How wired are we? New data on library technology

By Mary Jo Lynch

Two-thirds of academic institutions have Internet access

Do all academic libraries have electronic catalogs? Can they be accessed from off campus? How many four-year college libraries subscribe to electronic journals? How many libraries in two-year schools have access to the Internet?

Answers to those questions and many others were sought in a study done for the Corporation for Public Broadcasting (CPB) by SRI International (formerly Stanford Research Institute). CPB recently published a brief summary report of this study (available by contacting CPB Publications, 901 E Street, N.W., Washington, DC 20004; (202) 879-9764). Because that summary does not mention libraries, CPB gave ALA permission to present some of the key findings on that topic to the library community.

Study design
In the spring of 1994, CPB conducted a comprehensive, multifaceted national survey of 1,000 higher education institutions concerning the instructional uses of communications technology, including audio, video, multimedia, and computers. The study was done to help CPB plan for the future of public telecommunications. It included six institution-level questionnaires designed to assess the following topics: use of computer technologies in the libraries; availability and way in which computers are used for instructional purposes; use of audio, video, and multimedia technologies in the classroom; use of audio, video, multimedia, and computer technologies in teacher education; use

of distance education technologies; and institutional policies and chief academic officers' perceptions of current and future use of instructional technologies. Questionnaires on those topics were sent to a random sample of institutions stratified by using the Carnegie Classification. In addition, questionnaires were sent to a subsample of faculty in 100 of those institutions and telephone interviews were conducted with a national sample of students. This article summarizes results of the questionnaire on libraries. In the text and in the bar charts I refer to the seven Carnegie Categories used in the CPB study.

Electronic catalogs
Most academic libraries have electronic catalogs today, and many that don't have them now will have them within a few years. Figure 1 shows the percent that have electronic catalogs and the percent that will soon add them by level of institution. Virtually all of the cata-

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logs are accessible from terminals/PCs in the library. Well over 50% can also be accessed through dial-up access from outside the library, through a campus network, and through an outside network, except for public two-year insti-
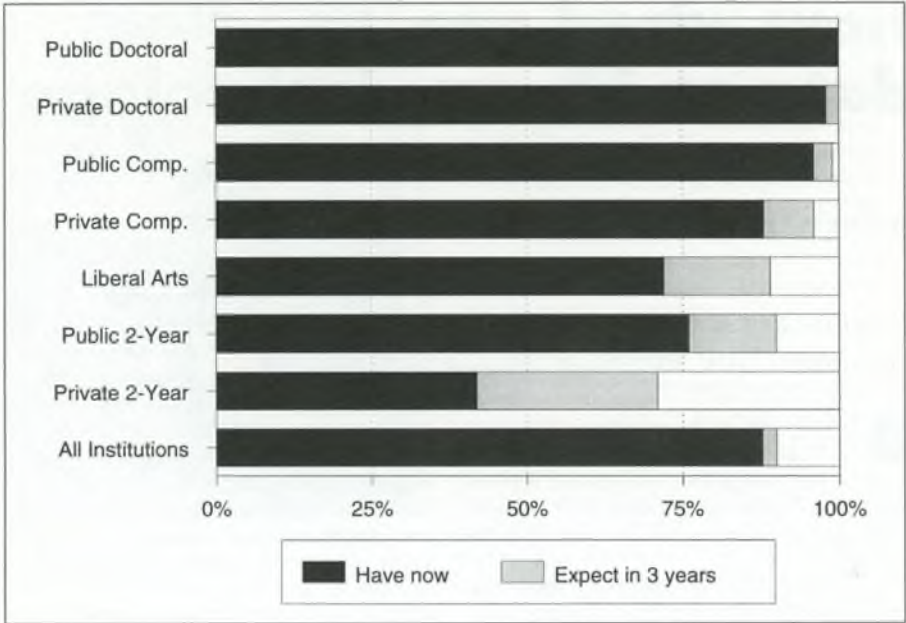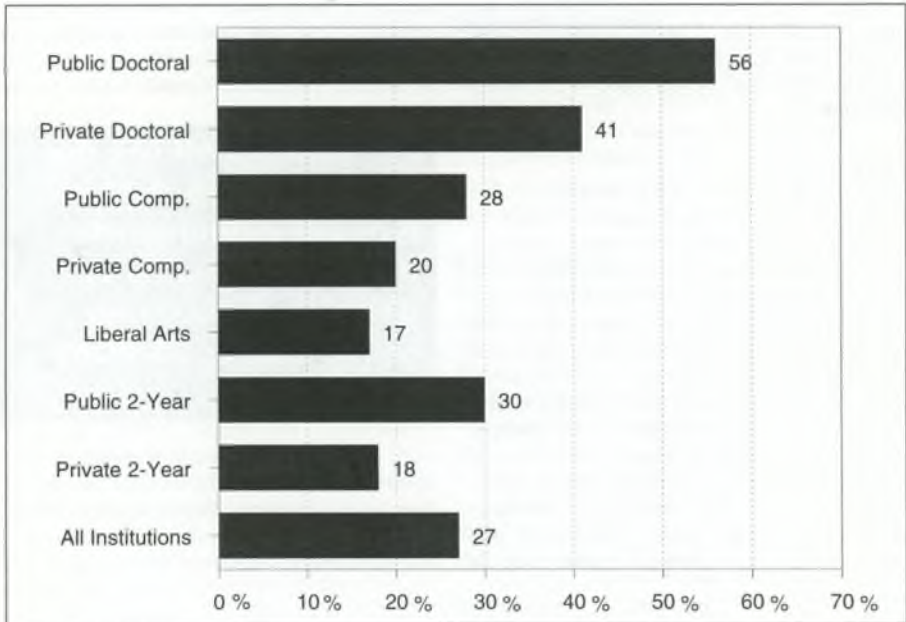
**Figure 1
Electronic Catalogs**

	Have now	Expect in 3 years

(Horizontal bar chart with categories, x-axis from 0% to 100%)

Public Doctoral
Private Doctoral
Public Comp.
Private Comp.
Liberal Arts
Public 2-Year
Private 2-Year
All Institutions

0%   25%   50%   75%   100%

**Figure 2
Subscriptions to Electronic Journals**

Category	Value
Public Doctoral	56
Private Doctoral	41
Public Comp.	28
Private Comp.	20
Liberal Arts	17
Public 2-Year	30
Private 2-Year	18
All Institutions	27

0 %   10 %   20 %   30 %   40 %   50 %   60 %   70 %

tutions where the percentages for those three types of access are 48%, 35%, and 24% respectively. Figures are not available for private two-year schools because there were too few respondents to provide reliable estimates.

CD-ROMs and electronic journals
The CPB found that multimedia CD-ROMs were available for use in 57% of academic libraries and text-only CD-ROMs were available in 85% of libraries. These CD-ROMs were rarely available for loan outside the library. Computer software was available for use in 54% of the libraries, with 20% allowing loan. Overall, more than a fourth of the libraries subscribe to electronic journals, but there is considerable variation by type of institution as shown in Figure 2.

Bibliographic and full-text resources
Access to external online bibliographic resources (e.g., DIALOG, ERIC) is almost universal in doctoral, comprehensive, and liberal arts institutions. In two-year schools, 63% of public institutions and 37% of private institutions offer such access. In libraries that offer these services they are available at no cost to students at

45% of institutions and to faculty at no cost at 50% of institutions.

The access figures are lower for CD-ROM-based external bibliographic resources. Among the doctoral and comprehensive institutions the range is from a low of 52% (private doctoral) to a high of 67% (public doctoral), with the comprehensive schools in between. CD-ROM bibliographic resources are held by 54% of liberal arts college libraries, 39% of public two-year schools, and 36% of private two-year schools. There were no doctoral-level institutions that did not offer any access to external databases (online or CD-ROM), and less than 10% of comprehensive and liberal arts institutions lacked that access. Among two-year institutions, 27% of the public schools and 48% of the private schools did not provide access to either external online bibliographic resources or external CD-ROM-based bibliographic resources.

External online full-text databases are offered by over 70% of doctoral institutions, 43% of public comprehensive, and less than 40% of all other categories. At 61% of institutions that offer them, online full-text resources are available gratis to both students and faculty.
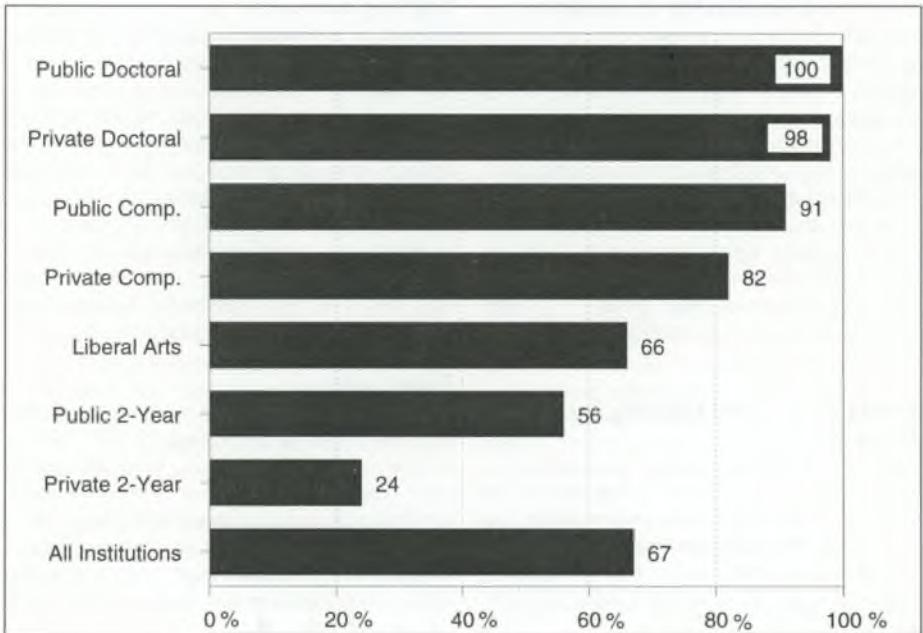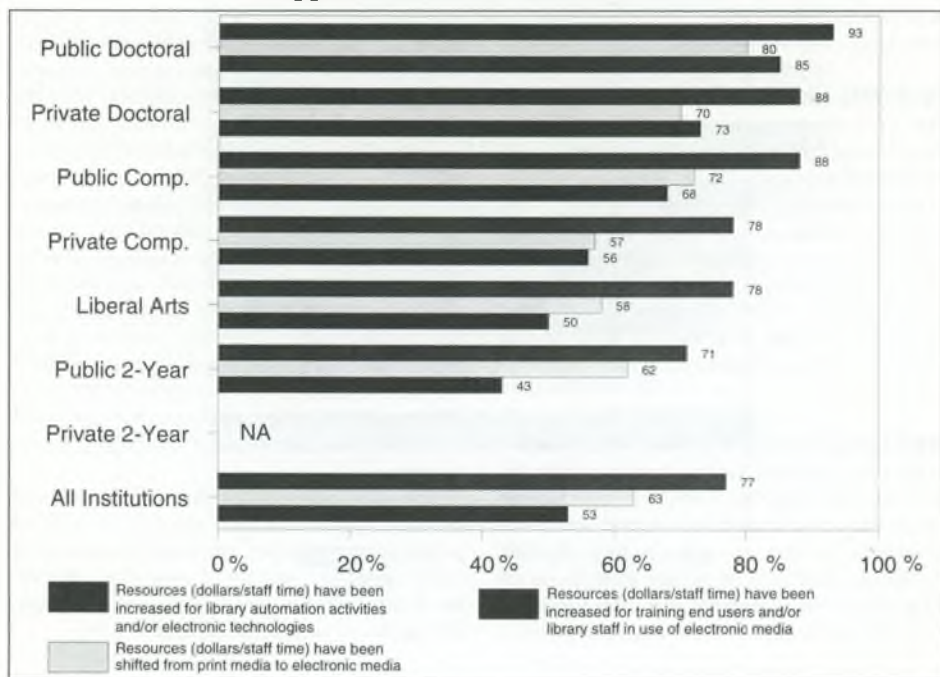
Figure 3
Access to Internet/Bitnet

Figure 4
Changes Made in the Past Three Years
to Support Electronic Access to Materials

Institution		
Public Doctoral	93 / 80 / 85	
Private Doctoral	98 / 70 / 73	
Public Comp.	88 / 72 / 68	
Private Comp.	78 / 57 / 56	
Liberal Arts	78 / 58 / 50	
Public 2-Year	71 / 62 / 43	
Private 2-Year	NA	
All Institutions	77 / 63 / 53	

0%   20%   40%   60%   80%   100%

■ Resources (dollars/staff time) have been increased for library automation activities and/or electronic technologies

□ Resources (dollars/staff time) have been shifted from print media to electronic media

■ Resources (dollars/staff time) have been increased for training end users and/or library staff in use of electronic media

Institutional leadership in academic libraries

According to chief academic officers who responded, library staff are the most likely group at all types of institutions to provide leadership or direction in accessing online and/or CD-ROM databases. At almost three-fourths of institutions (71%), library staff provide leadership or direction in this area. They are especially likely to do so at private comprehensive and private doctoral universities (82% and 90% respectively). The next most likely group to provide leadership in this area is academic computing staff (42%).

Internet access and training by staff members

Two-thirds of the responding institutions reported that their libraries are connected to the Internet. Figure 3 (previous page) shows the variation by type of institution. Among those that have access, 80% report that library staff provide training and/or answer questions about the Internet.

Shifting resources

Almost all institutions reported some changes in the three years preceding the survey to support increased reliance on electronic media. Figure 4 shows the percent of each type of institution reporting three kinds of change: resources have been increased for library automation activities and/or electronic technologies; resources have been shifted from print media to electronic media; resources have been increased for training end users and/or library staff in use of electronic media. Figures are not available for private two-year schools.

Future plans

ALA will be conducting a survey of these topics plus more in the spring of 1996 using a similar sample design (i.e., Carnegie Categories). This is a joint project of the ALA Office for Research and Statistics (ORS) and the Association of College and Research Libraries (ACRL), with financial support from Ameritech Library Services. A report will be published by ALA in fall 1996. ■