	637	47%
AZ	Isaac Elem School District 5	26.1	6,660	255	8	866	13%	5,261	79%
AZ	Stanfield School District 24	25.0	625	25	1	200	32%	431	69%
AZ	Osborn School District 8	24.0	3,500	146	5	455	13%	1,645	47%
AZ	Duncan Unified School Dist 2	23.2	650	28	2	130	20%	143	22%
AZ	Total		31,650	1,043	40	5,463		19,351	
CA	Roseland Elem School District	69.0	1,035	15	2	590	57%	538	52%
CA	Buena Vista Elem Sch District	65.0	130	2	1	77	59%	46	35%
CA	Redlands Unified School Dist	59.6	17,053	286	19	4,093	24%	7,333	43%
CA	Ocean View School District	55.1	9,040	164	15	2,079	23%	2,893	32%
CA	Hanford Elem School District	52.1	4,848	93	8	2,667	55%	2,715	56%
CA	Arcadia Unified School Dist	52.1	8,282	159	11	414	5%	4,389	53%
CA	Taft City Elem School District	51.3	2,103	41	6	883	42%	231	11%
CA	Sunnyside Un Elem Sch District	50.9	560	11	1	409	73%	347	62%
CA	Pemis Elem School District	50.0	4,604	92	5	3,085	67%	3,131	68%
CA	Santa Monica-Malibu Un Dist	47.2	10,190	216	16	2,242	22%	4,687	46%
CA	Shasta Union High Sch Dist	47.1	4,470	95	4	760	17%	849	19%
CA	Lamont School District	43.8	2,800	64	4	2,520	90%	2,324	83%
CA	Berryessa Union Elem Sch Dist	43.5	8,617	198	13	1,723	20%	5,946	69%
CA	Semitropic Elem School Dist	43.5	174	4	1	164	94%	144	83%
CA	Centinela Valley Un H S Dist	42.7	6,022	141	4	602	10%	5,360	89%
CA	Calexico Unif School District	42.6	7,284	171	10	3,715	51%	7,138	98%
CA	Rincon Valley Union Elem Dist	42.5	2,719	64	7	517	19%	272	10%
CA	Newark Unified School District	42.2	6,619	157	15	1,456	22%	3,177	48%
CA	Alta Loma School District	42.0	7,852	187	9	785	10%	2,042	26%
CA	Mother Lode Un Elem Sch Dist	41.8	1,880	45	3	414	22%	150	8%
CA	West Covina Unif School Dist	41.2	8,320	202	11	2,579	31%	5,574	67%
CA	La Mesa-Spring Valley Sch Dist	41.1	14,680	357	22	1,468	10%	2,789	19%
CA	Oxnard Elem School District	40.6	12,990	320	17	9,093	70%	10,912	84%
CA	Ophir Elem School District	40.2	241	6	1	17	7%	12	5%
CA	Morongo Unif School District	40.2	10,160	253	16	3,861	38%	2,235	22%
CA	Roseville Jt High School Dist	40.0	4,683	117	6	234	5%	749	16%
CA	Woodville Elementary Sch Dist	40.0	680	17	1	598	88%	612	90%
CA	Woodlake Union High Sch Dist	40.0	800	20	2	368	46%	528	66%
CA	Inglewood Unif School District	39.8	16,328	410	19	9,307	57%	16,001	98%
CA	San Ysidro Elem School Dist	39.2	3,880	99	6	3,531	91%	3,725	96%
CA	Pleasant View Elem School Dist	38.4	461	12	1	392	85%	300	65%
CA	Kingsburg Jt Un High Sch Dist	38.3	880	23	2	238	27%	414	47%
CA	Livingston Union School Dist	38.2	2,252	59	3	1,734	77%	1,914	85%

Districts with "Greatest Need for Educational Technology"
By State

Prepared by Quality Education Data, Inc.

ST	District Name	Students per Computer	No. Students	No. Computers	No. Schools	Title I		Multicultural	
						Students	Pct.	Students	Pct.
CA	Salinas City Elem Sch District	38.1	8,200	215	13	4,428	54%	5,494	67%
CA	Sequoia Union Elem School Dist	37.7	377	10	1	185	49%	117	31%
CA	Waterford Elementary Sch Dist	37.5	1,311	35	2	721	55%	406	31%
CA	Magnolia Elem School District	37.4	5,528	148	8	3,040	55%	3,040	55%
CA	Penryn Elem School District	37.2	335	9	1	34	10%	40	12%
CA	Mariposa Co. Unif School Dist	37.0	2,699	73	12	540	20%	297	11%
CA	Vineland School District	36.3	726	20	2	632	87%	661	91%
CA	San Marcos Unif Sch District	36.2	10,139	280	10	4,157	41%	4,056	40%
CA	Paramount Unif School District	36.1	13,900	385	15	5,143	37%	12,371	89%
CA	Pond Union School District	36.0	180	5	1	124	69%	85	47%
CA	Rosemead School District	36.0	3,056	85	5	1,895	62%	2,659	87%
CA	Kingsburg Jt Un Elem Sch Dist	35.9	1,832	51	4	696	38%	843	46%
CA	Los Gatos Union Sch Dist	35.1	2,459	70	5	98	4%	344	14%
CA	Fairfax Elem School District	34.5	1,208	35	2	894	74%	737	61%
CA	Le Grand Un Elem School Dist	34.5	448	13	1	287	64%	323	72%
CA	Menlo Park City Elem Sch Dist	34.4	1,617	47	4	65	4%	340	21%
CA	Rescue Union School District	34.4	2,750	80	5	220	8%	275	10%
CA	Tulare City Elem School Dist	34.3	7,075	206	11	4,316	61%	3,962	56%
CA	Riverbank Elem School District	34.3	1,957	57	4	959	49%	1,018	52%
CA	William S Hart Un H S District	34.1	11,290	331	11	452	4%	2,484	22%
CA	Healdsburg Union Elem Sch Dist	34.0	1,225	36	3	355	29%	355	29%
CA	Sierra Sands Unif School Dist	33.6	7,324	218	14	1,611	22%	1,318	18%
CA	Desert Sands Unif Sch District	33.4	18,460	552	21	7,384	40%	11,261	61%
CA	Redwood City Elem School Dist	33.2	8,271	249	15	3,391	41%	4,963	60%
CA	Jefferson School District	33.0	7,000	212	15	3,010	43%	5,950	85%
CA	Sundale Union Elem Sch Dist	32.6	424	13	1	199	47%	170	40%
CA	Vacaville Unif School District	32.6	13,449	413	20	3,228	24%	3,362	25%
CA	Anaheim City Elem Sch District	32.5	15,742	484	21	6,612	42%	11,177	71%
CA	Escalon Unified School Dist	32.1	2,569	80	8	642	25%	591	23%
CA	Live Oak Elem School District	32.0	2,083	65	3	750	36%	542	26%
CA	Sunnyvale Elem School District	31.9	6,246	196	9	1,811	29%	3,685	59%
CA	Millbrae Elem School District	31.8	2,292	72	5	390	17%	1,077	47%
CA	Coachella Valley Unif Sch Dist	31.8	9,314	293	13	6,520	70%	8,755	94%
CA	Meadows Union Elem School Dist	31.7	539	17	1	372	69%	420	78%
CA	Lammersville Elem School Dist	31.7	285	9	1	74	26%	57	20%
CA	Palmdale Elem School District	31.7	17,600	556	18	5,632	32%	6,864	39%
CA	Natomas Unified School Dist	31.5	2,898	92	5	782	27%	1,391	48%
CA	Lassen Union High School Dist	31.4	1,100	35	2	77	7%	154	14%
CA	Riverdale Jt Union Elem Dist	31.4	816	26	2	530	65%	432	53%
CA	Madera Unified School Dist	31.3	15,020	480	20	5,708	38%	9,312	62%
CA	Bonita Unif School District	31.2	9,819	315	13	2,062	21%	3,437	35%
CA	King City Joint Un H S Dist	31.0	1,335	43	2	120	9%	961	72%
CA	Lodi Unified School District	31.0	25,325	817	38	9,624	38%	11,396	45%
CA	Duarte Unified School District	30.6	4,499	147	8	2,294	51%	3,419	76%

Districts with "Greatest Need for Educational Technology"

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ST	District Name	Students per Computer	No. Students	No. Computers	No. Schools	Title Students	Pct.	Multicultural	
								Students	Pct.
CA	Lafayette Elem School District	30.6	3,056	100	5	92	3%	336	11%
CA	Summerville Union H S District	30.5	641	21	5	115	18%	58	9%
CA	Old Adobe Union School Dist	30.3	2,276	75	4	250	11%	387	17%
CA	Montebello Unif School Dist	30.2	31,836	1,053	31	13,689	43%	29,607	93%
CA	Heber Elem School District	30.0	600	20	2	552	92%	588	98%
CA	Stone Corral Elem Sch District	30.0	150	5	1	84	56%	141	94%
CA	Vallecito Union Elem Sch Dist	30.0	1,200	40	3	300	25%	144	12%
CA	El Dorado Union H S District	30.0	4,950	165	6	248	5%	396	8%
CA	Lake Elementary School Dist	30.0	120	4	1	41	34%	14	12%
CA	Napa Valley Unif School Dist	29.9	14,624	489	27	3,510	24%	3,510	24%
CA	Harmony Union School District	29.7	593	20	2	77	13%	77	13%
CA	Pittsburg Unif School District	29.6	8,901	301	13	4,094	46%	6,142	69%
CA	Salida Union School District	29.4	2,000	68	3	600	30%	720	36%
CA	San Lorenzo Vly Unif Sch Dist	29.2	4,000	137	7	520	13%	320	8%
CA	Oakley Union Elem School Dist	29.2	3,765	129	5	264	7%	715	19%
CA	Hughes-Elizabeth Lakes Un Dist	29.1	465	16	1	84	18%	28	6%
CA	Elverta Joint Elem School Dist	29.1	465	16	2	144	31%	60	13%
CA	Salinas Union High School Dist	29.1	8,573	295	8	3,086	36%	6,258	73%
CA	Hayward Unif School District	28.8	20,611	715	37	7,832	38%	13,397	65%
CA	Santa Rosa City School Dist	28.7	16,395	571	22	4,099	25%	4,591	28%
CA	Lawndale School District	28.6	4,439	155	7	2,530	57%	3,063	69%
CA	Santa Rita Un School Dist	28.5	2,135	75	3	897	42%	1,238	58%
CA	Willits Unified School Dist	28.2	2,542	90	9	330	13%	458	18%
CA	Westmorland Union School Dist	28.1	506	18	1	435	86%	430	85%
CA	Glendale Unified School Dist	27.9	28,285	1,014	28	11,880	42%	11,597	41%
CA	Richland-Lerdo Elem Sch Dist	27.9	2,563	92	4	1,743	68%	1,717	67%
CA	Windsor Union School District	27.7	2,550	92	4	765	30%	791	31%
CA	Alameda Unif School District	27.6	9,928	360	19	2,085	21%	5,262	53%
CA	Paso Robles Union Elem Dist	27.5	3,990	145	6	998	25%	1,077	27%
CA	Mountain View Elem School Dist	27.5	2,750	100	4	385	14%	1,320	48%
CA	Hawthorne School District	27.5	7,615	277	9	3,884	51%	6,473	85%
CA	Fallbrook Union Elem Sch Dist	27.4	5,755	210	7	1,899	33%	2,187	38%
CA	Franklin-McKinley School Dist	27.3	9,940	364	13	6,461	65%	8,648	87%
CA	Di Giorgio Elem School Dist	27.3	191	7	1	136	71%	118	62%
CA	Santa Paula Un High Sch Dist	27.1	1,303	48	3	352	27%	938	72%
CA	Lucerne Elem School District	27.1	325	12	1	198	61%	52	16%
CA	McCabe Union Elem School Dist	27.0	540	20	1	119	22%	221	41%
CA	Fullerton Elem School District	27.0	11,200	415	18	3,472	31%	5,712	51%
CA	Gilroy Unified School District	26.9	8,548	318	13	3,163	37%	5,129	60%
CA	Vallejo City Unif Sch District	26.9	18,883	703	26	5,287	28%	13,029	69%
CA	Kings Canyon Unif School Dist	26.7	8,302	311	17	4,732	57%	5,728	69%
CA	Pleasanton Unif School Dist	26.6	10,100	380	13	303	3%	1,515	15%
CA	Antelope Valley Un H S Dist	26.6	13,335	502	8	1,734	13%	4,801	36%
CA	Cutten Elem School District	26.3	606	23	2	79	13%	61	10%

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		per Computer	Students	Computers	Schools	Students	Pct.	Students	Pct.
CA	Rio Linda Union Elem Sch Dist	25.9	10,072	389	21	4,029	40%	2,921	29%
CA	Menifee Union School District	25.8	3,772	146	4	453	12%	717	19%
CA	Mendota Unified School Dist	25.8	2,192	85	5	1,995	91%	2,126	97%
CA	Corcoran Unif School District	25.7	3,184	124	6	1,910	60%	2,515	79%
CA	Western Placer Unif Sch Dist	25.5	2,757	108	6	882	32%	607	22%
CA	Buckeye Union School District	25.5	3,317	130	6	232	7%	66	2%
CA	El Rancho Unif School District	25.5	10,766	422	16	6,352	59%	10,120	94%
CA	Paradise Unif School District	25.4	5,350	211	8	1,338	25%	268	5%
CA	El Monte Unif Elem School Dist	24.9	11,210	450	18	8,520	76%	9,753	87%
CA	Laytonville Unif Sch District	24.9	647	26	5	0	0%	84	13%
CA	Coarsegold Union Sch District	24.5	980	40	2	225	23%	108	11%
CA	Downey Unified School District	24.4	17,701	725	22	6,195	35%	10,267	58%
CA	Empire Union School District	24.4	3,800	156	6	380	10%	1,568	41%
CA	Lassen View Union School Dist	24.3	340	14	1	177	52%	68	20%
CA	La Habra City School District	24.3	4,954	204	8	2,328	47%	2,873	58%
CA	Santa Ana Unif School District	24.2	46,556	1,920	44	26,537	57%	43,297	93%
CA	Weaver Union School District	24.2	1,450	60	3	1,131	78%	812	56%
CA	Stockton Unif School District	24.1	32,573	1,350	45	18,241	56%	25,733	79%
CA	Hollister School District	24.1	4,600	191	6	2,208	48%	2,806	61%
CA	Bellevue Union Elem Sch Dist	24.0	1,200	50	2	780	65%	552	46%
CA	Hueneme School District	24.0	7,601	317	11	4,029	53%	5,397	71%
CA	Dixon Unified School District	23.9	3,156	132	6	1,231	39%	1,357	43%
CA	Norwalk-La Mirada Un Sch Dist	23.8	18,898	795	29	7,181	38%	12,662	67%
CA	Chula Vista Elem School Dist	23.8	18,705	787	35	6,547	35%	11,971	64%
CA	Westminster Elem School Dist	23.8	9,075	382	18	4,447	49%	5,354	59%
CA	Monrovia Unif School District	23.7	5,718	241	10	2,859	50%	3,374	59%
CA	Fontana Unif School District	23.7	29,681	1,252	33	11,872	40%	18,105	61%
CA	Black Oak Mine Unif Sch Dist	23.7	2,225	94	6	490	22%	67	3%
CA	Ackerman Elem School District	23.7	355	15	1	82	23%	28	8%
CA	Atwater Elem School District	23.7	4,614	195	7	1,753	38%	2,030	44%
CA	Culver City Unif School Dist	23.7	5,300	224	10	1,219	23%	3,127	59%
CA	Ripon Unified School District	23.7	2,247	95	5	360	16%	472	21%
CA	Cucamonga School District	23.6	2,341	99	4	983	42%	1,545	66%
CA	Cajon Valley Union School Dist	23.6	17,871	756	27	6,791	38%	4,646	26%
CA	Fresno Unified School District	23.6	70,863	3,005	90	42,518	60%	47,478	67%
CA	Chico Unified School District	23.5	12,956	551	22	4,016	31%	2,332	18%
CA	El Centro Elem School District	23.5	6,418	273	10	3,979	62%	5,199	81%
CA	Colfax Elem School District	23.5	493	21	2	118	24%	74	15%
CA	Newhall Elementary School Dist	23.5	5,000	213	6	1,200	24%	1,350	27%
CA	Ocean View Elem School Dist	23.4	2,338	100	4	1,379	59%	1,660	71%
CA	Red Bluff Union High Sch Dist	23.4	1,753	75	2	351	20%	280	16%
CA	Santee School District	23.4	6,178	350	11	1,636	20%	900	11%
CA	Coronado Unif School District	23.4	2,452	105	4	319	13%	588	24%
CA	Chualar Union Elem Sch Dist	23.3	280	12	1	255	91%	269	96%

Districts with "Greatest Need for Educational Technology"

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								Students	Pct.
CA	East Whittier City School Dist	23.3	7,864	338	13	2,202	28%	3,932	50%
CA	Pleasant Valley School Dist	23.2	6,952	300	14	556	8%	1,738	25%
CA	Plumas Unified School District	23.1	3,933	170	18	1,219	31%	433	11%
CA	Kernville Un School District	23.1	1,110	48	3	422	38%	100	9%
CA	Westside Union Elem Sch Dist	23.1	5,332	231	10	906	17%	1,173	22%
CA	Loomis Union Elem Sch District	23.1	1,800	78	3	234	13%	162	9%
CA	Panama-Buena Vista Un Sch Dist	23.0	11,296	491	17	2,372	21%	3,050	27%
CA	Palo Verde Unif Elem Sch Dist	23.0	460	20	1	345	75%	294	64%
CA	Burrel Union Elem School Dist	23.0	115	5	1	68	59%	106	92%
CA	Curtis Creek Elem Sch District	23.0	920	40	2	248	27%	46	5%
CA	CA Total		1,160,632	40,257	1,708	446,322		637,682	
CO	Brighton School District 27 J	45.3	4,304	95	9	990	23%	1,506	35%
CO	Falcon School District 49	32.0	3,269	102	6	392	12%	523	16%
CO	Woodland Park School Dist Re 2	29.9	2,898	97	5	348	12%	174	6%
CO	Mancos School District Re 6	28.8	576	20	3	167	29%	98	17%
CO	Douglas Co. School Dist R E 1	28.6	20,041	701	28	601	3%	1,002	5%
CO	Summit School District R E 1	25.0	2,126	85	6	85	4%	128	6%
CO	Gunnison-Watershed Dist Re 1 J	23.9	1,676	70	6	134	8%	67	4%
CO	CO Total		34,890	1,170	63	2,717		3,498	
CT	Chester School District	88.5	354	4	1	18	5%	7	2%
CT	Deep River School District	67.8	407	6	1	12	3%	12	3%
CT	Plymouth School District	63.0	1,891	30	5	151	8%	57	3%
CT	Hebron School District	62.2	933	15	2	19	2%	28	3%
CT	New Britain School District	40.1	8,832	220	14	3,268	37%	5,123	58%
CT	Guilford School District	39.7	3,414	86	7	68	2%	102	3%
CT	Waterbury School District	39.2	14,448	369	26	6,357	44%	7,802	54%
CT	Killingly School District	38.5	3,038	79	4	547	18%	122	4%
CT	Ledyard School District	34.3	3,084	90	6	62	2%	247	8%
CT	Glastonbury Public School Dist	33.9	5,180	153	8	207	4%	518	10%
CT	Bethany School District	31.7	475	15	1	5	1%	24	5%
CT	North Branford School District	30.5	2,284	75	5	69	3%	69	3%
CT	Kent School District	30.0	300	10	1	15	5%	12	4%
CT	Columbia School District	29.8	625	21	1	13	2%	19	3%
CT	West Haven School District	29.1	7,108	244	12	1,422	20%	1,990	28%
CT	Regional School District 10	28.3	2,267	80	4	45	2%	68	3%
CT	Canaan School District	27.0	135	5	1	16	12%	5	4%
CT	Cornwall School District	26.5	159	6	1	6	4%	6	4%
CT	Redding School District	25.2	881	35	2	9	1%	26	3%
CT	Easton School District	25.2	755	30	2	8	1%	23	3%
CT	Salisbury School District	25.0	375	15	1	34	9%	23	6%
CT	Wallingford School District	23.9	6,332	265	11	380	6%	380	6%
CT	Colchester School District	23.4	2,129	91	4	85	4%	85	4%
CT	Hartford School District	23.2	25,293	1,090	34	14,417	57%	23,017	91%
CT	Brookfield School District	23.1	2,500	108	4	25	1%	125	5%

STATE AND FEDERAL EDUCATIONAL TECHNOLOGY PROGRAMS AND FUNDING SOURCES FOR CALIFORNIA *

John Cradler, Far West Laboratory for Educational Research and Development

Schools across the country do not have the resources to prepare citizens for the technological age. This is especially true for California. Reed Hundt, head of the Federal Communications Commission, recently said, "there are thousands of buildings in this country with millions of people in them who have no telephones, no cable television and no reasonable prospect of broad band services. They're called schools."

A recent nationwide survey indicates that only 14% of our public schools used telecommunications networks in classrooms last year. California statistics show that less than 3% of our schools use telecommunications. The national survey also ranks California 50th among the states in the number of students per computer in schools. This document summarizes the efforts to implement and fund technology in education in California.

1. Technology is an Emerging Priority for California Education

The Governor, gubernatorial candidates, legislators, and education organizations and agencies are addressing the need for technology to become a higher priority for California education. This new interest among policy makers is long over due as California schools have declined in technology access while many states have increased over the past 10 years. Evidence of the renewed interest follows:

The California Teachers Association (CTA) issued a report, *Rediscovering Education: Creating Schools for the 21st Century* which says the state must provide the resources needed to obtain, maintain, and regularly upgrade the hardware and software required to employ state-of-the-art technology. The report also suggests that a bold and comprehensive program to bring the advantages of technology into the classroom is fundamental to creating schools for the 21st century.

The California Business Roundtable report, *Mobilizing for Competitiveness: Linking Education and Training to Jobs, A Call for Action from The California Business Roundtable*, recommends the integration of technology into curriculum and instruction throughout K-12 education and community colleges. The report asserts that "barriers to the full integration of technology into education include inadequate resources with substantial capital investment needed to purchase essential equipment in adequate quantities" and recommends full funding of the *California Master Plan for Educational Technology*.

Governor Wilson's Education Reform Proposal calls for high technology in the classroom. "While the rest of the world uses e-mail, our schools are stuck in the age of the Pony Express. I propose we give every classroom in California access to the information 'superhighway' offered by computers and fiber-optic technology."

The California Education Summit pointed out the lack of access to technology and the information infrastructure in California schools. Panelists noted current efforts of phone and cable companies to meet student needs through network connectivity and urged the State Legislature to fund and support the means to address those needs.

2. Research is Documenting the Educational Benefits of Technology

Research consistently shows that with planning, administrative commitment and teacher training and time, technology applications can foster increased student performance, positive school work attitudes and

* Based on an Article published by the Association of California School Administrators (ACSA) in *Thrust for Educational Leadership*.

school-to-work preparation. For example, Far West Laboratory studied California technology programs from 1984 to 1991 and reviewed current research on the impact of technology in education. This study showed that technology alone does not have a significant effect on teaching and learning—it is a tool that when used with tested and instructional practices and curriculum can be an effective ingredient to foster change. Examples of the many findings show that for technology applications to be effective. . .

- educators must integrate technology into the ongoing educational programs and reforms.
- teachers and administrators must jointly plan for the use of technology.
- education agencies must promote educationally sound applications of technology and development of software and video programs that meet educational content standards.

Other findings from this study showed that . . .

- student access to technology increases opportunities and incentives for students to construct and invent their own learning; it gives students more control over learning, while teachers serve as facilitators.
- technology provides many new opportunities for students to solve problems and develop solutions.

3. Past Efforts to Implement Technology in California Lacked Sufficient Funding

Major interest in technology for education emerged in 1984 with the passage of legislation that brought together previous initiatives such as the Instructional Television Agency (ITV) funding and grants for equipment to schools. Funding of AB 803 began with about \$10 million and increased to \$26 million by its sunset in 1989. AB 803 was best known for the school-based competitive grants offered each year. AB 803 also funded the start-up of the model technology schools and the California Technology Project (CTP) and maintained the seven regional ITV Agencies.

Another bill, SB 813, the Hart California education reform legislation incorporated the Teacher Education and Computing (TEC) Centers. This provided approximately \$15 million to fund up to 17 regional centers that offered a wide variety of resources to include in-depth training in technology integration, software and video demonstration programs, grant preparation assistance, local business partnerships, and a variety of other support resources to schools. However, in 1987, funding for TEC Centers was eliminated and the AB 803 funding cut from \$26 to \$13 million. A major reason for this reduction was a lack of widespread interest among the education community in saving these programs when many other issues threatened the state's overall education system.

Subsequently the California Legislature determined that it would be necessary to develop a strategic plan to improve statewide coordination of technology, reduce duplication of effort, and establish guidelines for planning, implementing, evaluating, and funding technology in California schools. Senator Becky Morgan and Assembly Members Sam Farr and Charles Quackenbush authored legislation (AB 1470) that would establish the *California Planning Commission for Educational Technology* to develop a *Master Plan for Educational Technology* and maintain the school-based grants and other basic programs previously funded through AB 803. The plan was informed by a comprehensive study of the implementation, use and impact of technology in California schools (Far West Laboratory, 1991). The Commission issued the Master Plan recommendations that offered an agenda that emphasized:

• Technology in every learning environment	• Professional development and support
• A Golden State Education Network	• Access to instructional materials
• A state-wide student information system	• Management information resources
• Coordinated governance	• Comprehensive evaluation
• Sustained and adequate funding	

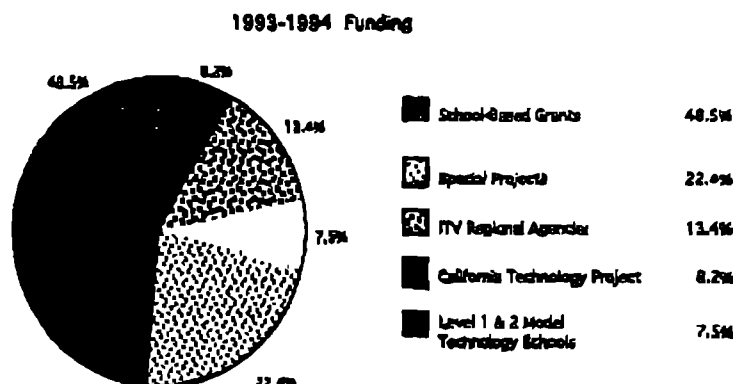
In 1992, SB 1510, the *Morgan-Farr-Quackenbush Educational Technology Act of 1992* was passed to implement the Master Plan and reauthorize and restructure effective components of the state's existing educational technology programs. Most of the recommendations of the Master Plan could not be accomplished as the funding level remained at \$13 million. The Commission estimated that it would cost at least one billion dollars to fully implement the plan. The result was that equity and opportunity for both students and teachers to access and utilize technology in education could not be realized.

4. Limited Funding for Many Effective and Valued Programs and Services

With the available \$13.6 million, California offers grants, programs, and resources that are of great value. These limited resources have leveraged, through matching funds, dollars and business donations of over \$15 million in resources. However, even with leveraged resources, California still falls short of meeting its needs for educational technology. The following are brief descriptions of the current resources:

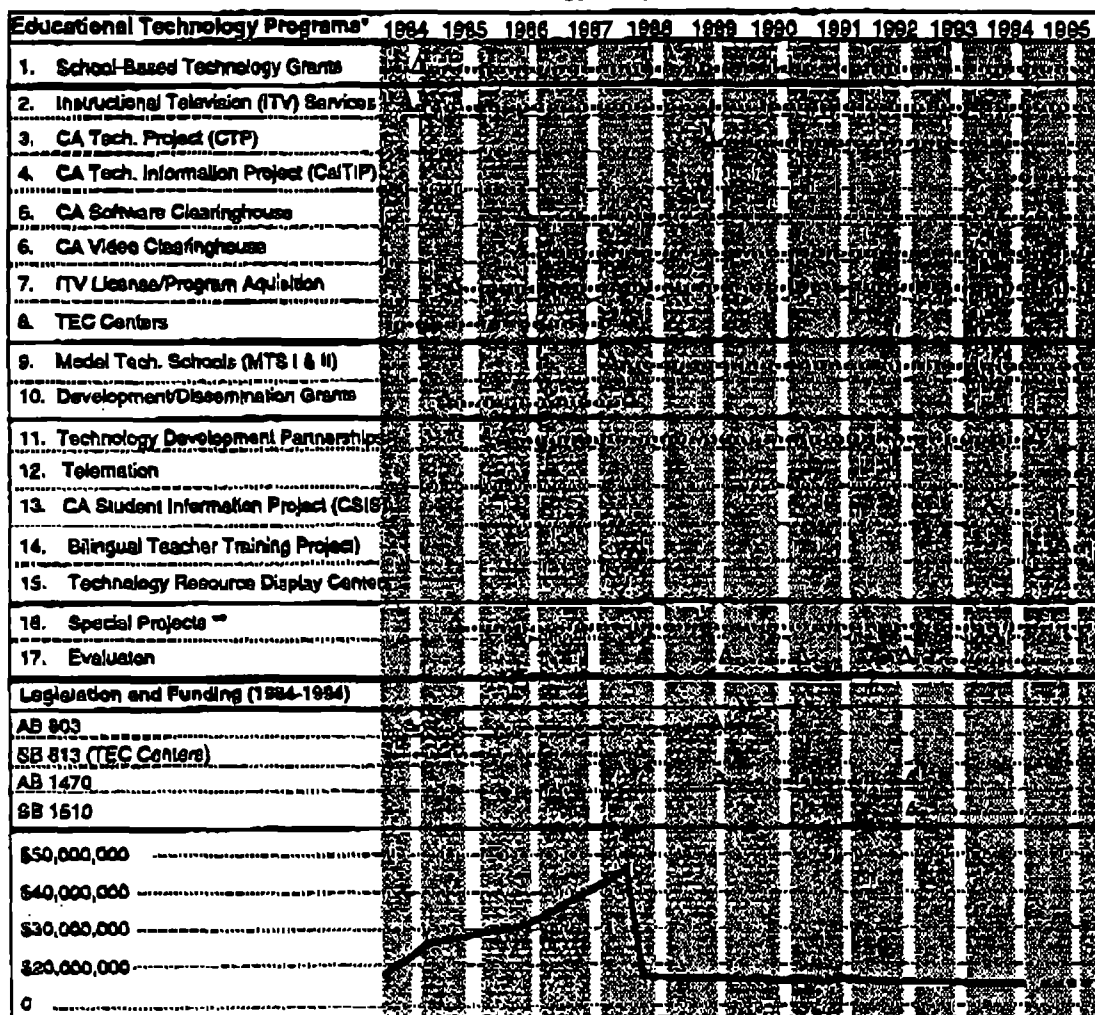
- *School-Based Educational Technology Grants.* These grants to school districts and county offices of education are to develop, adapt, or expand existing technological applications in teaching and learning. To receive a grant the school shall develop a Technology Use Plan (TUP) that: addresses the needs of students and teachers, is part of existing district programs, contains school-level planning, supports the local and state curriculum frameworks, includes teacher staff development, and provides for evaluation.
- *California Technology Project.* The California Technology Project (CTP) Regional Affiliates receive limited funding to provide professional development programs and technical assistance to schools.
- *California Online Resources for Education (CORE).* CORE is a statewide information service accessed via CSUnet that offers many valuable information resources to K-12 educators.
- *Instructional Television Regional Agencies.* Seven Instructional Television (ITV) Regional Agencies provide advice on instructional television programming and offer staff development and printed resources to help teachers make better use of instructional television programs.
- *Model Technology Schools (Level I and II).* The Model Technology Schools (MTS), provide information about carefully researched procedures, planning approaches, and instructional practices for implementing educational technology programs.
- *The Telemation Project.* Telemation is a collaborative effort to provide professional development in telecommunications for teachers and administrators. A team of 'telementors' help school teams to integrate electronic learning resources into curricular plans.
- *California Instructional Video and Computer Software Clearinghouses.* These agencies have implemented a nationally recognized system for evaluating instructional video and computer and software programs, as well as CD-ROM and video disc programs. These evaluations are available on request to guide educators in the selection and purchase of technology-based resource to support the California Curriculum Frameworks.
- *California Technology Information Project (CalTIP).* CalTIP offers a toll free "help-line" that provides grant applicants with answers to questions about the SB 1510 grant development process and information about many programs and resources, including funding sources, legislative updates, curriculum support, and much more. The CalTIP toll-free "help-line" number is 1-800-240-2744.
- *Special Projects.* Included in the special projects are: CalTIP, Telemation, Program/License Acquisitions, High-Tech learning Resources Display Center, Software and Video Clearinghouses, California Student Information Services, Building the Future Project, Bilingual Teacher Training Project, and program evaluation and review.

The 1993-94 state funding allocation for these programs is distributed as shown in the following:



The next chart illustrates the major programs funded from 1984 to the present time, indicates the legislative timelines, and shows the funding levels authorized for educational technology over the past ten years.

State Funded California Educational Technology Programs from 1984-1995



* Technology Programs are grouped as follows: 1) Grants directly to schools to fund planned use of technology integrated instruction; 2-8) Statewide and regional support resources for local technology implementation; 9-10) Model programs for local adoption and adaptation; 11-15) Specialized projects established to meet specific statewide priorities and technology resource needs; Evaluation of particular programs as determined by the state committee.

** Special Projects include: VCR distribution, Technology in Curriculum (TIC) consumer guides, video productions, summer training institutes, Tri-state software development, ITV evaluation, MTS evaluation and dissemination, and more.

5. Education and Business Councils Help Coordinate and Initiate New Programs

The Master Plan and SB 1510 also established the Education Council for Technology in Learning (ECTL) and the Industry Council for Technology in Learning (ICTL). The ECTL is an 11 member council of teachers, administrators, and business representatives that advises the State Board of Education, with input from the education community and the California Department of Education, on funding and program priorities.

The ICTL was established to provide executive level involvement of business and industry in the planning and implementation of technology in California education. The ICTL represents over 50 companies that meet monthly to plan and coordinate various initiatives with the ECTL. The ICTL has and continues to be an important advocacy group for educational technology. Presently the ICTL is planning a series of regional forums for the planning and application of technology in education. The first forum will be in San Bernardino County during November of 1994.

Continued funding for SB 1510 Programs. The State budget includes continuation of the \$13.6 million to fund the programs authorized by SB 1510 already described in this article. The California Department of Education with local support provided by the CTP Affiliates will soon be announcing another cycle of School-Based Educational Technology Grants to schools. This will fund over 250 projects to schools from a total allocation of \$6.5 million for these grants. The state will continue to fund the services and programs already described as well as some additional projects such as the Bilingual Teacher Training Project, the California Student Information Services Program (CSIS), and the High-Tech Learning Resources Display Center.

6. Additional Funding and Support Leveraged by State Educational Technology Funding.

AB 1470 mandated a comprehensive study of the programs and project authorized by AB 1470. The study provided the detailed analysis of the programs and the educational technology infrastructure in an effort to make recommendations to the legislature about what programs should be continued and in what form. Programs continued would be those with the greatest cost benefit to educators and students in the state. These include the California Technology Project and California On-line Resources for Education (CORE), regional instructional television services, school based grants with increased planning, staff development, and matching requirements, and research and development partnership programs. Some new programs that emerged from the study were the California Technology Information Project--the "one stop" electronic information resource for educators, the Telemation training project to facilitate effective teacher utilization of telecommunications, the California Student Information System (CSIS), and a program for the dissemination of the various programs and practices that were identified as effective resources for teachers to be able to adopt or adapt in their classrooms. The following identifies the documented levels of funding leveraged from a variety of sources that have supported California's educational technology programs.

Developmental Partnership Programs (1990-91)

This program funded the development and research of new software and multimedia programs designed to support and expand instruction in alignment with the California State Curriculum Frameworks.

<i>State Investment</i>	<i>Private Investment</i>	<i>Gain</i>
42% (\$1.8 million)	57% (\$2.4 million)	75%

California Technology Project (1990-91)

The California Technology Project provided limited state funding to 14 regional consortia to provide assistance and training to educators at schools sites to facilitate the implementation and effective use of technology to support teaching and learning.

<i>State Investment</i>	<i>Consortia Investment</i>	<i>Gain</i>
32% (\$.8 million)	68% (\$1 million)	50%

Telecommunication Resources for K-12 from CSU-Net (1990-91)

The California State University telecommunication network (CSU-Net) is made available to K-12 because of the state educational technology funding that provides for the staffing and maintenance of the network for K-12 utilization. The cost to duplicate a similar network for K-12 would be prohibitive and in the millions of dollars.

<i>State Investment</i>	<i>CSU Investments</i>	<i>Gain</i>
70% (\$.6 million)	29% (\$.25 million)	41%

Instructional Television Agencies (1990-91)

The state provided funding as an incentive for public television agencies and county offices of education to assist the use of instructional television and to provide information on how to integrate ITV into curriculum and instruction.

<i>State Investment</i>	<i>Matching & Donations</i>	<i>Gain</i>
21% (\$1.9 million)	79% (\$7.1 million)	373%

Model Technology Schools (1989-90)

The state has funded a total of 13 model technology schools projects since 1988. Six of these were K-12 demonstration programs (MTS Level I) that would offer educators a resource to visit and then adopt or adapt desired products and practices at any grade level and for all curriculum topics. Seven of the projects were funded to develop adaptable models for integrating technology in specific content areas and at particular grade levels (MTS Level II).

MTS Level I

<i>State Investment</i>	<i>Matching & Donations</i>	<i>Gain</i>
57% (\$4.0 million)	42% (\$3.0 million)	73%

MTS Level II

<i>State Investment</i>	<i>Matching & Donations</i>	<i>Gain</i>
71% (\$1.0 million)	28% (\$.4 million)	39%

Undocumented Savings: The study showed that all schools surveyed indicated that they saved time and resources by being able to adopt or adapt resources, ideas, products, and practices developed by the MTS projects. This resulted in a potential saving of cost in re-inventing or developing resources by using those that have already been developed and field tested. SB 1510 makes it possible to issue Dissemination Grants to fund the dissemination of resources developed by MTS Projects as well as others determined to meet state criteria.

School Based Educational Technology Grants (1989-90)

Over past 10 years the state with advise of the education community developed a process for effectively distributing funding to school in ways that would maximize planned change, sustained use, and local investment in school-based educational technology programs.

<i>State Investment</i>	<i>Matching & other sources</i>	<i>Gain</i>
69% (\$6.0 million)	33% (\$2.6 million)	47%

Sources of School-Based Grant Funding

<i>Source of Support</i>	<i>Average Amount</i>
AB 1470 Funding	\$31,860
School District General Funding	\$5,003
School Site	\$2,763
School Improvement Funding	\$2,113
Business and Industry	\$1,325
Lottery	\$1,098
Chapter I	\$1,038
Mentor Teacher Program	\$496
Private Foundation	\$439
Community Donations	\$276
Chapter II	\$207
Prop. 98 Supplemental Grants	\$80
Federal Grants	\$60
State Funding other than AB 1470	\$45
Colleges and Universities	\$29
Average Grant Value	\$35,868

In one year the state invested \$15.1 million in the development and implementation of a variety of programs just summarized. The return on this investment was \$16.75 million—over 100% return on the state investment in educational technology. This does not include the undocumented value added by the schools and districts utilizing the services of the regional programs (that they would need to finance without this resource) and the value of the CSU-Net provided for access by K-12. Additionally, the state now has a valuable resource and infrastructure to support the expansion and use of technology in it's schools. All agencies surveyed mentioned that without the state support (small as it is) that they would not be able to justify and obtain the funding to accomplish their objectives. Business mention that the state must show some support and be an active partner in the development and implementation of the statewide technology infrastructure.

7. Educational Technology Funding in California May Improve

As was mentioned earlier California is 50th among the states in the ratio of computers to students. Most other states are now moving ahead of California in their support for technology in education. It is hoped that the emerging interest in technology expressed by the state leadership and education organizations will result in some action that will further technology in California. Following are some concrete initiatives and actions that suggest possible increases in future funding for educational technology from both state and federal sources.

California Public Utilities Commission. The California Public Utilities Commission (CPUC) released a report to the Governor, *Enhancing California's Competitive Strength: A Strategy for Telecommunications Infrastructure*, recommending its plan for developing a state-wide telecommunications infrastructure. To "ensure universal access and enrich the state education system," the CPUC recommends support for the use of advanced telecommunications in California's K-12 schools and public libraries. The CPUC also recommends creation of a Schools and Libraries Information Technologies Grant Program to provide up to \$150 million annually. Funding could come from a variety of sources such as issuance of state bonds, a small end user surcharge on telecommunications services, a direct appropriation of state funds, or some combination. Additionally, Governor Wilson has urged the CPUC to allocate the money to support telecommunications access for schools and libraries and endorsed the expenditure of the \$150 million for school and library access to telecommunication networks.

The CPUC set a precedent with the announcement that \$40 million from the \$49 million Pacific Telesis spin-off of its wireless operations will fund educational technology. The funding will be allocated for

telecommunications connectivity to schools and related staff development, hardware, software, and other resources for public schools. Of the remaining amount, \$7.9 million will be refunded directly to ratepayers and \$2.1 million will be used to continue the Telecommunications Education Trust Fund.

The Governor has designated the Office of Local Assistance (OLA) to administer the funds. The SB 600 *Task Force on Telecommunications Network Infrastructure* will serve as the advisory body to assist the design of various programs, funding allocation criteria, and evaluation of strategies to determine the effectiveness of various approaches to develop telecommunications infrastructure in schools. The SB 600 Task Force consists of representatives from CTA, CUE, ACSA, CSU, the telecommunications industry, libraries, and ratepayer groups.

The Speaker of the House (Willie Brown) and a ratepayer advocate group (TURN) filed a petition for a rehearing on the \$49 million as these groups believe that it is not legal for the CPUC to allocate the funds to education. The Speaker supports the concept of the funding going to education but believes that legislation is necessary to make it legal for the CPUC to allocate these funds. Delaine Eastin had a bill that would have done this but it died in committee. A third petition for rehearing has been filed with the Commission by the Mexican-American Political Association and Latino Issues Forum. The CPUC and the Governor are taking the position that special legislation is not necessary to allocate these funds, and the CPUC and the Governor have the authority to administer the program in cooperation with the Department of Education and the SB 600 Task Force.

The OLA Director, Oscar Wright, recently stated that his office desires to take it's time so that the use of funds is balanced between local access while leveraging other funds available from federal and private sources.

The California Task Force on Telecommunications Network Infrastructure. This task force was established by SB 600 (Rosenthal) to represent business, K-12 and postsecondary education, libraries, and ratepayer advocates in the development of a telecommunications plan to serve education, libraries, and communities. The Task Force focus is on the development of a plan and strategy to implement the CPUC recommendations mentioned above and devise and implement the means to provide telecommunication technologies and services to schools, libraries, and communities.

California Legislation. Several bills were considered this year in response to the CPUC initiative and various education organizations, to include CTA, ACSA, CUE, CSU, the Department of Education, and a number of school districts.

SB 1960 (Rosenthal). This legislation would fund a process to provide telecommunication connectivity into California public schools and libraries; however, the funding formula and source is yet to be determined at this time. The bill would also establish a Golden State Education Network Authority representing K-12 and institutions of higher education to administer the program.

AB 3607 (Moore). Schools and districts which have locally approved educational technology plans for classroom level telecommunication connectivity with staff development support and curriculum integration would be eligible for funding to implement such plans. Funding would be provided through a telecommunication surcharge to generate \$150 million dollars annually for the schools.

AB 3031 (Eastin). This bill would require the State Superintendent of Instruction to prepare and execute a long-range plan to equip every public school classroom in the state with specified basic technology tools by January 1, 2000, and order the CPUC, in a specific case, to transfer \$48 million to fund this effort.

AB 1261 (Eastin). This bill would authorize a statewide bond to fund hardware and connectivity for California schools.

Telephone Company Support. Pacific Bell announced *Education First*, an initiative to connect all schools to the information infrastructure to provide free telecommunication connection to two classrooms per school and one year of free monthly service to use these connections. Pacific Bell is now establishing demonstration test sites and a process for distributing the resources. General Telephone (GTE) announced its *California Education Initiative* which will soon provide technical support to assist schools in connectivity utilizing telecommunication services within the GTE service areas.

8. Current Status of Funding for California Technology Programs

FY 1994-95 Appropriations. The State Legislature has appropriated \$13,398,028 per year for K-12 educational technology programs. Of this \$13 million, the following budget items relate to telecommunications for education.

Project	FY 93-94	FY 94-95 Recommended
<i>California Technology Project</i> , which includes professional development, support of regional services, CTP affiliate agencies, and support of CSU Net access for teachers.	\$1.1 million	\$1.265 million
<i>Telemation Project</i> . A project that offers specific training through "telementors" to assist teachers in using telecommunications in the classroom	\$350,000	\$350,000
<i>California Technology Information Project (CalTIP)</i> . An information collection and analysis service to put content and resources information on-line.	\$294,390	\$198,028
<i>California Online Resources for Education (CORE)</i> . Telecommunications networking services.	\$0	\$735,000
<i>School Based Grants</i> . Grants directly to schools for the planned use of technology, which may or may not include telecommunications access. Average school grants are about \$15,000 and can range from \$4,000 to \$90,000.	\$6.5 million	\$6.5 million
<i>California Student Information Services</i> . A start-up project to provide student information and resources on-line.	\$300,000	\$300,000
<i>Model Technology Schools</i> . Classroom-tested technology activities and staff development for adoption or adaptation.	\$1 million	\$1 million
<i>Instructional Television (ITV) Regional Agencies</i> . Instructional television programming and videos, to include staff development.	\$1.8 million	\$1.8 million
<i>Software and Video Clearinghouses</i> . Evaluation and information dissemination on effective instructional video and computer software.	\$300,000	\$300,000
<i>Evaluation</i> . Review of state technology programs.	\$14,638	\$200,000

The remainder of funding supports other educational technology programs and resources, such as the program licensing, acquisition of video programming, high technology learning resources display centers, and bilingual teacher training programs. The fiscal year 1994-1995 budget has been approved by the State

Board of Education and Legislature. However, funding distributions are subject to change throughout the year. No additional state funding is anticipated other than the possible user surcharge on telecommunications services or the use of Pacific Bell "spin" money, which seems unlikely for FY 1994-95.

9. Federal Initiatives.

The Clinton Administration is promoting the NII and its potential benefits to education. This has resulted in an increased level of legislative activity and potential funding for educational technology.

Goals 2000: The Educate America Act. The Act provides funding to support development of a State plan for technology integrated into the State Goals 2000 Improvement Plan. The California Department of Education has received approval for its already authorized \$10 million entitlement for the initial planning and pilot testing of a California Goals 2000 Educational Improvement Plan. Of the \$10 million, \$390,000 is allocated for the development of an educational technology plan that is integrated into the State's overall Goals 2000 Improvement Plan. The state intends to use the Goals 2000 planning as an opportunity to consolidate and coordinate its existing technology plans and initiatives in an effort to efficiently target resources to schools.

The Goals 2000 Plan will serve to guide the use of funding for subgrants to schools that will become available in 1996. These subgrants can be used for educational technology resources to support the state's Goals 2000 Improvement Plan. Congress recently appropriated \$388.4 million for Goals 2000 for 1996 with approximately \$39 million for California. Although no amount was set specifically for technologies, states may use its Goals 2000 funds for the continued development and implementation of state technology plans.

Improving America's Schools Act. The reauthorization of the Elementary Secondary Education Act (ESEA) will incorporate technology provisions for: regional staff development, technical assistance, distance learning, research and development related to new and emerging technologies to support teaching and learning, and the use of technology in federally funded programs such as Chapter 1 and the new Eisenhower Professional Development Programs. At this point it is anticipated that \$40 million will be allocated for technology in ESEA. Of this \$40 million, approximately \$25 million will be awarded to consortia of education agencies for R&D on new and emerging technologies that would support national education reform initiatives, such as Goals 2000 and School to Work. Approximately \$10 million may be allocated for regional staff development and technical assistance to support education uses of technology. It is anticipated that between \$3 and 5 million will be allocated to the recently formed U.S. Office of Educational Technology.

School-to-Work. Grants will be available for states to apply for school to work programs and will emphasize the development of local work skill standards and educational strategies for their implementation. These grants can be used to fund the integration of technology into school-to-work programs.

Star Schools. Distance education funding will be increased. California has benefited from Star Schools funding. The TEAMS distance learning program of the Los Angeles County Office of Education has been and continues to be funded by Star Schools to deliver distance education and staff development in math and science for elementary grades. The Distance Learning Resource Network of the Far West Laboratory offers information resources about distance education to educators throughout the western states.

Department of Commerce. The U.S. Department of Commerce issued grants to local educational agencies and schools for the planning and implementation of telecommunications to support teaching, learning, and administrative applications of technology. The funding for this national grants program will increase from its current \$26 million to \$100 million for 1996.

Education Access to the Information Superhighway. Congress has introduced legislation that would establish regulatory authority and other actions to enhance the availability of advanced telecommunications services to all educational institutions by mechanisms such as preferential rates for telecommunications services.

Technology Reinvestment Program (TRP). TRP is a grants program which emphasizes conversion of defense funding in combination with funds from other agencies, such as NSF, in the form of competitive grants. A few of these grants have been awarded to education agencies for digital libraries and telecommunication infrastructure. However, most of these grants are awarded to defense contractors for the development of high performance computing technology.

10. State by State Funding Comparison for Technology

Far West Laboratory is conducting a new survey on state funding for educational technology and telecommunications. The enclosed chart shows the initial findings of the Far West study, as well as information obtained from a Council of Chief State School Officers survey to expand the scope of the state comparison. Notice where California is ranked for per pupil expenditures for educational technology.

Information for the Far West Laboratory study is being gathered through a series of phone interviews with each state department of education and/or agency responsible for coordination of statewide technology programs. In order to provide an accurate comparison and include as many states as possible, the figures shown in the chart represent state education funding, either general education funds that may be used for technology equipment and programs or funds designated for educational technology.

Educational technology/ telecommunications initiatives also rely on financial assistance from other state agencies, local discretionary funds, public and private foundations, telephone and technology companies, and others. However, accurate records do not exist to monitor the extent to which schools utilize these sources.

Other funding sources may include the following federal funds: Chapter 1, Chapter 2, Special Education, and various other federal sources. Districts may decide whether or not to use these funds for technology, and most of the funds that are used for technology are applied to the acquisition of computers, software, and computer labs -- not for telecommunications. Most state and federal education agencies do not have in place a system to monitor the extent to which these funds are used for technology.

It should be noted that California ranks 50th in computers per student (19.7) as determined by Quality Education Data, and is ranked 44th according to Market Data Retrieval, another national survey agency. Most states are not only ranked ahead of California, but are planning significant increases in funding for educational technology and telecommunications in the next year.

Far West Laboratory is continuing to update this information for comparison of state-by-state educational technology appropriations and eventually collect information on alternative funding sources.

THE WHITE HOUSE

WASHINGTON

November 2, 1995

MEMORANDUM FOR EDUCATION TECHNOLOGY WORKING GROUP

(see attached distribution list)

FROM: Jonathan Sallet, Paul Dimond, Greg Simon

SUBJECT: Increased Coordination for the Educational Technology Initiative

As we move forward on the President and Vice President's Educational Technology Initiative, we hope that the following steps will establish a useful coordinating structure:

- **Regular Monday Meetings.** Formalizing past practice, we will meet regularly every Monday afternoon at 3:00 in Room 211 to review the progress of our workplan, an updated copy of which is attached. Jonathan will be responsible for the agenda and updated workplan.
- **Regular Wednesday Conference Calls.** We will also have regular conference calls every Wednesday evening at 6:30. These calls will give us an opportunity in midweek to touch base. The phone number and code will be sent out early next week.
- **A Secretariat.** We have asked Mike Schmidt to once again take up the duties of "Ed-Tech Secretariat." That means that Mike will be responsible for setting up and publicizing working group meetings, collecting file copies of all paper that is created and distributed on this initiative, and generally managing the paper flow for the initiative, much like he did for the September 21 and October 10 events. This does not denote any change in responsibilities for anyone, but require that we each make sure to you tell Mike about meetings and events that we set up and send him copies of any paper that is created. This way, there is a central person for all of us to contact for any information about the initiative. (Mike's phone is 456-5567, fax is 456-7028, and e mail is schmidt_mt@a1.eop.gov)
- **A Unified Calendar, Updated Regularly.** This Friday, you will receive a unified calendar of meetings/events that the Administration is calling or participating in on the educational technology front. Mike Schmidt will maintain and update this calendar, so please send him any information about meetings or events that you are working on.

- **Outside Schedule.** Attached is an excellent schedule of outside ed tech events that Julie Swisshelm put together last week. One of the agenda items on the Monday meeting calendar will be to review which events should include an Administration presence. Also, call Julie at 456-6041 with any additional outside events that you know about -- she will work with Mike to make sure they are on the unified calendar.

Distribution List:

Gene Sperling
Bill Curry
Greg Simon
Jim Kohlenberger
Paul Dimond
Henry Kelly
Julie Swisshelm
Linda Roberts
Jonathan Hoyt
Kate Carr
David Shipley
Julia Moffett

CLOSE HOLD -- DRAFT 11/02/95 -- EDUCATIONAL TECHNOLOGY WORKPLAN

MISSION: To develop a national vision and unveil a national effort within the next four months that will demonstrate, in concrete ways:

- The details and expected timeline for reaching each of the four pillars;
- The contributions that will be made by the federal government and corporate America to demonstrate the feasibility of the goals, working with state and local governments, teachers, parents, and students.

I. Overall Coordination:

Goal: To ensure that Administration efforts are conducted on a coordinated, consensus basis; that the process is managed in a comprehensive and timely fashion; and that decisions that need be made at a more senior level are reached expeditiously.

Organization: Laura Tyson, as led by Sperling, Simon, and Curry, with working group representing NEC, DPC, OVP, OSTP, OPL, DoEd, DOC.

- Decision process. [Tyson]
- Working agenda with status of tasks, updated. [Sallet]
- Schedule of working group meetings. [Sallet]
- Secretariat. [Schmidt]
- Outside Calendar. [Swishhelm]
- Recruiting outside ex-CEO? [Kalil]

Timeline: Through the unveiling of the national vision and national effort: date of unveiling to be determined

II. Potential Federal Actions

Goal: To demonstrate that the federal government under the leadership of the President and Vice President will effectively act as a catalyst for national action, both governmental and non-governmental, and will contribute specific expertise through concrete actions that will fulfill needs that would otherwise be unmet.

Organization: NEC/DPC-led working group process [Dimond, Schmidt] with specific assignments (e.g., Greg Simon lead on Spectrum Issues)

Timeline (with specific tasks):

- October 19 - 20: Spectrum Issues [Simon]
- October 23: DoDDS Schools [Kelly, Swisshelm]
- October 24: DoEd/HHS Issues [Dimond, Roberts, Edelman]
- October 26: Internal WH Issues [Kohlenberger]
- November 1: PBS Issues [Kelly, Swisshelm]
- November 2: Smithsonian Issues [Kelly, Swisshelm]
- November 3: Educational Technology Trust Fund [Sperling, Simon, Apfel]
- November 6: Campus of Learning [Dimond, Schmidt, Kohlenberger]

****By November 15, we hope to have made decisions on all of the Federal Actions (with the exception of the Trust Fund)**

III. Constituency Outreach

Goal: To conduct a dialogue with key constituencies that will help to enrich the national vision and to work with the private sector in a coordinated fashion to facilitate voluntary actions that will demonstrate how the Administration's national effort can be achieved.

Organization: Working group with specific assignments that track key constituencies, including

- Corporate attendees at POTUS/VPOTUS meetings [Carr, Simon, Sallet, Kalil, Kelly]
- Administration advisory groups, including the NIIAC [Sallet] and PCST [Kelly]
- Education Associations [Dimond, Roberts]
- Non-profit organizations/foundations [Sallet to contact Melanie Verveer]
- State/local government [Schmidt to work with Intergovernmental Affairs]
- Follow-through on NetDay [Kalil]
- NCC-TET [Kelly]

Timeline:

- November 2: CEO Contact Conference Call [Carr]
- November 7: Education Association Meeting [Dimond]
- Week of November 6: "Content" Conference Call [Sallet]
- November 29: Parents Organization Meeting [Roberts, Sallet]

Issues: What should be raised in a December Event? What in January?

IV. National Vision and Associated Documents

Goal: Communicate the Administration's national vision through the Department of Education's plan for educational technology and provide associated documents along the way.

Organization: DoEd with David Shipley

Timeline: Ready by November 15

- By November 3: Draft of national vision/national effort circulated from Department of Education [Roberts]

V. Communications and Event Planning

Goal: Outline a comprehensive "game plan" detailing the actions, events, and public statements the President and Vice President will utilize to communicate their national vision for educational technology.

Organization: NEC, WH Office of Communications, OVP, Bill Curry

Timeline: By November 3, draft of communications plan. [Moffett]

- October 30: Tech Corps meeting in Washington, D.C.
- November/December: Implementation of communications plan including non-event related communications, i.e. interviews with trade and education reporters, mailings, etc.

Specific Tasks: TBD

EXECUTIVE OFFICE OF THE PRESIDENT

27-Oct-1995 02:05pm

TO: schmidt_mt
FROM: swiss

CC: fitzsim
CC: hkelly
CC: swiss

SUBJECT: calendar of ed tech conferences

Mike,

The NCTET folks maintain a calendar of upcoming educational technology conferences on the ISTE web site, which may be useful to our outreach efforts. I've attached the file below. Could you please forward it to the ed tech working group?

Thanks,
Julie

This list of educational technology conferences is maintained at the ISTE Web Site (isteonline.uoregon.edu) under the "Conferences" hotlink.

[Please note that some of the characters did not translate well; in particular I believe the "\055" should really be a dash ("-"). - jms]

ISTE Conference Calendar

1995

OCTOBER

30-11/3 International Community Interconnected Computing eXchange (ICICX) People, Networks & Communications 1995 Conference (PNC '95); Honolulu, HI; Mr. Robers Mathews, Conference Coordinator, ICICX-HQ, 415 Nahua Street, Honolulu, HI 96815-2949; ph. 808/921-2097, 808/524-2449, or 808/533/3969; e/mail: bm189@po.cwru.

31-11/3 EDUCOM '95; Portland, OR; Bill Graves or Ruth Holder, EDUCOM '95; ph. 202/872-4200; e-mail: conf@educom.edu.

NOVEMBER

2-4 Sixteenth Annual Instructional Technology Conference, "Beyond the Horizon"; Spokane Sheraton Hotel, Spokane, WA; 1995 ITC Program Chairman, Communications Technology Center, 3860 159th Avenue NE #150, Redmond, WA 98052; ph. 206/881-

4409; fax 206/881-4470; e-mail: institute@ctc.edu.

3 MAINEducation '95, "Changing Schools in Changing Times: Goals 2000"; Augusta, ME; The Maine Center for Educational Services, P.O. Box 620, Auburn, ME 04212-0620; ph. 207/783-0833 or 207/783-9703.

6-7 SIMBA Online Conference '95, "Practical Experience & Insight for Online Executives"; Washington, DC; SIMBA Information Inc., P.O. Box 7430, Wilton, CT 06897.

8-11 Idaho School Boards Association (ISBA) Annual Conference; Coeur d'Alene, ID; 2815 Madison Avenue, Boise, ID 83702; ph. 208/342-6441; fax 208/345-4212.

9 Integrating Technology Across Your Curriculum Seminar (K-5); Ontario, CA; California Elementary Education Association (CEEA), P.O. Box 3168, Torrance, CA 90510; ph. 800/678-8908.

9-11 Fourth Annual Innovations in Education Conference: Technology in Education; Minot, ND; Midcontinent Institute, Minot State University, 500 University Avenue West, Minot, ND 58707; ph. 701/857/3070; fax 701/857-3165.

10-12 California League of Middle Schools and the California League of High Schools 1995 Technology Conference and Exhibit; Monterey, CA; Peter Murphy, Executive Director, 18012 Cowan, Suite 110, Irvine, CA 92714; ph. 800/326-1880 or 714/261-2567; fax 714/261-2578.

13 Integrating Technology Across Your Curriculum Seminar (K-5); Los Angeles, CA; California Elementary Education Association (CEEA), P.O. Box 3168, Torrance, CA 90510; ph. 800/678-8908.

13 Connecticut Educators Computer Association 14th Annual Technology Conference (CECA '95); Cromwell, CT; Paul Hunter; ph. 203/625/7464; e/mail: cecact@aol.com.

19/21 Thirtieth Annual Conference of the New York State Computers & Technologies, "The Many Facets of Technology"; Syracuse, NY; Peter Flyzik, Conference Chair, RD#2 Box 211-B, Hamilton, NY 13346; ph. 315/691-3360; fax 607/674-9742; e-mail: pflyzik@broome.bitnet.

15 Integrating Technology Across Your Curriculum Seminar (K-5); San Jose, CA; California Elementary Education Association (CEEA), P.O. Box 3168, Torrance, CA 90510; ph. 800/678-8908.

17 Technology Conference, "Implementing Technology in Your Classroom: Ideas That Work!" (K-12); Orlando, FL; The Education Centre (TEC), P.O. Box 3168, Torrance, CA 90510; ph. 800/678-8908.

17 Integrating Technology Across Your Curriculum Seminar (K-5); Sacramento, CA; California Elementary Education Association (CEEA), P.O. Box 3168, Torrance, CA 90510; ph. 800/678-8908.

27 Implementing Multimedia Technology in Your Classroom

Seminar (K-8); Chicago, IL; The Education Centre (TEC), P.O. Box 3168, Torrance, CA 90510; ph. 800/678-8908.

28-30 Christa McAuliffe Technology Conference, Nashua, NH; Christa McAuliffe Technology Conference, c/o NHSAA, 11 Morill Hill, Durham, NH 03824.

28-12/1 CAUSE 95, "Realizing the Potential of Information Resources

Information, Technology, & Services"; New Orleans, LA; CAUSE, 4840 Pearl East Circle, Suite 302E, Boulder, CO 80301-6114; ph. 303/939-0315; fax 303/440-0461; e-mail: conf@cause.colorado.edu; gopher: cause-gopher.colorado.edu; World Wide Web: <http://cause-www.colorado.edu>.

30-12/3 The Fourth International Conference on Telecommunications in Education (Tel-Ed '95); Ft. Lauderdale, FL; Lori Novak, International Society for Technology in Education, 1787 Agate Street, Eugene, OR 97403-1923; ph. 503/346-2411; fax 503/346-5890; e-mail: lori_novak@ccmail.uoregon.edu.

DECEMBER

2 First Annual Classroom Telecommunication Conference; Pasadena Conference Center, Pasadena, CA; CTC, P.O. Box 5546, Pasadena, CA 91117; ph. 818/792-8546; e-mail: ncarter@oxy.edu.

2-5 1995 Technology and Information Educational Services (TIES) Educational Technology Conference, "The Great Technology Get-Together '95"; Minneapolis, MN; TIES Training Center, 2665 Long Lake Road, Roseville, MN 55113-2535; ph. 612/638-8780; fax 612/638-8798.

4 Implementing Multimedia Technology in Your Classroom Seminar (K-8); Houston, TX; The Education Centre (TEC), P.O. Box 3168, Torrance, CA 90510; ph. 800/678-8908.

5-8 International Conference on Computers in Education (ICCE '95); Singapore; ICCE '95/AACE, P.O. Box 2966, Charlottesville, VA 22902 USA; ph. 804/973-3987; fax 804/978-7449; e-mail: aace@virginia.edu.

1996

JANUARY

8 California Elementary Education Association (CEEA) and The Education Centre (TEC) Technology Conference, "Implementing Technology in Your Classroom" (k-12); Long Beach, CA; TEC, P.O. Box 3168, Torrance, CA 90510; ph. 800/678-8908.

8-11 The Second Jerusalem International Science & Technology Education Conference on Technology Education for A Changing Future: Theory, Policy, and Practice (JISTEC '96); Jerusalem, Israel; Conference Chair, 18 Shoken Street, Tel-Aviv 66556, Israel; ph. (972)-3-5124823/843 or -3-6817037; fax: (972)-3-5124833; e-mail: jistec@trendline.co.il.

10-13 BETT '96, "The World of Educational I.T.; London,

Engand; Emap Education, Greater London House, Hampstead Road, London, NW1 7QZ, U.K.; ph. 0171-388-2430; fax 0171-388-2620; International: Andrew Wilkinson, fax +44-171-388-2578; e-mail: AndyW@computing.emap.co.uk.

14-17 New Zealand Computers in Education Society (NZCES) Sixth Biennial Conference, "Inter Net Works"; Hamilton, New Zealand; NZCES Conference Coordinator, P.O. Box 1504, Hamilton, New Zealand; ph./fax 64 7 838 0521; e-mail: essvb@twp.ac.nz.

18-20 Fourteenth Annual "Technology, Reading, & Learning Difficulties" National Conference (TRLD '96); San Francisco, CA; Diane Frost, Educational Computer Conferences, 1070 Crows Nest Way, Richmond, CA 94803; ph. 800/255-2218 or 510/222-1249.

FEBRUARY

5-9 Sixteenth Annual State Conference of the Texas Computer Education Association; Austin, TX; TCEA, P.O. Box 93353, Lubbock, TX 79493; 806/799-0906; fax 806/799-6562.

6-10 Texas Computer Education Association (TCEA) 16th Annual State Conference, Austin Convention Center, Austin, TX; Robert Knight, Executive Secretary, TCEA; ph. 800/282-8232; fax 806/799-0906; e-mail: rknight@tenet.edu.

15-17 Florida Assistive Technology Impact Conference, "Celebrating Five Years of Service"; Orlando, FL; Florida Instructional Materials Center, 5002 N. Lois Avenue, Tampa, FL 33614-6549.

16-18 Sixteenth Annual Florida Educational Technology Conference (FETC '96); Orange County Convention Center, Orlando, FL; FETC/COASTAL Instructional Technology Center, 120 Lowery Place, SE, Fort Walton Beach, FL 32548; ph. 904/488-0980; SunCom: 278-0980; e-mail: fetc96@mail.firn.edu; FIRNMail: FETC96.

20-23 The Role of Technology in Education XVI, "Technology and the Emerging Roles in Education Conference; St. Charles, IL; Glenn Magle or Judy Sander, North Cook Educational Service Center, 200 Glendale Street, Wheeling, IL 60090-2936; ph. 708/419-5065; fax 708/419-0676.

MARCH

4-6 Midwest Education & Technology Conference; America's Center, St. Louis, MO; Christine McConnell, 1460 Craig Road, St. Louis, MO 63146; ph. 314/692-1250; fax 314/872-9128; e-mail: christin@info.csd.org.

11-13 Sixteenth Annual Microcomputers in Education Conference, "Internet 1996

What's Next? Connecting the Global Education Community"; Tempe, AZ; Barbara Ford, Microcomputers in Education Conference, Arizona State University, Box 870908, Tempe, AZ 85287-0908; ph. 602/965-7363; fax 602/965-8887; e-mail: meconf@asuvm.inre.asu.edu.

11-14 European Design and Test Conference 1996; Paris

France; CEP Consultants Ltd., 43 Manor Place, Edinburgh EH3 7EB, U.K.; ph. +44 131 300 3300; fax +44 131 300 3400.

13-16 Society for Information Technology and Teacher Education (SITE '96) Seventh International Conference; Phoenix, AZ; AACE, P.O. Box 2966, Charlottesville, VA 22902; ph. 804/973-3987; fax 804/978-7449; e-mail: aace@virginia.edu.

17-20 Thirteenth International Conference on Technology and Education (ICTE 996); New Orleans, LA; Tom Sechrest, ICTE 996, ph. 512/471-4080; fax 512/471-4080; e-mail: sechrest@mail.utexas.edu.

19-23 Center on Disabilities Technology and Persons With Disabilities Conference; Los Angeles, CA; Conference Committee, Center on Disabilities, California State University, Northridge, 18111 Nordhoff Street, Northridge, CA 91330-8340; ph. 818/885-2578 (V/TDD/Message); fax 818/885-4929; e-mail: ltm@csun.edu.

26-30 Teachers of English to Speakers of Other Languages, Inc. (TESOL) 30th Annual Convention and Exposition, Chicago, IL; TESOL Conventions Department, 1600 Cameron Street, Suite 300, Alexandria, VA 22314-2751; ph. 703/836-0774; fax 703/836-7864; e-mail: conv@tesol.edu.

31-4/3 ICTE Copenhagen '96, "Technology and Communications: Catalysts for Educational Change"; Copenhagen, Denmark; Tom Sechrest, Conference Coordinator; ph. 512/471-4080; fax 512/471-8786; e-mail: sechrest@mail.utexas.edu.

APRIL

9-11 Australian Computers in Education Conference (ACEC '96); Canberra, Australia; ACEC '96, ph. 06-205-6594; fax 06-205-9387.

24-26 Northwest Council for Computer Education (NCCE 996); Portland, OR; NCCE 96, University of Oregon Continuation Center; ph. 503/346-3537; fax 503/346-3509.

24-27 WTA Center for Information Transfer Fourth Annual Pacific Northwest Technology Conference & Expo; Seattle, WA; Convention Services Northwest, 8511 15th Avenue Northeast, Seattle, WA; 98115; ph./fax 206/526-1240; email: electhiway@aol.com.

MAY

9-11 1996 National Spring Computer-Using Educators, Inc. (CUE) Conference; Palm Springs, CA; Spring CUE, 1210 Marina Village Parkway, Suite 100, Alameda, CA 94501; ph. 510/814-6630.

JUNE

11-13 1996 National Educational Computing Conference (NECC '96), "Call of the North"; Minneapolis, MN; NECC '96/TIES, 2665 Long Lake Road, Suite 250, Roseville, MN 55113-2535; ph. 612/638-8764; fax 612/638-8769; e-mail:

necc96@ties.k12.mn.us.

OCTOBER

13-16 ARMA International 41st Annual Conference,
"Exploring the RIM Frontier"; Denver, CO; ARMA International,
4200 Somerset Drive, Suite 215, Prairie Village, KS 66208;
ph. 800/422-2762 or 913/341-3808; fax 913/341-3742; e-mail:
76015.3151@compuserve.com.

17-22 ED-MEDIA 96 and ED-TELECOM 96, World Conferences on
Educational Multimedia and Hypermedia and Telecommunications;
Boston, MA; AACE, P.O. Box 2966, Charlottesville, VA 22902
USA; ph. 804/973-3987; fax 804/978-7449; e-mail:
aace@virginia.edu; gopher: aace.virginia.edu.

DECEMBER

5-8 The Fifth International Conference on
Telecommunications in Education (Tel-Ed '96); Tampa, FL; Lori
Novak, ISTE, 1787 Agate Street, Eugene, OR 97403-1923; ph.
541/346-2411 or 800/336-5191; fax 541-346-5890; e-mail:
Lori_Novak@ccmail.uoregon.edu.

EDITOR'S NOTE: When submitting an announcement to this
column, please include contact data for participants rather
than exhibitors. Indicate if a conference or workshop is
sponsored by an ISTE Organization Affiliate. Be sure that
your conference information reaches our office two months
ahead of intended date of publication.

Educational Technology Initiative

*To "ensure that every child in America has the resources,
the means, by which to become
technologically literate by the dawn of the 21st century."*

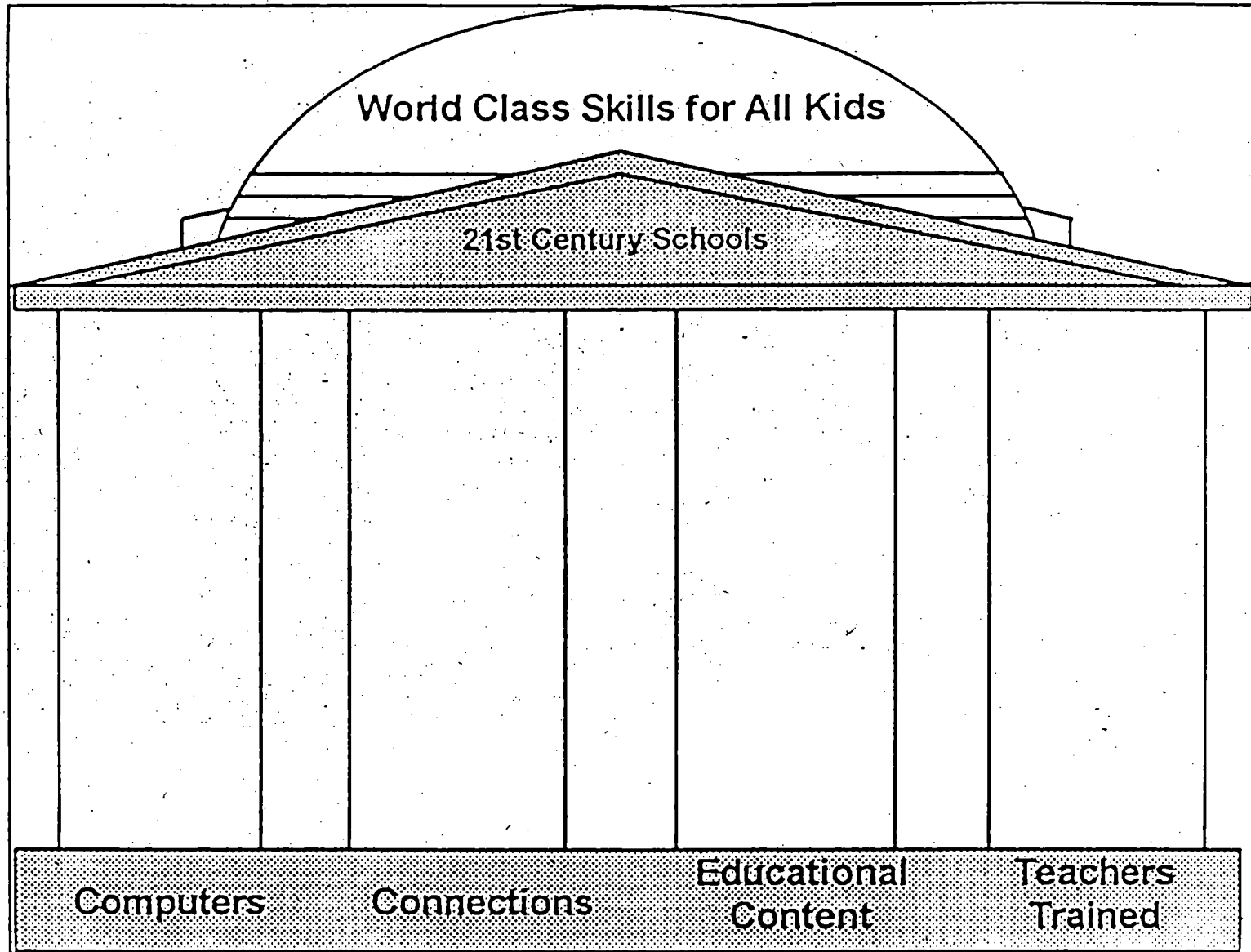
President Clinton
October 10, 1995

Four Pillars:

- ▶ "Modern computers in every classroom, accessible to every student from kindergarten through 12th grade,
- ▶ networks that connect students to other students, schools to other schools, and both to the world outside,
- ▶ educational software that is worthy of our children and their best aspirations and, finally
- ▶ teachers with the training and the assistance they need to make the most of these new technologies."

President Clinton

October 21, 1995



Achieving these Goals

- ◆ Federal Government working as catalyst;
- ◆ Through the issuance of a national plan based on the four pillars;
- ◆ With particular emphasis on private-sector support,
- ◆ "With communities, business, governments, teachers and students all joining together --a high-tech barn raising."

President Clinton,
September 21st

Recent Presidential Announcements Exemplifying The Work Done

- September 21: Through voluntary, private efforts, by the end of this school year, every K-12 school in California will have access to the Internet and 21% of the classrooms will be connected for computers.
- October 10:
 - o Announcement and Award Ceremony of the 19 Technology Learning Challenge Grants;
 - o Technology Corps;
 - o American Technology Honor Society.
- November 4: Two prototype schools weired in California

Examples of On-Going Federal Efforts

- ◆ Technology Learning Challenge
- ◆ TIAAP Grants to Schools
- ◆ Star School Programs
- ◆ Title I Funds
- ◆ NII Advisory Committee -- "Kickstart" primer.

One Estimate of What it Would Take

ESTIMATED COST OF DEPLOYING AND OPERATING INFRASTRUCTURE Computer-based Infrastructure only

Model	Total Initial deployment \$ Billions	Annual operation and maintenance \$ Billions	Public K-12 spending in final year* Percent	Deployed by year
Lab	\$11	\$4	1.5%	2000
Lab Plus	22	7	3.0	2000
Partial Classroom	29	8	3.4	2000
Classroom	47	14	3.9	2005

- * Reflects increase in education budget as forecasted by Department of Education (averages 5.6% per year through 2005 including inflation)

Educational Technology Workplan

- Federal Policies
- Private-Sector Outreach
- Communications
- National Technology Plan