

California School Library Media Centers And Student Achievement

A Survey of Issues and Network Applications

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2002

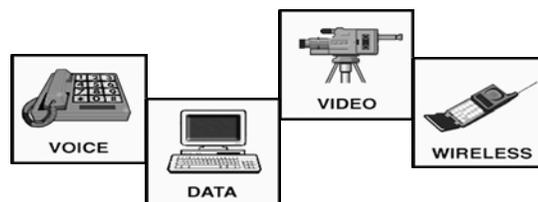


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Executive Overview

School Library Media Centers and Student Achievement:

A survey of California public school issues, library issues, technology issues, and academic network applications

Introduction

SBC Pacific Bell follows California's education and library issues, technology trends, and network applications. Market research allows SBC Pacific Bell Account Teams to stay responsive to their customer needs and provide useful discussion and planning tools for administrators, library media teachers, and their network teams. This research¹ is widely shared with California's education community and used as a starting point for planning discussions.

California school districts are being driven by high stakes testing to improve student academic performance.

As a result, school library staffing, programs, information literacy instruction, print and electronic resource collections, and online tutorials are being looked at in a new light.

This year, SBC Pacific Bell turned its attention to California's public K-12 schools and their library media centers. Acknowledging that curriculum should drive technology, the company sought the views of district curriculum leaders on top school and school library issues, technology concerns, and academic network applications. By far, the top issue driving all else is academic achievement. *California school districts are being driven by high stakes testing to improve student academic performance. As a result, school library staffing, programs, information literacy instruction, print and electronic resource collections, and online tutorials are being looked at in a new light.* Curriculum leaders point to a need to improve equity of access by students to school library resources, including Internet access and library media teachers (LMTs).² "Equity of access" was repeatedly given as a top library and technology concern.

Survey Highlights

Issues

School district curriculum leaders at California's 25 largest districts tend to agree on top issues for their district and their school library media centers. **Academic achievement** is the #1 issue districtwide, including high schools. Most other

¹ Previous research covers public libraries, community college learning resource centers, university libraries, and schools of teacher education. See <http://www.kn.pacbell.com/support/jackie> [The preceding link is invalid]

² In California, school librarians are certificated teachers who get further certification as a library media teacher, or LMT. LMTs are teachers who also have extensive training in library administration.

concerns flow from that top issue. Other issues include funding, staffing, facilities/space, technology, staff development, and so on.

Library Issues

Staffing and its related issue of equitable access to library resources is the top issue for school library media centers district wide and for high schools. California school districts have a driving need to improve student academic performance driven by high stakes testing. As a result, school library staffing, programs, information literacy instruction, print and electronic resource collections, and online tutorials are being looked at in a new light. Curriculum leaders point to a need to improve equity of access for all students to school library resources, which includes Internet access and library media teachers (LMTs). The term "equity of access" was repeatedly given as a top library issue and technology concern.

Staffing and its related issue of **equitable access to library resources** is the top issue for school library media centers district wide and for high schools. Staffing or lack of staffing determines if library doors are open or closed, if students have access to print or electronic resources, if students receive instruction in information literacy, and if teacher collaboration on research assignments and lesson planning occurs. *At the high school level, curriculum leaders point to significant understaffing of school library media centers: One library media teacher for 2,000-4,000 students.*³

Each January, a district library plan must be Board approved and submitted to the California Department of Education in order for a district to receive state categorical funds for school library print and electronic resources, including library automation. A plan may extend beyond collection development. It should include staffing, professional development, programs, facilities, collaboration, parent involvement, and communication. For this reason, curriculum leaders were asked if these plans were posted to their district websites. Five districts had their district library plans posted and another five indicated they planned to do so. A slightly higher number of districts posted their annual district technology plans, with several districts indicating that their technology plans were still circulating for comment and would be posted once finalized. District technology plans now have curriculum-specific requirements to meet compliance with Enhancing Education Through Technology (EETT), a part of the Federal No Child Left Behind Act of 2001.⁴

³ U.S. national average library media teacher-to-student ratio is 1:953. This suggests that California's large high schools are understaffed by 2-4 LMTs.

⁴ EETT has a strong curriculum component, unlike tech plans required for E-Rate. See criteria at <http://www.cde.ca.gov/tlc/tlctechplanfinalcriteria.pdf> [Note: The preceding link is no longer valid.]

Given collaboration is an area addressed by most district library plans, curriculum leaders were asked if their district had yet joined their Library of California Regional Library Network.⁵ The Library of California allows districts to join other school, public, college, university, and special libraries in regional resource sharing, professional development, and collection development. *More than half of California's largest school districts are Library of California members.* Those unfamiliar with the Library of California wanted more information to evaluate membership benefits. The top three reasons cited for participation in their Library of California region were: professional growth for school library media teachers, resource sharing and student access to outside resources, and group discounts for e-Databases and other library subscriptions and services.

Technology Issues

Quality of service -- networked computers and applications working at all times -- led their list of top issues. Curriculum leaders were asked about technology issues from a curriculum perspective. They wanted computers in all schools and wanted them to be working at all times, with fast response times. Not all schools,

*libraries, or classrooms have equitable network access. Related to computer and network access is **professional and staff development**. Teachers and technical support staff require training on how to use ever-changing software programs, online information, computer workstations, and printers. They should know how to trouble shoot simple computer problems and become efficient network users or tech support for users. Inadequate **tech support** relates back to the quality of service issue. Teachers and Library Media Teachers must have access to the network when they are teaching and when their students work on projects that require online research.*

Curriculum leaders want computers, printers, software applications, and high-speed Internet access working at all times. This is a quality of service issue.

Academic Network Applications

eResearch and eDatabase searching lead academic network applications. Curriculum leaders were asked to describe how their network was used to support curriculum. By far, their top network application was

eResearch and eDatabase searching by teachers, students, and administrators. Districtwide, this was followed by their use of **online library catalogs**.

eResearch and eDatabases are the most popular and important academic network applications, K-12.

⁵ Library of California Act was established in 1999 to provide equitable access to library materials and information resources for all Californians. See <http://www.library.ca.gov/loc/>

Four high school network applications rise to second place after e-Research: **website development, online tutorials and courses, e-mail and other Internet communications, and videoconferencing or video streaming.** Unlike K-8 schools, most high schools have received Digital High School grants.⁶ Over the past few years they have been able to infuse technology into school curriculum with network access and professional development for teachers. Digital High School grant applications specify how technology will be integrated into the school curriculum. High school teachers create "course of study" plans⁷ that include an outline of their course, how their course meets state curriculum standards, and (in some districts) how technology will be integrated into the course. As a result, many high school libraries, departments and individual teachers are designing their own **web pages and multimedia productions.** The California High School Exit Exams are another driving force to use network applications to increase student knowledge. There is a growing number of **online tutorials** available for test preparation for other exams such as SATs. Some districts are also considering extending online reading comprehension programs (Accelerated Reader and Fast Forward.) **Distance learning courses** for advanced placement (AP) were mentioned in a few instances, as were CD and web-based supplemental science activities and support material for new science textbooks.⁸

Network Applications NOT mentioned

What's missing? What's coming? Applications not mentioned, but are appearing in California workshop offerings or online library and education discussions include: Administrative and teacher uses of **handheld devices** such as PDAs (personal digital appliances.); **webconferencing** for professional development; dial-a-story programs for young learners; and **closed captioning** video for hearing impaired students, archived webcasts, and other multimedia programs. Closed captioning is a technology-related issue that is a significant one for California Community Colleges, and thus most likely will become important for K-12 schools.

Other network applications were not mentioned by curriculum leaders but were identified in last year's survey of public library leaders. These include a collection of eServices such as eBooks, eBranches, eGovernment, eContent, eDonations, ePublishing, eReference, and eReserves. These are described in the Network Applications section of the report.

⁶ See <http://www.cde.ca.gov/digitalhigh/> [Note: the preceding link is invalid.] for California Digital High School program information.

⁷ "Course of Study" for H.S. history/social science, English, mathematics, laboratory science. Language other than English, visual and performing arts, and college prep electives. See http://pathstat1.ucop.edu/ag/course_submissions/course_submission_template.html [Preceding link is invalid.]

⁸ Curriculum-related software and multimedia databases are purchased through Curriculum Departments, but Educational Technology Departments need to understand their impact on overall network bandwidth requirements.

Methodology

This survey is based on telephone interviews with Assistant Superintendents of Curriculum, Instruction, or in some cases district librarians of California's 25 largest public school districts representing about one third of public school students. For purposes of this report, participants are referred to as "curriculum leaders." District curriculum leaders were first sent an invitation requesting an interview, followed by calls to confirm interview dates and times. Interview time ran about 20-30 minutes and were conducted in early April through Early May, 2002. During this interview period, 23 of 25 districts participated, a 92% response rate. Curriculum leaders were generous with their time and support of the research.

California Department of Education school library consultants Barbara Jeffus and Martha Rowland reviewed survey concept, methodology, and findings. Fresno Pacific University School Library Media Credential Program Director JoEllen Misakian also reviewed survey findings before publication. SBC Pacific Bell is most grateful for their time, expertise, and interest.

School District Curriculum Leaders were asked six questions:

- 1.0 **What are your district's top three issues** (overall issues, not necessarily technology or library issues.)
 - 1.1 **What are your top three issues for your high schools** (including continuation H.S.)
 - 2.0 **What are your district's top 3 technology issues** (from a curriculum perspective)
 - 2.1 **What are your top three high school technology issues** (including continuation H.S.)
- (Recognizing that all district boards had to approve a new district library plans by mid-January in order to get California Public School Library Act funds....)*
- 3.0 **What are your district's top Library Media Center issues?**
 - 3.1 **What are your top three High School Library Media Center Issues?**
- (Moving from issues to network applications - or uses of your network...)*
- 4.0 **What are your district's most important library and classroom network applications?** Applications are key to California's Digital California Project, a high-speed backbone network.
 - 4.1 **What are your most important high school library and classroom network applications?**
 - 5.0 **Is your district library plan posted to your website?**
 - 5.1 **Is your district tech plan posted to your website?**
 - 6.0 **Is your district a member (or NOT) of the Library of California?** (Region 1-7; See map at <http://www.library.ca.gov/loc/buffer/maps.html>) [The link is invalid.]
 - 6.1 **What do you expect to gain from LOC membership?**

25 Largest Public School Districts (2000-2001)

The following school districts represent 2 million (a third) of California's students:

1. Los Angeles USD (735,058)
2. San Diego USD (141,599)
3. Long Beach USD (96,488)
4. Fresno USD (81,058)
5. Santa Ana USD (61,909)
6. San Francisco USD (58,566)
7. Oakland USD (53,545)
8. Sacramento City USD (53,418)
9. San Bernardino City USD (54,166)
10. San Juan USD (51,383)
11. Garden Grove USD (49,809)
12. Elk Grove USD (49,970)
13. Capistrano USD (46,756)
14. Riverside USD (39,688)
15. Stockton City USD (39,213)
16. Corona-Norco USD (39,614)
17. Fontana USD (38,930)
18. Mt. Diablo USD (36,824)
19. Sweetwater Union HSD (37,175)
20. Saddleback Valley USD (35,117)
21. Montebello USD (35,379)
22. West Contra Costa USD (34,667)
23. Pomona USD (35,070)
24. San Jose USD (32,309)
25. Moreno Valley USD (33,295)

California Public School Libraries: A Profile

Public school libraries are often called School Library Media Centers. Most have print and electronic resources in the collections, have converted from card catalogs to automated library systems, and have Internet access. Many store and check out audio visual equipment such as televisions and VCRs to classroom teachers. Most school libraries have -- or plan to convert to -- an inventory system similar to retail stores. Library material including books, audio recordings, videotapes, CDs, and other items would be barcoded for easier tracking. According to the California Department of Education annual library survey,⁹

- 74% of responding schools reported the use of automated library circulation systems.
- Internet access in California school libraries increases with grade levels (65% at the elementary level, 88% in middle schools, and 93% in high schools (CDE Online School Library Survey for 1999-2000.)

Today's figures for library automation and library Internet access are higher thanks to several California initiatives including Digital High School (DHS) grants and the California Public School Library Act entitlement.¹⁰

School libraries have a strong commitment to student achievement. They are responsible for collection development, enrichment programs, teacher collaboration, and information literacy instruction. However, not all California elementary, middle, and high school libraries are alike. For example, *not all California school libraries are staffed with full-time school library media teachers, library assistants, and technology support staff.* Elementary school libraries' collections stand out as being least accessible. Most do not employ full time staff. When elementary school libraries are staffed, it is usually with library aides or assistants rather than teachers with library media teacher certification. No matter how knowledgeable and experienced library aides are, they are not certificated teachers. Students lack key academic elements, information literacy instruction, teacher collaboration, and a curriculum-based collection. *The absence of a library media teacher handicaps a school's effort to increase student achievement.*¹¹

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See <http://www.cde.ca.gov/library/> [The preceding link is invalid.]

¹⁰ K-12 California Public School Library Act of 1998, <http://www.cde.ca.gov/library/2001index.html>

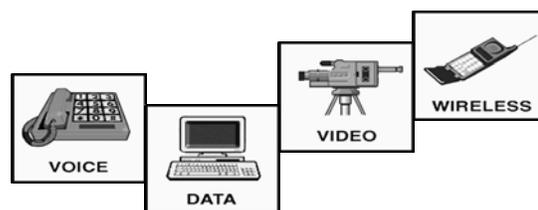
[The preceding link is invalid.]

¹¹ "How School Librarians Help Kids Achieve Standards" by Keith Curry Lance, Colorado Department of Education, <http://lrs.org> or <http://www.lrs.org/documents/lmcstudies/CO/CO2brochure.pdf>

Staffing in high school library media centers presents a different picture, that is, understaffing. *California high schools in the largest school districts have 2,000 to 4,000 students, yet have only one library media teacher to support them.* California's national ratio of library media teacher to student is 1:4673 compared to the average national ratio of library media teacher to student of 1:953, according to a 1999-2000 California Basic Educational Demographic Survey (CBEDS) Report.

By far, the most important development in recent years for California public school libraries is the K-12 California Public School Library Act of 1998. For the last 20 years, California school libraries now have state categorical funding for their library collections, print and non-print. California's Public School Library Act fund provides an allocation per student for school library collection improvement. Even with this annual funding, it will take years to re-build California's school libraries; however, it has already made a significant difference in the number of academic resources available to students and teachers. School library media centers are centers for instruction in information literacy¹², an essential skill for today's students and teachers alike. School library media centers are becoming the hub for eResearch. A variety of resources are being purchased to support classroom assignments.

For schools to receive these significant library funds, a district must create a districtwide library plan that extends beyond collection development. It drives programs, information literacy instruction, facilities, professional development, communications, and other activities. Many district plans follow assessment guidelines set forth by a California Department of Education publication, *Check It Out*.¹³



--- See following sections for more detailed findings on public school library issues, technology issues, and network applications. ---

¹² Information Literacy covers a range of research skills, including questioning, identifying and collecting resources, evaluating, sensemaking, reflecting and refining, using, and assessing. See UCLA's 21st Century Literacies website <http://www.kn.pacbell.com/wired/21stcent/> [The preceding link is invalid.] for an example of information literacy lesson plans. Information Literacy instruction also covers social responsibility issues such as ethical use of information, copyright, knowing not to plagiarize. Digital High Schools grants include an information literacy component.

¹³ See <http://www.cde.ca.gov/library/checkitout.html> [The preceding link is invalid.]

Findings -- Issues

It is helpful to understand overall district and high school issues in order to understand school library issues. Thus, the first survey question asks "What are your district's top three issues that keep you up at night?" Participants were asked to give their most important overall issues, not necessarily technology or library issues. Here are their top issues, listed by most frequently cited.

Top Districtwide issues

- | | |
|--------------------------------|--------------------------|
| 1. Academic Achievement (26) | 5. School Safety (4) |
| 2. Funding/ Budgeting (11) | 6. Technology (3) |
| 3. Staffing (4) | 7. Staff Development (3) |
| 4. Facilities/Growth/Space (4) | 8. Other (12) |

Top Issues for High Schools

- | | |
|---------------------------------|------------------------------------|
| 1. Academic Achievement (31) | 5. Facilities/Space/Class Size (5) |
| 2. Funding (7) | 6. School Safety (4) |
| 3. Professional Development (7) | 7. Staffing (4) |
| 4. Technology (6) | 8. Reduced Attendance (2) |

As discussed in the executive summary, **academic achievement** is the top issue for California public schools. All other issues drop far behind in importance. Schools are being asked for results. Great emphasis is on student testing and preparing students so they will be able to score high in API¹⁴ and to pass the new California High School Exit Exam.¹⁵ Continuation high schools are also responsible for helping prepare students for the High School Exit Exam; these students often have low literacy skills and would benefit from access to more books at their reading level.

Funding and budgeting follows academic achievement in importance. Schools that did well with API scores were rewarded this year with extra funding. High API scores often results in increased enrollment (which translates into more funding because of average daily attendance (ADA) funds from the state.¹⁶ One district

¹⁴ Academic Performance Index or API. See <http://api.cde.ca.gov/>

¹⁵ Education Code Section 60851(b) requires the Superintendent of Public Instruction to provide the high school exit examination to students who "shall take the high school exit examination in grade 10 beginning in the 2001-02 school year and may take the examination during each subsequent administration or until each section of the examination has been passed." The exam has two parts: English-language arts and mathematics. Students must pass both portions of the CAHSEE to receive their high school diploma, beginning in the 2003-2004 school year. Students must also meet the district's requirements for graduation. See <http://www.cde.ca.gov/statetests/cahsee/> [The preceding link is invalid]

¹⁶ Average Daily Attendance is often used as shorthand to describe state general purpose funding or revenue limits/ADA. According to the National Education Association, California revenue/student averaged \$7,930 in Fall

reported an increased dropout rate and another reported reduced attendance K-12. **Reduced attendance** results in less revenue for the district from the state.

Attracting and retaining quality teachers is a districtwide **staffing** issue. Uncredentialed and new teachers at the high school level put a strain on meeting instructional goals, especially preparing students to pass the California High School Exit Exam. In high schools, there is also a shortage in critical disciplines such as science, technology, and math. **Professional development** was a related issue in high schools, where teachers are not all teaching to their credential or using new technology tools. One district brought up the issue of moving teachers to believe that content literacy - and not simply reading - is important.

Technology was a top issue for three school district curriculum leaders. One district still relied on secretaries taking messages, no voice mail for administrators or teachers, and an overall lack of communications within district administration and with schools. Others referred to a need to improve network infrastructure. In addition to these issues, one high school stated a need for technology to support 21st century high school programs.

General **school safety** is a top issue for four districts. High school safety was further defined by two curriculum leaders to include drug use or an increase in racially motivated vandalism.

Class size and overcrowding is an issue in many districts. There is a need for bigger, better **facilities**. In elementary schools, there is a call for smaller classes in grades 4-6, while large high schools are looking to create smaller learning communities.

Other issues mentioned included teacher support, student counseling and support services, meeting the needs of a diverse student population, consistency in instruction, integration of careers into academics, and contract negotiations.

2000-2001. California is ranked 25th of 50 states in school funding. See <http://www.nea.org/publiced/edstats/rankings/#f1> [The preceding link is invalid.]

Top DISTRICTWIDE issues for LIBRARY MEDIA CENTERS

1. Staffing and Equitable Access (24)
2. Collection Development (10)
3. Funding (8)
4. Facilities (8)
5. Information Literacy Instruction (8)
6. Library Automation (5)
7. Staff Development (5)
8. Network Infrastructure (5)
9. Textbook Management (2)
10. Other

California school districts are being driven by high stakes testing to improve student academic performance. As a result, school library staffing, programs, information literacy instruction, resource collections, and online tutorials are being looked at in a new light.

Curriculum leaders report that **inadequate staffing** is the top library issue. This results in a **lack of access to library resources and library media teachers**. This access issue is particularly aimed at elementary school libraries, where often schools employ full or part-time library aides, clerks, or rely on volunteer parents to keep the doors of their school library open. During budget cutting cycles, unclassified employee hours are often further reduced. Equitable access is seen as an issue when some schools in a district have library media teachers or library aides, while other schools go without library service.

School libraries without library media teachers or without enough library staff to support a large student and teacher population is also an access equity issue. Large student-to-library media teacher ratios are especially pronounced in high schools, where there often is only one library media teacher to 2,000-4,000+ students. Unlike a classroom teacher, a library media teacher serves all students and teachers in a school and is a constant in a student's four-year high school experience. Curriculum leaders point out that library media teachers are certificated teachers who are responsible for a mix of program administration, teaching, instructional partner, and information specialist roles. Some of these duties include library collection development, student information literacy instruction, and teacher collaboration on lesson plans that integrate research and information literacy skills into the curriculum.

Collection development has taken on new life in California thanks to the California Public School Library Act, which provides categorical funding for school library print and electronic resources. The Library Act is allowing schools to clean out ("weed") its shabby and out-of-date collections, create strategies for building strong collections that support classroom instruction and encourage independent learning, automate school library catalogs, provide schoolwide access to online

resources (free and fee-based), and to review and revise a districtwide collection policy. Many school libraries have a long way to go to achieve the California State Superintendent of Public Instruction's goal of 20 books/student and to make curriculum-supporting e-Resources available to all students. The Library Act provides funding to help move forward with these goals.¹⁷

Funding goes hand-in-hand with library collection building. Funding appeared as a key issue in this survey because of recent legislative attempts to merge the Public School Library Act Funds with textbook and other "book" funds. This would essentially have eliminated state school library funds. School Library Funds remain intact as categorical funding at this time. Many curriculum leaders say they need funds for staffing, shelving, and furnishing, items not covered by the Library Act.

Facilities and inadequate space was cited frequently in a variety of ways. For example, some elementary school libraries have been permanently "squeezed out" of their former library space due to K-3 class size reduction (20 students/classroom.) Some elementary school libraries are in corners of multi-purpose rooms or have roll-away shelving. Overall, school libraries are too small for both their growing book collection and Internet workstations for eResearch and information literacy instruction.

Information literacy (IL) instruction has been a key issue for school library media teachers for years and now information literacy is being recognized as an essential skill for all students and teachers to incorporate into their academic, professional, and personal research. In this survey, district curriculum leaders say that information literacy instruction needs to be taught at all levels, K-12. Barriers to teaching information literacy skills include lack of elementary school library media teachers, large student-to-librarian ratios, and a need for professional development on information literacy for teachers.

Library Automation

Many school libraries are automated, but not all. This survey indicates that some are upgrading their systems or need to get all libraries in their district automated, preferably on one platform. Some high school libraries have added or plan to add a textbook management function. Several curriculum leaders have expressed a desire to link the library automation system with the district student information management system.¹⁸

¹⁷ California's 2003 budget crisis will result in lower funds for school library resources.

¹⁸ Coalition on Networked Information (CNI) Executive Director Clifford Lynch cited *interdependence of library automation systems with other institutional systems* as one of three trends in his April 12, 2002 California Academic and Research Libraries (CARL) keynote presentation on "Information Technology: Fueling the Future."

Staff Development for library staff, especially in libraries without Library Media Teachers. All library professionals and staff need ongoing training for using and assisting students in using technology for research. Curriculum leaders also emphasized a need for all teachers to learn how to integrate technology into the curriculum to support student learning.

Network Infrastructure is expressed as a school library issue for a variety of reasons including inadequate (bandwidth) to support library technology needs such as e-Research and e-Database searching. One curriculum leader said that library technology standards need to be developed and implemented because their school library media centers have a mix of computer and software platforms, yet not all technology is supported by their district Technology Department.

Textbook Management is a hot issue in that textbook management is important, it is a highly clerical function. Often high school library media teachers have library aides or clerks devoted to checking textbooks in and out. However, in many cases library media teachers do not have the benefit of library staff and thus spend a lot of time on textbook management rather than student information literacy instruction, collaboration with classroom teachers on research assignments, and collection development.

Top HIGH SCHOOL issues for LIBRARY MEDIA CENTERS

1. Staffing/ LMT:Student Ratios (12)
2. Staff Development and Collaboration w/ Teachers (10)
3. Funding (10)
4. Facilities (9)
5. Information Literacy Instruction (8)
6. Textbook Management (8)
7. Collection Development (8)
8. Library Automation (4)
9. Network Infrastructure and Tech Support (4)
10. Internet Use Monitoring (1)

Staffing is the biggest high school library issue, with a different focus from other K-8 levels. High school library media teachers instruct students and classroom teachers in information literacy skills, yet have thousands of students to schedule for this instruction. One district curriculum leader said that LMT time should be shifted to best support curriculum integration. Another said that there is just not enough time for one LMT at a high school to support all students (formal information literacy instruction and when students visit the library to do research), collection development, and collaboration with classroom teachers. LMT to student ratios in California's high schools are 1:2,000-4,000+. *America's national average is 1:953, suggesting that California high school libraries are understaffed by 2-3 school library media teachers per school.* Several curriculum leaders indicated that they were looking at ways to create smaller learning communities¹⁹ within their large high schools in order to give students a better sense of belonging. If they do create smaller communities within one campus, they indicated that it would make sense to have a library media teacher to support each of the resulting two-to-three high school learning communities.

Staff development and collaboration with teachers is an interesting issue because while teacher collaboration on lesson plans is a goal and responsibility for LMTs, classroom teachers do not necessarily share that goal. Teachers are not charged with working with their school library media teachers unless a school principal urges such collaboration. High School teachers now must integrate technology into their lesson plans and "courses of study,"²⁰ but they are not specifically encouraged to work with their school library media teacher. At this time, the burden of collaboration seems to fall on library media teachers.

Funding also takes a different turn for high school library media centers because **on-going, consistent funding is needed for eDatabases**. High schools are just realizing improvements resulting from the California Public School Library Act and

¹⁹ High School Reform programs like Sacramento City's e21 Initiative call for creating smaller learning communities within large, impersonal high schools. See http://www.cta.org/cal_educator/v6i3/feature_sense.html#top
[The preceding link is not valid.]

Digital High School Initiative. *Curriculum leaders point out that school library electronic fee-based research services would be devastated if the Library Act would go away.*

Inadequate space for books, computers, and large numbers of students is a High School Library **facility** issue. One district curriculum leader said that some high school libraries are without air conditioning or windows. Space is particularly a problem in some continuation high schools,²¹ where Digital High School grants have placed computer labs -- without library media teachers -- where books once were.

Information literacy instruction is needed, according to many district curriculum leaders. In some cases there are no site-based library media teachers at the high school and so information literacy instruction is provided by library techs (non teachers) and thus those schools are out of compliance.

Many schools assign **textbook management** to the school site library media teacher. Cuts in hours or positions for library clerks are shifting clerical, time-consuming textbook management to library media teachers. This shifts a professional teacher away from student instruction, collaboration with teachers, and collection building to perform clerical duties.

Collection development goals mentioned include improving book-to-student ratios,²² current print and electronic material that reflect student diversity, and adding more non-fiction resources to support courses.

Library automation is an issue for those districts adding or upgrading it. Some are upgrading to include textbook management software. Library automation benefits include online catalog searching for students and staff, collection management, book reviews, and book ordering.

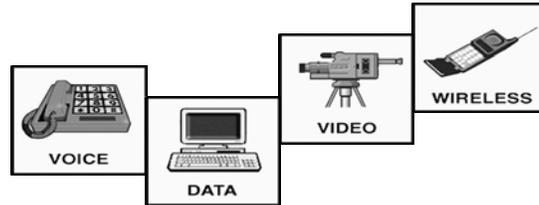
Network infrastructure and tech support are needed to support videostreaming, library automation, and other online applications. Given the increasing use of online and multimedia resources, a school's network must be robust enough to support large numbers of users, with little or no "down time." Some library media teachers have tech support staff, while others are their own tech support.

Internet use monitoring at one school district has shifted from library media teachers because the education technology department implemented a watchdog

²¹ Low literacy levels are a characteristic of Continuation High Schools (and prisons.)

²² National school library book-to-student ratio is 20 books per student.

product used by the high schools called "Vision." Vision allows a teacher or library tech to look at computer screens and Internet sites that students are on to verify that students are doing valid research or classroom-related activities. This will be hard to monitor, and the procedures are under development.



--- See following sections for more detailed findings on public school district and high school technology issues and network applications. ---



Findings – Technology Issues

California Public School District Curriculum Leaders were invited to list their top three technology issues. Here are their most cited technology issues.

Top Technology Issues – from a Curriculum Perspective

District wide

1. **Quality of Network Service.** Speed. Upgrading. Maintenance. Access to network. Equitable access. (23)
2. Professional & staff development (14)
3. Tech support (8)
4. Automation (library automation system) and Internet safety (6)
5. Student Information Services (2)
6. OTHER

High Schools, including Continuation HS

1. **Quality of Network Service.** Equitable access to technology. Network speed. (18)
2. Professional development. (16)
3. Tech support (9)
4. Information literacy (6)
5. Funding (3)
6. Student Information Systems (3)
7. OTHER

Quality of service sums up curriculum leader assessment of top technology issues. They want the network accessible when and where teaching and learning is conducted. Network access includes equipment, software, telecommunications, energy supply (power plugs and capacity), and even technical staff development. Network speed refers to how fast a user can download or access online material. Speed depends on bandwidth, number of workstations online at a given time, as well as the ability of workstations and servers to move data. Network infrastructure also includes electrical wiring and space for cabling and workstations alike. Many older buildings have aging network infrastructure or inadequate space for new cabling or electrical outlets.

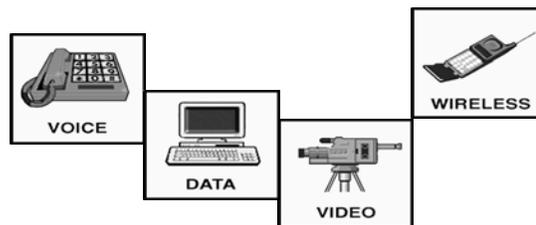
Professional and staff development related to equipment and software is important for teachers to get the most out of programs and content available online. One curriculum leader indicated that it takes about three years for a teacher to learn and embrace a new technology program and fully integrate it into a course curriculum. **Tech support** is highly related to quality of network service and staff development. Teachers and students alike want their networked workstations working when they use them, and often library media teachers become de facto tech support.

Automation of library services and Internet safety are issues raised at the district level, but less so for the high schools because high schools are most likely already automated, have well-established Internet use policies and practices, and more technical staff. High school library media teachers focus on teaching information literacy skills to students, thus enabling students to be more effective in their classroom research assignments and more responsible in their use of the Internet.

Several curriculum leaders indicated they wanted to somehow connect their library automation system with their **student information management system**. In order to provide individualized support for students, curriculum leaders indicate that teachers need at least three years of student information, including information on advanced or remedial courses, conduct, participation in after school and other school-sponsored programs in order to make informed decisions on student course offerings and remedial instruction.

Technology Issues NOT mentioned:

Curriculum leaders did not specifically mention technology compliance with the Americans with Disabilities Act, a technology issue that always appears as a top issue with California Community College Learning Resource Deans and Directors. For example, **closed captioning** for the hearing impaired is now required for videos, webcasts, and other multimedia programs. This issue will likely become more important for K-12 schools. California Community College Learning Resource Centers (libraries) are reviewing their videotape collections for closed captioning, and looking for cost efficient ways to provide closed captioning for distance education and other programs that will be offered and then archived.



--- See following sections for more detailed findings on public school library network applications. ---

Findings - Network Applications

California public school district curriculum leaders were also asked for their most compelling or popular library and classroom network applications. Here are their top network applications, listed by most frequently cited.

Top Library and Classroom Network

Applications Districtwide

1. eResearch and eDatabases (25)
2. eCatalog/Library Automation (12)
3. Internet and e-mail (8)
4. Internet or Intranet-based tutorials (networked AR, Fast Forward)(7)
5. Videostreaming, videoconferencing (7)
6. Library website (5)
7. Presentation tools (WORD, PowerPoint)(3)
8. Online textbook Management System
9. Student Information System

High Schools and Continuation HS

1. eResearch and eDatabases (28)
2. Websites (21)
3. Intranet-based tutorials, courses (16)
4. Internet and e-mail (15)
5. Videostreaming, videoconferencing (12)
6. E-Catalog/Library Automation (5)
7. Presentation tools (WORD, PowerPoint)
8. Online textbook management system
9. Student information management system
10. Collaboration/shared resource

High schools are the largest and most active users of a school district's Internet and other network-based commercial educational resources, thanks in part to the Digital High School initiative and teacher requirements to integrate technology into their courses of study. These applications include reference resources such as online encyclopedias, full-text journal and newspaper resources like InfoTrac, Ebscohost, and specific curriculum-supporting services such as Big Chalk and Videodiscovery²³ which has converted its multimedia science product to an online, interactive format. **eDatabases** are important assets a school library media center has to offer its students. Many commercial databases require special access privileges, authentication, firewalls, and PIN access for users. Schools and libraries are joining together to negotiate lower subscription fees.²⁴

Curriculum leaders indicate that in high schools, web creation is a popular network application. Many high school library media teachers and classroom teachers have created websites and web-based lessons, activities, and hot lists.²⁵

Internet access and **e-mail** for administrators and teachers are important network applications in schools and school libraries. The two applications go hand-in-hand in that e-mails often refer to URLs. Only a few high schools are planning to make e-mail available to students.

High schools are using more videostreaming and video conferencing according to about half of the district curriculum leaders. More and more Internet-based websites include videostreamed segments. One northern California curriculum leader stressed a growing importance of video conferencing for professional development related to best practices.

School library media centers are rapidly moving to online, web browser-based catalogs and circulation system for its print, audio, and other collections. These school online public access catalogs are increasingly connected to other local and regional library catalogs such as those of public, college, and university libraries.

Presentation tools like Microsoft WORD and PowerPoint were referenced a number of times as important intranet tools for teaching those applications as well as using them for presentation of classroom assignments. These are used in conjunction

²³ See <http://www.videodiscovery.com> [The preceding link is invalid.]

See

²⁴ C-SMART and Library Of California are two resources for getting electronic database discounts. <http://www.c-smart.org/> [and <http://www.library.ca.gov/loc/database/index.html> [The preceding link is invalid.]]

²⁵ SBC Pacific Bell's most popular sections of its non-commercial website for educators and librarians are Blue Web'n and Filamentality, both of which are used for creating web-based lesson plans, activities and hot lists. See <http://www.kn.pacbell.com/wired/bluewebn/index.html> and <http://www.kn.pacbell.com/wired/fil/index.html>

The preceding links are invalid.]

with the Internet, school-based graphics, and other student work and shared resources.

Online textbook management is a network application associated with library automation systems²⁶ that is new to high school library media centers, where library media teachers are often responsible for this curriculum-supporting activity. Gradually, more and more textbooks will be supplemented with web-based resources and activities.

Network applications NOT mentioned:

It is worth noting which applications or "eServices" were most cited by *public* libraries only one year ago, given public libraries are complementary community educational institutions. Here are network applications NOT mentioned by school districts, but referenced by public libraries in last year's "Survey of Issues and Network Applications in California Public Libraries:"²⁷

- **eBooks** are digitized books that come in a variety of forms. Many libraries are piloting eBook collections, discussing the implications of making eBooks available via the public library, and watching to see which technology standards win. Electronic or eBooks are books in computer file format and read on all types of computers, including handheld devices designed specifically for reading eBooks (such as the Rocket Book). They can be as familiar as their print counterparts or contain audio, video or live hyperlinks. They can be delivered by download or e-mail file attachment, such as "Chapter-A-Day." And, they can be sent on diskette or CD-ROM by postal mail or sold in bookstores. Some libraries are adding features originally seen on Amazon.com, where book references are linked to a book's cover, reviews, and how to reserve or order a book, which also introduces the concept of recommenders based on patron borrowing history. Public or academic libraries might add the ability to recommend other books, once they work more on this feature with library automation vendors.
- **eBranches** and "virtual" branch libraries were used by several librarians to describe their websites. Library **websites** were frequently cited as a public library's top network application, a tool for global reach, and thus require constant updating, new features, and new content. There is a significant cost

²⁶ Several curriculum leaders mentioned Follet Library Automation System's textbook management component, TextLink. See <http://www.fsc.follett.com/>. Another library system mentioned was Athena by Sagebrush, which offers TIP, Textbook Inventory Program. See [Invalid link removed Apr 6, 2017]

²⁷ See <http://www.kn.pacbell.com/survey/publiclibrary.pdf> 2001. [The preceding link is invalid.]

associated with creating, maintaining, and providing quality content to a library website or portal.²⁸

- **eGovernment** is where residents are encouraged to make web-based financial transactions to pay taxes, permit fees, and other government-managed services or charges. In 2001, most public librarians had library leadership positioned on local eGovernment committees. Several library leaders indicated plans to take a key role in making eGovernment services available in user-friendly ways.
- **eContent** is one way to describe the heavy use of public library websites for access to expensive databases,²⁹ special web pages, eNewsletters, web-based tutorials and library tours, and more. Three county librarians indicated that they were digitizing photos and other material from their local history and special collections.
- **eDonations** was referenced only once, but that will most likely become more widespread as Library FRIENDS or Foundation Boards embrace the web to raise money to support library programs and capital campaigns. The library eDonations page was specifically for Library endowments. Some school districts have eDonation or eScript sections on their website for contributions.
- **ePublishing** refers largely to previously print-only library publications that are now being posted to the web. Library websites are ideal for posting **eFlyers** for contests and events, where these can be read, printed, or urls forwarded. Schools should be interested in the growing online book lists and annotated bibliographies by grade levels or topics created by public librarians who are specialists in children and young adult books, authors, and programs.
- **eReference**, whether online or a call center, eReference provides 24x7 reference service for residents calling from home or anywhere, any time. There are several "e" or "virtual" reference pilots underway, including Northern California's Golden Gateway Library Network "Q and A Café," and Southern California's Arroyo Seco Library Network "24x7 Reference."³⁰

²⁸ A web portal is a website that offers a broad selection of resources and services, such as e-mail, chat, forums, search engines, e-databases, e-commerce, class or event registration, tutorials, videoclips, programs, policies, fundraising efforts, and other new features as they are developed or as appropriate for a portal's target audience.

²⁹ Leased databases are available to defined or authenticated subscribers, not through general web surfing. John Jewell of the California State Library calls these subscription database services as "dark matter" or "the invisible web."

³⁰ See <http://www.qandacafe.com/> and <http://www.247ref.org/> [The preceding link is invalid.]

- **eReserve** for public libraries generally refers to reserving a book or other resource for borrowing. eReserve in academic libraries often refers to digitized articles or other material to support course assignments and is accessible electronically with student or faculty authentication in order to respect copyright laws.

What else did NOT appear on school or high school district radar screens?

One resource that seems to have a lot of potential for professional development for public school educators and for advanced placement courses for students is **California's online catalog of distance education courses** available via the California Virtual Campus (CVC) at <http://www.cvc.edu/catalog/>. For example, there are many online courses on basic communication and presentation software that might be more convenient for busy educators to take at a schedule that works for individuals rather than groups. *California Virtual Campus courses (at least community college courses) cost little or nothing for high school students, so online courses might be particularly popular with families on tight budgets.* This is a good resource to promote in California high schools.

Personal digital assistants (PDAs) are growing in popularity and practicality for educators and students. Although handheld devices such as PDAs weren't mentioned in the K-12 survey, there are many workshops offered for educators and librarians on the power and potential of PDAs. How will use of these technology tools impact your school network? Will they provide greater access to library and classroom network applications? Will PDAs users experience traffic congestion when many try to access the wireless spectrum?

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Findings – Web Posting District Library and Technology Plans

Question #5 asked "Is your district library plan posted to your website?" This question was included because it is the master plan for library programs and planning. Each January, a district library plan must be Board approved and submitted to the California Department of Education in order for a district to receive state categorical funds for school library print and electronic resources, including library automation. A plan may extend beyond collection development. It should include staffing, professional development, enrichment programs, facilities, collaboration, parent involvement, and communication. The annual plan is an important public document and of particular use in today's economy as school districts are cutting programs. For example, districts that eliminate or reduce the hours of library staff are impacting a district's plan for providing equitable access to library resources.

In order for a school district to get Federal E-Rate discounts and other technology related discounts and grants,³¹ a district technology plan is required. Once again, posting district technology plans to district websites permits a school community better understand where a district is going and the impact of budget cuts.

Here are the results of this survey:

Only five districts (about a quarter) post their district library plan to their website. An additional five districts indicated that they plan to post the library plan in the near future.

A slightly higher number (7) post their district technology plans. An additional five districts said their technology plan was in its final stages of revision and would be posted. One district speculated that their technology plan might be on their district Intranet, and thus only viewable by district staff.

³¹ District Technology Plan Criteria for Federal "No Child Left Behind" grants require specific curriculum-supporting information. See <http://www.cde.ca.gov/tlc/tlctechplanfinalcriteria.pdf> [The preceding link is invalid.]

Findings - Library of California (LOC) Membership and Value

The last survey question referred to **The Library of California (LOC)**, a multi-type library network initiative (S.B.409) which was signed into law in late 1998. The Library of California is consolidating 15 cooperative public library systems into seven multi-type library regions. "Multi-type" refers to the four types of libraries: K-12 school, public (city and county), academic (college and university), and special (i.e., libraries in non-profit and for-profit institutions such as hospitals, museums, science centers, corporations, and government agencies.) See a LOC regional map at [The link has been removed.]

Region I	Cascade Pacific , [The link has been removed.]
Region II	Golden Gateway , [The link has been removed.] (Alameda, Contra Costa, Lake, Marin, Mendocino, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, and Sonoma counties)
Region III	Sierra Valley , [The link has been removed.] (16 counties are included as far north as Yuba, east to Mono, west to Yolo, south to Merced.)
Region IV	Arroyo Seco , [Invalid link removed March 13, 2018]
Region V	Tierra del Sol , [The link has been removed.]
Region VI	Heartland Regional Library Network , [The link has been removed.] (Mariposa, Madera, Kings, Kern, Tulare, Fresno counties)
Region VII	Gold Coast Library Network , [The link has been removed.] (Ventura, Santa Barbara, and San Luis Obispo counties)

More than half (13) of the largest school districts surveyed were familiar with the Library of California and were members of a local regional library network. Ten districts either were unfamiliar with the Library of California or simply said "no." Four districts expressed interest in learning more about LOC regional library networks.

Top 7 "expected gains" from school district membership in LOC Regions:

1. Professional growth for Library Media Teachers/Networking with other local professional librarians from public, academic, special libraries. (12)
2. Resource sharing and student access to outside resources, area libraries (9)
3. Group discounts - for books, eDatabases, other subscriptions and services. (5)
4. Advocacy - for library issues and trends such as information literacy, role of libraries and librarians, library program and service trends. (3)
5. Professional development through workshops and conferences (2)
6. Reference service - pilot 24x7 Reference and "Q&A Café" eReference (2)
7. School library representation through LOC Regional Board membership (2)

California's largest 25 school districts are located in five of the seven LOC regions (regions 2-6.)

Highlights of California School Library Media Survey – June 2002

Issues: Top District issues and School Library Media Center Issues

Top 8 Districtwide issues

- | | |
|--------------------------------|--------------------------|
| 1. Academic Achievement (26) | 5. School Safety (4) |
| 2. Funding/ Budgeting (11) | 6. Technology (3) |
| 3. Staffing (4) | 7. Staff Development (3) |
| 4. Facilities/Growth/Space (4) | 8. OTHER |

Top Districtwide issues for LIBRARY MEDIA CENTERS

1. Staffing and Equitable Access (24)
2. Collection Development (10)
3. Funding (8)
4. Facilities (8)
5. Information Literacy Instruction (8)
6. Library Automation (5)
7. Staff Development (5)
8. Network Infrastructure (5)
9. Textbook Management (2)

High School issues and High School Library Media Center Issues

Top 8 issues for High Schools

- | | |
|---------------------------------|------------------------------------|
| 1. Academic Achievement (31) | 5. Facilities/Space/Class Size (5) |
| 2. Funding (7) | 6. School Safety (4) |
| 3. Professional Development (7) | 7. Staffing (4) |
| 4. Technology (6) | 8. Reduced Attendance (2) |

Top High School issues for LIBRARY MEDIA CENTERS

- | | |
|---|--|
| 1. Staffing/LMT:Student Ratios (12) | 6. Textbook Management (8) |
| 2. Staff Development and Collaboration w/ Teachers (10) | 7. Collection Development (8) |
| 3. Funding (10) | 8. Library Automation (4) |
| 4. Facilities (9) | 9. Network Infrastructure and Tech Support (4) |
| 5. Information Literacy Instruction (8) | 10. Internet Use Monitoring (1) |

District Plans Posted

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Top District Technology Issues, Top High School Technology Issues

1. **Quality of Service.** Network. Speed. Upgrading. Maintenance. Access to network. Equitable access. (23)
2. Professional and staff Development (14)
3. Tech Support (8)
4. Automation (library automation system) and Internet Safety (6)
5. Student Information Services (2)
6. OTHER.

Top High School Technology Issues – from a Curriculum Perspective

(including Continuation High Schools)

- | | |
|--|---|
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|--|---|

Network Applications (Districtwide)

1. **E-Research and E-Databases** (25)
2. E-Catalog/Library Automation (12)
3. Internet and e-mail (8)
4. Internet or Intranet-based tutorials (networked AR, Fast Forward) (7)
5. Videostreaming, videoconferencing (7)
6. Library website (5)
7. Presentation tools (WORD, PowerPoint) (3)
8. Online textbook Management System
9. Student Information System

Network Applications (High schools)

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Library of California - LOC

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