

CHAPTER 7

Libraries and Educational Technology

This chapter contains statistics on libraries and on the use of information technologies. These data show the extent of America's access to information technologies outside of formal classroom activities. The data also provide a capsule description of the magnitude and availability of library resources. Access to information has been widely cited as the key to success in a growing number of endeavors. Thus, how information is made available and to whom are matters of concern.

The first section of the chapter (tables 417 to 419 and 422 to 425) deals with public libraries, public and private school libraries, and college and university libraries. It contains data on collections, population served, staff, and expenditures. Two tables provide institutional-level information for the largest public libraries and the largest college libraries in the country.

The second half of the chapter (tables 421, 422, and 426 to 430) provides information on the availability and use of technology. For example, the proportion of children using computers at school is shown over time. Also included are data on the use of home computers by adults and school children, with comparisons among various demographic groups.

Related data may be found in various sections of this report. For example, statistics on the number of degrees conferred in computer and information sciences and library sciences are in chapter 3. Further information on survey methodologies is in the "Guide to Sources" in the Appendix and in the publications cited in the source notes.

Libraries

In 1993–94, there were 77 school library visits each week per 100 public school students. Elementary school students were more likely to visit their school libraries (86 visits per 100 students each week) than secondary school students (61 per 100). Private school students were slightly less likely to visit their libraries (75 per 100). The average number of library staff per school was 1.8 at public schools, and 1.2 at private schools. Public school libraries generally had smaller numbers of books on a per student basis than private school libraries. In 1993–94, public school libraries held an average of 1,832

books per 100 students compared to an average of 2,689 per 100 students at private schools. Public elementary school libraries had larger holdings than public secondary schools on a per student basis, and elementary school students checked out three times as many books on a per student basis (1.3 per week compared to .4 per week) (table 417).

The increase in college library resources kept pace with increases in enrollment between 1987–88 and 1997–98. The library staff to student ratio rose from 137 students per staff member to 150 students per staff member. The average library operating expenditure per student rose 7 percent in constant dollars from \$419 in 1987–88 to \$450 in 1997–98 (table 422).

In 1998, there were 8,964 public libraries in the United States with 739 million books and serial volumes. The annual attendance per capita was 4.2 and the reference transactions per capita was 1.1 (table 425).

Educational Technology

There has been widespread introduction of computers into the schools in recent years. In 2000, the average public school contained 110 computers. One important technological advance that has come to schools following the introduction of computers has been connections to the Internet. The proportion of instructional rooms with Internet access increased from 51 percent in 1998 to 77 percent in 2000. About 98 percent of schools had access to the Internet in 2000 (table 421).

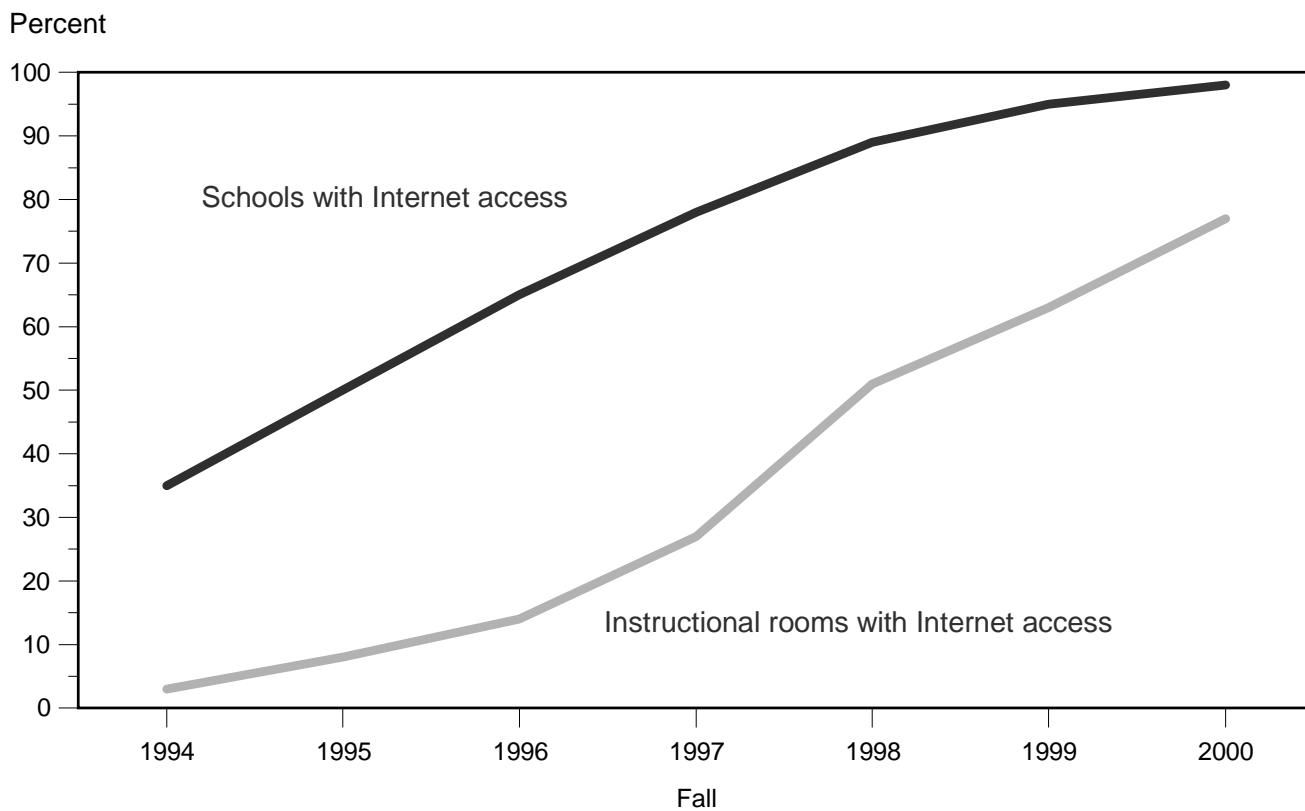
The total computer usage rate of students at school increased from 59 percent in 1993 to 69 percent in 1997. The rate for grades 1 to 8 increased from 69 percent in 1993 to 79 percent in 1997. The school computer usage rate in 1997 was 70 percent for students in high school and 65 percent for undergraduate students in college. At that time, sizable percentages of students used computers at home, though fewer actually used them for schoolwork. About 43 percent of elementary school children used computers at home and about 24 percent used them for schoolwork. Students at the high school and undergraduate levels were more likely than elementary school children to use home computers for schoolwork. In general, students in higher income families

were much more likely to use computers at home and use them for schoolwork than students from lower income families. About 13 percent of the high school students in the \$15,000 to \$19,999 household income group used computers at home for school work compared to 66 percent in the \$75,000 and over income group (table 430).

The use of computers has become widespread in the workplace. In 1997, 50 percent of all workers used computers on the job. More frequent use of computers was associated with higher levels of education and higher incomes. Thirty-six percent of high school graduates and 12 percent of high school dropouts used computers at work compared to 79

percent of those with master's degrees. Among those who did use computers, the master's degree recipients were the most likely to use the computers for a wide variety of applications. Among the most common applications for all employees using computers on the job were: bookkeeping/invoicing (66 percent), word processing (57 percent), communications (47 percent), analysis/spreadsheets (41 percent), and calendar/schedule (38 percent). Workers in the 25- to 59-year-old age range were more likely to use computers than younger or older workers. Elementary and secondary teachers were less likely to use computers than persons employed in other managerial or professional fields (table 426).

Figure 33.— Percent of all public schools and instructional rooms having Internet access: Fall 1994 to fall 2000



SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, *Internet Access in Public Schools and Classrooms: 1994-2000*.

Table 417.—Selected statistics on school library/media centers, by control and level of school: 1993–94

Selected statistics	Public				Private			
	Total	Elementary	Secondary	Combined	Total	Elementary	Secondary	Combined
1	2	3	4	5	6	7	8	9
Number of schools with libraries	77,573 (407)	53,059 (461)	22,643 (464)	1,871 (100)	19,301 (271)	10,880 (254)	4,178 (260)	4,243 (233)
Average number of staff per library								
Total	1.81 (0.02)	1.69 (0.02)	2.12 (0.03)	1.71 (0.06)	1.23 (0.04)	1.09 (0.04)	1.58 (0.08)	1.25 (0.08)
Certified library/media specialists	0.86 (0.01)	0.79 (0.02)	1.03 (0.01)	0.79 (0.03)	0.28 (0.02)	0.20 (0.02)	0.47 (0.04)	0.30 (0.02)
Full-time	0.61 (0.01)	0.51 (0.01)	0.84 (0.02)	0.51 (0.03)	0.17 (0.01)	0.07 (0.01)	0.35 (0.03)	0.21 (0.02)
Part-time	0.25 (0.01)	0.28 (0.01)	0.19 (0.01)	0.28 (0.04)	0.11 (0.01)	0.12 (0.02)	0.11 (0.02)	0.09 (0.02)
Other professional staff	0.27 (0.01)	0.27 (0.01)	0.26 (0.02)	0.29 (0.03)	0.66 (0.02)	0.65 (0.02)	0.65 (0.04)	0.70 (0.06)
Full-time	0.13 (0.01)	0.13 (0.01)	0.14 (0.01)	0.13 (0.03)	0.23 (0.02)	0.19 (0.01)	0.26 (0.03)	0.32 (0.04)
Part-time	0.13 (0.01)	0.14 (0.01)	0.13 (0.01)	0.16 (0.02)	0.43 (0.02)	0.47 (0.02)	0.39 (0.03)	0.39 (0.04)
Other paid employees	0.68 (0.02)	0.63 (0.02)	0.83 (0.02)	0.62 (0.05)	0.29 (0.02)	0.24 (0.02)	0.46 (0.04)	0.25 (0.03)
Full-time	0.34 (0.01)	0.28 (0.01)	0.49 (0.02)	0.29 (0.03)	0.07 (0.01)	0.05 (0.01)	0.12 (0.02)	0.07 (0.01)
Part-time	0.34 (0.01)	0.34 (0.02)	0.34 (0.01)	0.33 (0.03)	0.22 (0.02)	0.19 (0.02)	0.34 (0.03)	0.18 (0.03)
Percentage of schools' library media centers with the following equipment								
Telephone	61.2 (1.3)	55.8 (1.8)	74.7 (1.6)	51.6 (3.3)	40.8 (1.3)	30.7 (1.6)	52.8 (2.5)	54.6 (4.2)
Fax machine	7.8 (0.5)	4.7 (0.6)	15.1 (0.8)	8.8 (1.4)	5.1 (0.5)	3.1 (0.6)	7.9 (1.1)	7.4 (1.2)
Computer with modem	34.3 (1.0)	28.3 (1.2)	48.2 (1.5)	38.1 (3.0)	19.5 (1.0)	12.2 (1.5)	30.2 (1.9)	27.9 (2.7)
Automated catalog	24.0 (0.9)	20.3 (1.1)	32.8 (1.1)	20.5 (1.9)	9.7 (0.7)	5.5 (0.5)	15.8 (1.9)	14.4 (2.3)
Automated circulation system	37.9 (1.1)	34.1 (1.6)	47.7 (1.3)	27.8 (2.6)	9.5 (0.7)	5.4 (0.6)	16.0 (1.8)	13.8 (1.8)
Database searching with CD-ROM	31.2 (0.8)	23.9 (1.2)	48.1 (1.3)	31.4 (3.1)	13.9 (0.8)	6.3 (0.8)	25.7 (1.6)	21.6 (2.2)
Online database searching	9.4 (0.5)	5.4 (0.5)	18.9 (0.9)	8.8 (1.5)	5.5 (0.5)	0.7 (0.3)	12.2 (1.2)	11.0 (1.7)
Compact disc for periodical indices	46.7 (1.1)	39.6 (1.5)	63.5 (1.3)	46.6 (3.7)	19.6 (1.0)	12.3 (1.1)	33.5 (2.2)	24.6 (2.2)
Video laser disc	31.9 (1.0)	30.3 (1.3)	36.1 (1.3)	26.1 (2.8)	6.3 (0.6)	4.8 (0.7)	9.9 (1.2)	6.9 (1.1)
Connection to Internet	12.0 (0.6)	9.5 (0.8)	17.5 (0.8)	15.0 (1.9)	5.3 (0.5)	2.8 (0.8)	9.2 (1.1)	7.5 (1.2)
Cable television	76.2 (0.8)	75.0 (1.1)	80.6 (0.9)	57.7 (3.6)	39.9 (1.3)	42.6 (2.0)	43.1 (2.8)	30.1 (2.7)
Broadcast television	48.6 (1.0)	48.0 (1.4)	49.9 (1.3)	48.1 (3.1)	39.9 (1.6)	42.9 (1.9)	39.7 (2.5)	32.2 (3.9)
Closed circuit television	25.5 (0.7)	22.0 (1.0)	34.0 (1.0)	20.9 (2.2)	8.8 (0.7)	5.7 (1.0)	19.2 (1.6)	6.3 (1.5)
Satellite dish	22.9 (0.6)	14.4 (0.7)	41.1 (1.1)	45.2 (3.0)	8.7 (0.9)	5.6 (0.9)	15.6 (1.2)	9.8 (2.5)
Percentage of schools offering—								
Microcomputers	90.1 (0.7)	88.5 (1.0)	94.0 (1.0)	87.4 (1.5)	75.8 (1.6)	72.8 (2.1)	80.6 (2.9)	78.5 (3.5)
Long distance learning	19.0 (0.8)	15.9 (1.1)	24.8 (1.0)	36.4 (2.6)	8.8 (0.9)	8.3 (0.9)	8.2 (1.6)	10.9 (2.9)
Total students using library per 100 students each week ¹	77.4 (0.6)	86.2 (0.7)	61.4 (0.9)	59.7 (2.9)	74.9 (0.7)	84.0 (1.0)	63.7 (1.6)	62.2 (1.5)
Books checked out per 100 students each week ¹	101.0 (1.9)	134.4 (2.6)	39.0 (1.4)	57.7 (4.6)	85.2 (1.9)	112.6 (2.6)	27.9 (2.3)	63.4 (3.6)
Average holdings per 100 students at the end of the 1992–93 school year								
Books (number of volumes)	1,832 (33)	1,925 (48)	1,650 (26)	1,879 (69)	2,689 (69)	2,464 (72)	3,277 (225)	2,787 (122)
Current serial subscriptions (print/ microfilm)	6 (2)	5 (2)	7 (2)	7 (2)	6 (2)	4 (2)	11 (2)	6 (2)
Video materials (tape and disc)	29 (1)	28 (2)	29 (1)	41 (5)	33 (1)	29 (2)	41 (4)	39 (4)
Other audiovisual materials	95 (3)	100 (5)	84 (4)	109 (14)	80 (4)	80 (6)	98 (10)	68 (6)
Microcomputer software	12 (2)	15 (1)	6 (2)	13 (2)	11 (1)	15 (1)	6 (1)	8 (2)
CD-ROM titles	1 (2)	1 (2)	1 (2)	1 (2)	1 (2)	(2) (2)	2 (2)	1 (2)
Locally budgeted expenditures³ per student, 1992–93								
Books	\$6.43 (0.16)	\$6.48 (0.21)	\$6.28 (0.20)	\$7.41 (0.60)	\$6.93 (0.32)	\$5.23 (0.30)	\$9.90 (0.96)	\$8.68 (0.59)
Current serial subscriptions (print/microfilm)	1.56 (0.04)	1.10 (0.04)	2.44 (0.07)	1.96 (0.12)	1.69 (0.08)	0.74 (0.06)	3.80 (0.23)	2.35 (0.16)
Video materials (tape and disc)	0.94 (0.03)	0.89 (0.04)	1.06 (0.04)	0.78 (0.08)	0.90 (0.05)	0.71 (0.05)	1.21 (0.12)	1.13 (0.12)
Other audiovisual materials	0.65 (0.03)	0.72 (0.04)	0.52 (0.03)	0.65 (0.08)	0.54 (0.04)	0.51 (0.05)	0.66 (0.07)	0.54 (0.10)
Microcomputer software	0.69 (0.04)	0.73 (0.06)	0.60 (0.04)	1.17 (0.16)	0.81 (0.06)	0.77 (0.10)	0.91 (0.09)	0.83 (0.12)
CD-ROM titles	0.50 (0.04)	0.33 (0.06)	0.80 (0.04)	0.90 (0.16)	0.66 (0.08)	0.34 (0.12)	1.46 (0.11)	0.84 (0.10)
Expenditures (all sources) per student, 1992–93								
Total, library/media materials	\$12.74 (0.24)	\$12.00 (0.31)	\$13.92 (0.32)	\$16.79 (1.28)	\$14.47 (0.57)	\$10.55 (0.55)	\$22.13 (1.72)	\$17.96 (1.11)
Microcomputer hardware	2.96 (0.16)	2.63 (0.23)	3.57 (0.28)	3.44 (0.40)	3.06 (0.40)	1.72 (0.23)	6.05 (1.24)	4.02 (1.08)
Audiovisual equipment	1.76 (0.08)	1.77 (0.11)	1.77 (0.07)	1.43 (0.20)	1.42 (0.13)	1.06 (0.14)	2.65 (0.45)	1.39 (0.13)
Online database searching/electronic communications	0.26 (0.04)	0.22 (0.06)	0.33 (0.03)	0.32 (0.11)	0.23 (0.04)	0.10 (0.04)	0.40 (0.12)	0.41 (0.07)

¹ During the most recent full week of school.² Data less than 0.5.³ Locally budgeted expenditures exclude federal gifts and grants.

centers. Data revised from previously published figures. Standard errors appear in parentheses.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Schools and Staffing Survey, 1993–94*, unpublished data. (This table was prepared November 2001.)

NOTE: Percentages are based on schools that have library/media centers. In school year 1990–91, 96 percent of public and 87 percent of private schools had library/media

Table 418.—Selected statistics on public school library/media centers, by level and enrollment size of school: 1993–94

Selected statistics	Public elementary, secondary, and combined	Elementary libraries, by enrollment size of school					Secondary libraries, by enrollment size of school					
		Total	Less than 150	150 to 499	500 to 749	750 or more	Total	Less than 150	150 to 499	500 to 749	750 or more	
		1	2	3	4	5	6	7	8	9	10	11
Average number of staff per library												
Total	1.81 (0.02)	1.69 (0.02)	1.39 (0.08)	1.61 (0.03)	1.76 (0.05)	2.03 (0.05)	2.12 (0.03)	1.71 (0.04)	1.80 (0.05)	2.63 (0.04)	3.58 (0.09)	
Certified library/media specialists	0.86 (0.01)	0.79 (0.02)	0.65 (0.06)	0.75 (0.02)	0.85 (0.02)	0.90 (0.04)	1.03 (0.01)	0.89 (0.02)	0.98 (0.02)	1.25 (0.02)	1.62 (0.05)	
Full-time	0.61 (0.01)	0.51 (0.01)	0.13 (0.04)	0.42 (0.02)	0.66 (0.02)	0.82 (0.04)	0.84 (0.02)	0.58 (0.02)	0.92 (0.02)	1.17 (0.02)	1.53 (0.05)	
Part-time	0.25 (0.01)	0.28 (0.01)	0.52 (0.06)	0.33 (0.02)	0.19 (0.03)	0.08 (0.02)	0.19 (0.01)	0.32 (0.02)	0.06 (0.02)	0.08 (0.02)	0.09 (0.02)	
Other professional staff	0.27 (0.01)	0.27 (0.01)	0.30 (0.04)	0.27 (0.02)	0.25 (0.02)	0.31 (0.04)	0.26 (0.02)	0.25 (0.02)	0.17 (0.03)	0.23 (0.02)	0.30 (0.04)	
Full-time	0.13 (0.01)	0.13 (0.01)	0.09 (0.02)	0.13 (0.01)	0.12 (0.02)	0.22 (0.03)	0.14 (0.01)	0.12 (0.02)	0.08 (0.02)	0.14 (0.01)	0.25 (0.04)	
Part-time	0.13 (0.01)	0.14 (0.01)	0.21 (0.03)	0.14 (0.02)	0.13 (0.02)	0.09 (0.03)	0.13 (0.01)	0.13 (0.02)	0.09 (0.02)	0.09 (0.01)	0.05 (0.01)	
Other paid employees	0.68 (0.02)	0.63 (0.02)	0.44 (0.06)	0.59 (0.03)	0.66 (0.03)	0.82 (0.05)	0.83 (0.02)	0.57 (0.03)	0.66 (0.05)	1.14 (0.04)	1.65 (0.08)	
Full-time	0.34 (0.01)	0.28 (0.01)	0.10 (0.03)	0.22 (0.02)	0.34 (0.03)	0.51 (0.04)	0.49 (0.02)	0.27 (0.02)	0.39 (0.03)	0.76 (0.04)	1.10 (0.06)	
Part-time	0.34 (0.01)	0.34 (0.02)	0.34 (0.04)	0.37 (0.03)	0.32 (0.03)	0.31 (0.04)	0.34 (0.01)	0.29 (0.02)	0.27 (0.03)	0.38 (0.02)	0.55 (0.05)	
Percentage of schools' library media centers with the following equipment												
Telephone	61.2 (1.3)	55.8 (1.8)	40.1 (5.0)	49.4 (2.3)	64.0 (2.8)	73.8 (4.0)	74.7 (1.6)	61.2 (2.2)	85.5 (1.9)	90.4 (1.3)	98.8 (0.5)	
Fax machine	7.8 (0.5)	4.7 (0.6)	8.2 (2.6)	3.4 (0.7)	5.7 (1.3)	5.1 (1.4)	15.1 (0.8)	15.1 (1.3)	18.8 (2.3)	17.9 (2.0)	19.9 (2.1)	
Computer with modem	34.3 (1.0)	28.3 (1.2)	21.9 (4.5)	24.9 (1.7)	33.3 (2.8)	34.6 (3.1)	48.2 (1.5)	47.0 (2.2)	51.3 (2.9)	56.7 (2.7)	64.8 (2.7)	
Automated catalog	24.0 (0.9)	20.3 (1.1)	14.2 (3.8)	17.5 (1.4)	24.9 (2.1)	25.4 (2.2)	32.8 (1.1)	24.7 (1.8)	32.2 (2.7)	39.7 (1.8)	53.1 (3.2)	
Automated circulation system	37.9 (1.1)	34.1 (1.6)	16.0 (3.8)	28.5 (1.9)	40.4 (2.7)	55.0 (3.3)	47.7 (1.3)	36.5 (2.0)	48.0 (3.1)	61.9 (2.3)	71.6 (3.0)	
Database searching with CD-ROM	31.2 (0.8)	23.9 (1.2)	23.3 (3.3)	21.9 (1.7)	25.3 (2.6)	30.1 (2.8)	48.1 (1.3)	45.1 (2.1)	53.1 (3.1)	59.4 (2.5)	71.7 (2.2)	
Online database searching	9.4 (0.5)	5.4 (0.5)	6.0 (1.3)	4.1 (0.7)	7.1 (1.3)	6.8 (1.3)	18.9 (0.9)	18.5 (1.6)	20.5 (2.6)	23.4 (1.6)	33.3 (2.8)	
Compact disc for periodical indices	46.7 (1.1)	39.6 (1.5)	27.0 (3.5)	37.5 (2.1)	42.6 (2.7)	49.5 (3.4)	63.5 (1.3)	59.2 (1.9)	69.8 (2.7)	74.3 (1.8)	83.2 (2.8)	
Video laser disc	31.9 (1.0)	30.3 (1.3)	19.6 (4.8)	24.8 (1.7)	37.2 (2.3)	44.3 (3.1)	36.1 (1.3)	25.5 (1.8)	41.1 (2.1)	42.2 (1.8)	46.6 (3.1)	
Connection to Internet	12.0 (0.6)	9.5 (0.8)	5.0 (1.3)	8.7 (1.4)	11.9 (1.8)	10.0 (1.5)	17.5 (0.8)	16.8 (1.5)	18.9 (2.5)	20.9 (1.9)	31.0 (2.6)	
Cable television	76.2 (0.8)	75.0 (1.1)	59.8 (4.9)	78.0 (1.6)	74.7 (2.3)	73.0 (3.0)	80.6 (0.9)	76.3 (1.9)	81.9 (2.5)	87.7 (1.3)	74.8 (2.4)	
Broadcast television	48.6 (1.0)	48.0 (1.4)	47.0 (4.8)	45.2 (1.6)	51.5 (2.5)	52.3 (4.1)	49.9 (1.3)	43.4 (2.3)	52.0 (3.1)	60.5 (2.0)	56.6 (2.9)	
Closed circuit television	25.5 (0.7)	22.0 (1.0)	7.0 (2.1)	19.2 (1.4)	23.1 (2.0)	41.4 (2.9)	34.0 (1.0)	23.4 (1.7)	46.1 (3.1)	44.8 (1.7)	43.7 (2.9)	
Satellite dish	22.9 (0.6)	14.4 (0.7)	15.4 (2.8)	13.6 (1.2)	12.7 (1.4)	21.3 (3.1)	41.1 (1.1)	51.9 (2.3)	54.5 (2.7)	45.5 (2.0)	35.0 (3.0)	
Percentage of schools offering—												
Microcomputers	90.1 (0.7)	88.5 (1.0)	79.2 (3.4)	89.1 (1.6)	88.4 (2.0)	92.1 (2.2)	94.0 (1.0)	94.2 (1.1)	96.4 (0.9)	95.7 (1.1)	98.5 (0.9)	
Long distance learning	19.0 (0.8)	15.9 (1.1)	16.7 (2.7)	16.3 (1.6)	14.4 (1.7)	17.5 (2.6)	24.8 (1.0)	28.3 (1.5)	25.6 (2.0)	26.8 (1.4)	21.6 (2.7)	
Total students using library per 100 students each week ¹	77.4 (0.6)	86.2 (0.7)	93.4 (1.0)	92.1 (0.7)	87.7 (1.1)	73.6 (2.2)	61.4 (0.9)	75.2 (1.4)	66.9 (1.8)	61.3 (1.1)	51.4 (1.6)	
Books checked out per 100 students each week ¹	101.0 (1.9)	134.4 (2.6)	213.0 (11.3)	159.4 (4.6)	132.9 (4.7)	90.9 (4.8)	39.0 (1.4)	71.2 (4.5)	45.9 (3.5)	32.1 (1.6)	27.4 (2.7)	
Average holdings per 100 students at the end of the 1992–93 school year												
Books (number of volumes)	1,832 (33)	1,925 (48)	4,839 (302)	2,510 (108)	1,587 (42)	1,325 (36)	1,650 (26)	3,063 (79)	1,801 (49)	1,422 (25)	1,133 (29)	
Current serial subscriptions (print/microfilm)	6 (2)	5 (2)	20 (2)	6 (2)	4 (2)	3 (2)	7 (2)	16 (2)	8 (2)	5 (2)	3 (2)	
Video materials (tape and disc)	29 (1)	28 (2)	86 (10)	34 (4)	25 (2)	20 (2)	29 (1)	52 (3)	35 (2)	25 (2)	20 (1)	
Other audiovisual materials	95 (3)	100 (5)	197 (47)	116 (6)	97 (9)	71 (7)	84 (4)	135 (16)	102 (10)	80 (4)	52 (5)	
Microcomputer software	12 (2)	15 (1)	55 (14)	20 (1)	11 (1)	10 (1)	6 (2)	10 (1)	8 (1)	6 (1)	4 (2)	
CD-ROM titles	1 (2)	1 (2)	2 (2)	1 (2)	1 (2)	1 (2)	1 (2)	2 (2)	1 (2)	1 (2)	(2) (2)	
Locally budgeted expenditures³ per student, 1992–93												
Books	\$6.43 (0.16)	\$6.48 (0.21)	\$15.10 (1.21)	\$7.47 (0.25)	\$6.37 (0.41)	\$4.42 (0.29)	\$6.28 (0.20)	\$11.24 (0.51)	\$6.83 (0.36)	\$5.68 (0.19)	\$4.20 (0.37)	
Current serial subscriptions (print/microfilm)	1.56 (0.04)	1.10 (0.04)	4.19 (0.44)	1.37 (0.06)	0.89 (0.05)	0.76 (0.06)	2.44 (0.07)	4.51 (0.20)	2.84 (0.15)	2.20 (0.07)	1.47 (0.06)	
Video materials (tape and disc)	0.94 (0.03)	0.89 (0.04)	2.46 (0.40)	0.93 (0.05)	0.91 (0.07)	0.66 (0.07)	1.06 (0.04)	1.85 (0.13)	1.26 (0.11)	0.98 (0.07)	0.63 (0.04)	
Other audiovisual materials	0.65 (0.03)	0.72 (0.04)	1.31 (0.58)	0.82 (0.07)	0.70 (0.06)	0.53 (0.07)	0.52 (0.03)	0.96 (0.09)	0.63 (0.08)	0.47 (0.04)	0.31 (0.03)	
Microcomputer software	0.69 (0.04)	0.73 (0.06)	1.76 (0.49)	0.86 (0.09)	0.76 (0.13)	0.38 (0.05)	0.60 (0.04)	1.31 (0.18)	0.70 (0.11)	0.52 (0.04)	0.29 (0.04)	
CD-ROM titles	0.50 (0.04)	0.33 (0.06)	0.98 (0.35)	0.31 (0.03)	0.41 (0.16)	0.16 (0.02)	0.80 (0.04)	1.36 (0.12)	0.85 (0.10)	0.74 (0.06)	0.57 (0.04)	
Expenditures (all sources) per student, 1992–93												
Total, library/media materials	\$12.74(0.24)	\$12.00(0.31)	\$31.05(2.45)	\$14.27(0.50)	\$11.16(0.56)	\$8.34(0.45)	\$13.92(0.32)	\$24.95(0.80)	\$15.01(0.72)	\$12.53(0.45)	\$9.45 (0.51)	
Microcomputer hardware	2.96 (0.16)	2.63 (0.23)	6.23 (1.32)	2.53 (0.26)	3.14 (0.52)	1.69 (0.26)	3.57 (0.28)	5.69 (0.94)	4.04 (0.70)	3.93 (0.50)	1.79 (0.21)	
Audiovisual equipment	1.76 (0.08)	1.77 (0.11)	4.37 (1.28)	1.70 (0.16)	1.91 (0.24)	1.45 (0.25)	1.77 (0.07)	2.96 (0.23)	1.69 (0.15)	1.61 (0.11)	1.42 (0.14)	
Online database searching/electronic communications	0.26 (0.04)	0.22 (0.06)	0.31 (0.16)	0.23 (0.06)	0.26 (0.15)	0.10 (0.03)	0.33 (0.03)	0.57 (0.09)	0.26 (0.05)	0.22 (0.05)	0.39 (0.08)	

¹ During the most recent full week of school.² Data less than 0.5.³ Locally budgeted expenditures exclude federal gifts and grants.SOURCE: U.S. Department of Education, National Center for Education Statistics, *Schools and Staffing Survey, 1993–94*, unpublished data. (This table was prepared November 2001.)

NOTE: Percentages are based on schools that have library/media centers. In school year 1990–91, 96 percent of public and 87 percent of private schools had library/media centers. Data revised from previously published figures. Standard errors appear in parentheses.

Table 419.—Selected statistics on public school library/media centers, by state: 1993–94

State or other area	Percent of centers offering selected services/equipment						Average number of staff per library ¹	Total students using library per 100 students each week ²	Books checked out per 100 students each week ²	Books held per 100 students	Total expenditures for materials per student
	Computer with modem	Automated catalog	Database searching with CD-ROM	Online database searching	Compact disc for indices, etc.	Connection to the Internet					
1	2	3	4	5	6	7	8	9	10	11	12
United States	34.3 (1.0)	24.0 (0.9)	31.2 (0.8)	9.4 (0.5)	46.7 (1.1)	12.0 (0.6)	1.81 (0.02)	77.4 (0.6)	101.0 (1.9)	1,832 (33)	\$12.74 (0.24)
Alabama	33.0 (4.2)	37.6 (5.9)	29.3 (4.0)	5.7 (2.0)	44.1 (4.6)	3.2 (1.5)	1.47 (0.06)	70.4 (2.4)	90.8 (14.4)	1,420 (44)	10.93 (0.52)
Alaska	34.7 (3.6)	34.3 (4.0)	39.7 (4.7)	6.8 (1.9)	44.6 (4.5)	15.1 (2.3)	1.53 (0.07)	82.5 (2.5)	144.1 (14.2)	2,698 (148)	29.39 (2.67)
Arizona	28.1 (3.5)	38.3 (5.3)	28.0 (4.0)	5.6 (2.2)	43.0 (4.4)	6.0 (1.9)	2.03 (0.09)	79.2 (2.5)	99.9 (6.6)	1,857 (83)	12.63 (0.89)
Arkansas	19.0 (4.0)	18.7 (4.0)	20.5 (4.1)	5.6 (2.4)	29.7 (4.6)	8.5 (2.5)	1.49 (0.06)	75.0 (3.6)	98.5 (11.0)	1,854 (148)	12.75 (0.67)
California	19.9 (4.3)	14.0 (3.4)	23.4 (3.7)	3.1 (1.0)	38.0 (5.7)	6.2 (2.3)	1.54 (0.10)	72.8 (2.6)	87.1 (9.0)	1,315 (77)	6.45 (0.89)
Colorado	47.0 (4.7)	43.6 (5.7)	43.3 (5.5)	30.7 (4.7)	60.7 (5.5)	16.3 (3.5)	1.89 (0.09)	75.8 (3.0)	104.4 (7.2)	1,812 (75)	13.03 (0.76)
Connecticut	43.8 (6.5)	12.8 (2.7)	45.4 (5.3)	17.9 (3.8)	54.4 (6.0)	6.5 (2.6)	1.69 (0.07)	84.6 (2.6)	89.7 (7.1)	2,076 (99)	14.10 (1.25)
Delaware	41.8 (3.6)	22.5 (3.0)	34.7 (3.5)	14.4 (2.5)	48.2 (3.5)	5.7 (2.0)	1.43 (0.06)	74.4 (3.5)	79.0 (3.8)	1,428 (64)	8.75 (0.73)
District of Columbia	23.5 (4.0)	4.4 (2.2)	25.4 (2.8)	10.4 (3.3)	31.2 (3.2)	1.7 (1.1)	1.46 (0.08)	59.6 (3.5)	38.5 (3.9)	1,377 (53)	7.53 (0.59)
Florida	45.3 (3.8)	29.8 (3.3)	39.9 (3.6)	11.8 (2.8)	71.0 (4.0)	21.1 (3.4)	2.04 (0.06)	70.9 (3.1)	80.5 (8.4)	1,428 (202)	9.87 (0.57)
Georgia	29.8 (4.7)	48.2 (4.4)	34.5 (4.6)	13.6 (2.6)	46.6 (4.7)	10.8 (2.7)	2.07 (0.06)	80.1 (1.8)	97.4 (5.7)	1,384 (31)	12.04 (0.47)
Hawaii	75.3 (5.3)	27.1 (4.4)	47.7 (5.7)	24.3 (4.9)	64.8 (4.9)	29.4 (5.0)	1.46 (0.08)	80.0 (2.4)	143.7 (18.6)	1,366 (49)	10.21 (0.67)
Idaho	29.9 (4.2)	15.4 (4.0)	21.6 (4.4)	6.2 (2.3)	32.1 (5.1)	8.6 (3.1)	1.68 (0.11)	80.9 (2.4)	106.1 (8.3)	1,774 (124)	10.07 (0.60)
Illinois	32.2 (3.5)	17.7 (3.8)	23.0 (3.4)	7.9 (1.7)	36.6 (4.2)	7.1 (2.2)	2.05 (0.11)	77.7 (2.7)	104.8 (7.6)	1,879 (95)	12.02 (0.81)
Indiana	29.9 (6.7)	31.0 (4.9)	32.0 (5.9)	2.4 (0.7)	66.1 (6.3)	5.5 (1.2)	1.93 (0.07)	82.3 (2.1)	133.9 (18.1)	2,192 (274)	13.92 (0.94)
Iowa	38.8 (6.4)	17.4 (5.0)	44.2 (5.7)	14.6 (3.6)	71.2 (5.7)	8.6 (3.1)	2.15 (0.12)	87.6 (2.6)	138.3 (10.6)	2,923 (260)	17.21 (1.59)
Kansas	24.9 (3.0)	31.5 (4.9)	20.9 (3.1)	9.7 (2.0)	46.6 (4.5)	10.6 (2.5)	2.00 (0.07)	86.3 (1.7)	127.4 (8.7)	2,768 (152)	24.81 (2.59)
Kentucky	30.1 (6.2)	33.1 (7.0)	32.3 (5.5)	4.3 (2.2)	60.3 (6.3)	5.3 (2.4)	1.77 (0.10)	80.8 (2.5)	109.4 (6.8)	1,529 (72)	13.62 (0.88)
Louisiana	24.2 (3.9)	13.9 (3.5)	21.9 (3.4)	2.3 (0.8)	28.1 (3.8)	6.2 (2.4)	1.43 (0.09)	66.0 (3.2)	93.2 (10.1)	1,635 (56)	15.76 (4.25)
Maine	33.3 (5.4)	18.9 (4.4)	25.5 (3.8)	5.4 (2.0)	38.9 (6.7)	5.4 (1.6)	1.54 (0.12)	87.4 (2.6)	118.7 (12.5)	2,141 (124)	15.08 (1.20)
Maryland	41.0 (3.9)	15.4 (3.4)	31.8 (4.5)	22.3 (3.1)	46.2 (4.7)	32.6 (3.5)	1.70 (0.08)	84.2 (1.7)	87.0 (4.6)	1,363 (45)	11.25 (0.56)
Massachusetts	38.2 (4.9)	9.1 (1.6)	45.3 (4.8)	8.9 (1.6)	46.3 (4.8)	24.1 (3.8)	1.67 (0.11)	71.1 (3.3)	62.2 (6.5)	2,003 (134)	10.29 (0.89)
Michigan	42.2 (7.6)	12.1 (3.9)	38.1 (6.3)	10.2 (3.8)	57.9 (6.1)	15.1 (5.3)	1.85 (0.12)	80.5 (3.3)	91.6 (9.9)	1,797 (89)	12.25 (1.35)
Minnesota	35.6 (4.8)	53.4 (6.1)	52.9 (6.1)	13.8 (3.0)	69.0 (5.6)	17.3 (3.6)	2.43 (0.16)	82.1 (2.7)	128.4 (19.5)	2,362 (104)	15.94 (1.31)
Mississippi	9.4 (2.0)	5.2 (2.1)	14.2 (3.9)	3.0 (1.4)	23.2 (3.6)	3.1 (1.3)	1.74 (0.13)	70.0 (3.1)	80.9 (8.8)	1,415 (51)	13.78 (2.65)
Missouri	31.3 (4.3)	39.4 (6.7)	31.4 (5.0)	17.8 (3.9)	46.0 (5.9)	15.7 (4.2)	1.63 (0.09)	74.2 (2.9)	119.8 (11.5)	2,052 (105)	14.88 (0.93)
Montana	50.8 (4.3)	20.6 (3.1)	43.7 (4.1)	17.4 (3.3)	58.2 (3.6)	6.2 (2.0)	1.73 (0.07)	86.4 (2.7)	139.2 (9.9)	4,127 (259)	28.39 (2.34)
Nebraska	31.6 (5.0)	29.0 (4.9)	36.3 (5.7)	12.1 (2.5)	58.8 (6.0)	15.8 (3.0)	1.65 (0.12)	86.3 (2.2)	140.6 (12.0)	3,289 (285)	24.63 (1.77)
Nevada	18.4 (4.0)	48.2 (5.5)	32.2 (4.5)	3.0 (1.3)	37.1 (4.2)	9.4 (2.9)	1.96 (0.10)	77.3 (3.4)	82.6 (6.4)	1,528 (156)	10.26 (0.91)
New Hampshire	43.9 (6.6)	21.4 (4.8)	39.8 (6.6)	8.2 (2.6)	51.2 (5.9)	17.4 (4.4)	1.76 (0.08)	82.7 (2.5)	98.6 (10.5)	1,858 (124)	16.82 (1.12)
New Jersey	39.1 (6.8)	28.5 (6.5)	30.2 (6.4)	7.2 (1.4)	46.2 (7.2)	5.2 (1.3)	2.08 (0.13)	77.5 (3.5)	79.4 (9.7)	2,198 (233)	18.38 (1.94)
New Mexico	32.8 (6.1)	21.9 (5.3)	32.0 (4.3)	3.9 (1.5)	43.1 (5.5)	7.8 (2.4)	1.29 (0.06)	72.3 (2.6)	104.8 (9.8)	1,781 (76)	13.10 (3.26)
New York	39.5 (5.5)	14.3 (3.9)	25.2 (3.4)	12.5 (2.4)	44.8 (5.1)	16.0 (3.6)	1.90 (0.10)	70.9 (4.2)	74.7 (7.7)	1,768 (78)	11.47 (0.96)
North Carolina	40.5 (4.6)	29.4 (4.0)	42.0 (4.3)	10.8 (1.7)	65.0 (4.1)	7.9 (2.3)	2.07 (0.10)	76.1 (2.6)	105.6 (8.4)	1,493 (39)	13.76 (0.90)
North Dakota	65.8 (5.3)	18.0 (3.6)	27.3 (5.1)	39.1 (5.7)	41.1 (6.5)	36.8 (5.5)	1.65 (0.06)	90.5 (1.1)	283.2 (56.3)	5,198 (853)	22.43 (1.41)
Ohio	33.1 (7.1)	12.9 (5.0)	16.9 (3.9)	3.3 (1.1)	31.9 (6.7)	7.1 (2.3)	1.69 (0.09)	79.7 (3.0)	92.8 (8.3)	2,906 (435)	9.87 (1.03)
Oklahoma	20.1 (2.7)	32.7 (3.8)	32.5 (3.5)	6.7 (1.7)	44.1 (4.2)	4.0 (1.7)	1.81 (0.05)	78.0 (1.9)	114.0 (7.3)	2,045 (90)	22.89 (1.49)
Oregon	38.6 (5.8)	39.2 (5.2)	51.5 (6.7)	18.9 (4.7)	49.5 (6.5)	11.7 (4.2)	1.87 (0.11)	82.7 (3.7)	112.3 (10.9)	2,125 (113)	17.90 (1.45)
Pennsylvania	33.9 (6.9)	17.3 (4.0)	32.6 (5.5)	2.5 (1.1)	39.2 (6.4)	6.4 (3.1)	1.88 (0.11)	86.6 (2.6)	117.0 (14.5)	2,169 (106)	12.36 (1.13)
Rhode Island	25.0 (4.9)	11.8 (3.2)	13.0 (3.5)	1.0 (0.6)	21.7 (4.8)	18.6 (4.2)	1.75 (0.08)	79.6 (3.2)	103.3 (13.3)	1,626 (155)	7.73 (0.90)
South Carolina	44.0 (5.4)	46.4 (5.0)	39.4 (5.7)	6.9 (1.7)	55.4 (7.1)	13.5 (4.1)	1.97 (0.09)	74.6 (3.7)	97.8 (10.6)	1,415 (49)	10.89 (0.51)
South Dakota	56.2 (6.8)	12.6 (3.4)	37.7 (6.2)	23.1 (4.2)	60.2 (5.5)	9.0 (2.7)	1.69 (0.12)	87.3 (2.2)	149.6 (13.4)	3,075 (271)	26.47 (2.62)
Tennessee	15.1 (4.3)	18.9 (5.1)	16.6 (4.5)	2.5 (2.3)	34.9 (6.5)	3.6 (1.9)	1.46 (0.08)	79.7 (2.8)	84.1 (7.9)	1,550 (79)	8.19 (0.60)
Texas	39.4 (4.6)	20.5 (4.2)	27.2 (3.1)	9.9 (2.8)	33.9 (3.8)	24.7 (4.2)	1.81 (0.07)	75.7 (2.6)	109.1 (7.3)	1,554 (69)	14.62 (0.97)
Utah	22.2 (3.6)	37.4 (4.1)	28.6 (3.6)	5.1 (2.3)	39.1 (3.6)	6.7 (1.9)	1.67 (0.07)	70.5 (2.4)	88.8 (5.4)	1,235 (54)	7.92 (0.50)
Vermont	47.0 (4.9)	27.2 (5.6)	35.3 (4.2)	14.5 (3.3)	51.9 (4.8)	32.2 (3.4)	1.80 (0.11)	86.8 (1.7)	153.8 (29.1)	2,871 (156)	25.50 (2.40)
Virginia	61.7 (8.3)	35.5 (6.1)	38.6 (5.8)	10.6 (2.9)	72.4 (7.0)	31.4 (5.6)	1.85 (0.11)	82.6 (2.8)	118.6 (14.4)	1,716 (76)	13.03 (0.85)
Washington	40.2 (5.2)	35.7 (5.6)	43.1 (3.6)	11.7 (2.9)	53.1 (4.9)	13.0 (2.6)	1.91 (0.10)	85.7 (1.9)	127.8 (8.9)	1,728 (53)	13.16 (1.18)
West Virginia	24.7 (6.0)	16.7 (4.2)	18.0 (4.0)	8.3 (3.5)	31.0 (5.5)	6.4 (3.2)	0.95 (0.09)	67.1 (4.4)	79.0 (11.9)	1,666 (124)	7.15 (0.67)
Wisconsin	34.2 (6.5)	27.2 (4.7)	36.1 (5.0)	14.8 (3.8)	57.1 (6.1)	9.0 (2.6)	1.98 (0.11)	83.9 (2.9)	138.9 (14.6)	2,430 (117)	21.84 (1.19)
Wyoming	39.0 (3.4)	28.0 (4.2)	32.1 (5.7)	8.1 (2.5)	41.7 (4.5)	6.6 (2.3)	1.82 (0.10)	80.4 (2.1)	158.0 (13.8)	3,968 (379)	22.42 (1.61)

¹ Includes professional and nonprofessional staff.² During the most recent full week of school.

NOTE: Percentages are based on schools that have library/media centers. In school year 1990–91, 96 percent of public schools had library/media centers. Data have been revised from previously published figures. Standard errors appear in parentheses.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Schools and Staffing Survey, 1993–94*, unpublished data. (This table was prepared November 2001.)

Table 420.—Percent of public and private schools having access to selected telecommunication capabilities, by location of access site and control of school: 1995 and 1998–99

Telecommunications capabilities	Percent of schools having access	Percent of schools with telecommunicatons access, by location					
		Administrative offices	Teacher workrooms	Classrooms	Computer labs	Library/ media centers	Other instructional rooms
1	2	3	4	5	6	7	8
All public schools, 1995							
Computer with any telecommunication capabilities via local area network	77	73	20	45	71	64	—
Computer with any telecommunication capabilities via modem	76	61	10	30	41	64	—
Computer with any telecommunication capabilities via wide area network	61	58	14	35	41	68	—
Broadcast television	71	35	28	82	47	88	—
Cable television	76	33	25	72	42	91	—
Closed circuit television	28	50	32	91	60	89	—
Two-way video with two-way audio	13	24	17	57	37	69	—
One-way video with two-way audio or computer link	7	26	15	63	41	54	—
All private schools, 1998–99							
Computer connected to a local area network	49	79	—	51	68	45	31
Computer with modem	73	81	—	41	50	31	18
Computer with connection or access to the Internet	67	79	—	44	56	41	21
Computer with connection or access to the Intranet	19	86	—	61	75	54	30
Stand-alone computer (i.e., not connected to any network)	85	68	—	83	52	42	39
Computer with multimedia capabilities (e.g., CD-ROM, speakers)	81	83	—	69	70	48	35
Interactive television/computer with two-way audio/visual	12	12	—	54	65	38	28

—Not available.

NOTE: Location estimates are based on those schools having access to each type of telecommunication capability. Percents of schools reporting telecommunication locations do not sum to 100 because many schools have access in more than one location. Data are derived from a sample survey and are subject to sampling error.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, *Advanced Telecommunications in U.S. Public Elementary and Secondary Schools, 1995*; and *Advanced Telecommunications in U.S. Private Schools: 1998–99*. (This table was prepared May 2001.)

**Table 421.—Public schools and school classrooms with access to the Internet,
by school characteristics: 1994 to 2000**

Schools, computers, instruction rooms, and access	All public schools	Instructional level ¹		Size of school enrollment			Metropolitan status				Percent of students eligible for free or reduced-price lunch ²				
		Elementary	Secondary	Less than 300	300 to 999	1,000 or more	City	Urban fringe	Town	Rural	Less than 35 percent	35 to 49 percent	50 to 74 percent	75 percent or more	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Estimated number of schools															
1995	77,853	57,705	18,083	20,673	50,044	7,136	17,906	18,464	19,539	21,944	37,450	13,627	12,808	13,166	
1997	79,125	59,695	19,430	20,540	51,169	7,416	21,071	23,419	12,637	21,998	37,525	12,250	16,302	12,864	
1998	78,791	59,173	19,193	20,095	50,655	8,041	20,698	26,265	11,306	20,522	38,156	12,088	13,967	14,541	
1999	78,399	59,575	17,110	20,018	50,389	7,992	21,034	26,245	11,235	19,885	35,653	13,908	16,099	11,993	
2000	80,127	59,782	18,414	20,067	51,887	8,173	21,115	26,584	11,879	20,550	36,563	12,414	17,030	13,912	
1998 (standard error)	(333)	(293)	(220)	(479)	(467)	(165)	(88)	(98)	(182)	(273)	(1,530)	(1,185)	(991)	(1,263)	
1999 (standard error)	(665)	(722)	(521)	(1,263)	(681)	(291)	(605)	(514)	(343)	(506)	(1,211)	(977)	(1,067)	(949)	
2000 (standard error)	(650)	(569)	(359)	(697)	(206)	(217)	(1,380)	(1,746)	(1,323)	(1,478)	(1,215)	(792)	(1,071)	(923)	
Percent of schools having access to the Internet															
1994	35	30	49	30	35	58	40	38	29	35	39	36	31	20	
1995	50	46	65	39	52	69	47	59	47	48	60	48	41	31	
1996	65	61	77	57	66	80	64	75	61	60	74	59	53	53	
1997	78	75	89	75	78	89	74	78	84	79	86	81	71	62	
1998	89	88	94	87	89	95	92	85	90	92	92	93	88	79	
1999	95	94	98	96	94	96	93	96	94	96	95	98	96	89	
2000	98	97	³ 100	96	98	99	96	98	98	99	99	99	97	94	
1998 (standard error)	(1.3)	(1.6)	(2.1)	(3.4)	(1.4)	(2.4)	(2.1)	(2.8)	(3.2)	(3.4)	(2.0)	(2.2)	(3.0)	(3.7)	
1999 (standard error)	(0.8)	(1.0)	(0.8)	(1.5)	(1.0)	(1.7)	(1.5)	(1.2)	(2.5)	(1.4)	(1.1)	(0.9)	(1.7)	(3.1)	
2000 (standard error)	(0.5)	(0.7)	(0.2)	(1.7)	(0.5)	(0.6)	(1.1)	(1.2)	(1.2)	(0.9)	(0.7)	(0.7)	(1.3)	(1.7)	
Number of computers for instructional purposes, in thousands															
1995 ⁴	5,621	3,453	2,021	850	3,600	1,171	1,497	1,526	1,404	1,195	2,905	806	950	882	
1997	5,959	3,701	2,258	839	3,767	1,353	1,727	2,084	934	1,214	3,154	886	1,013	890	
1998	7,111	4,519	2,549	952	4,414	1,744	2,148	2,606	1,047	1,311	3,630	1,105	1,127	1,235	
1999	7,806	4,923	2,728	1,021	4,952	1,834	2,320	2,975	1,022	1,489	3,900	1,245	1,429	1,170	
2000	8,776	5,296	3,271	1,135	5,524	2,117	2,537	3,396	1,155	1,689	4,394	1,373	1,606	1,384	
1998 (standard error)	(183)	(145)	(94)	(53)	(136)	(106)	(74)	(129)	(58)	(77)	(198)	(114)	(89)	(155)	
1999 (standard error)	(147)	(114)	(103)	(76)	(127)	(101)	(113)	(121)	(50)	(75)	(152)	(115)	(116)	(98)	
2000 (standard error)	(174)	(149)	(113)	(73)	(121)	(103)	(179)	(213)	(132)	(131)	(147)	(93)	(112)	(107)	
Mean number of instructional computers per school															
1995 ⁴	72	60	112	41	72	164	84	83	72	54	78	59	74	67	
1997	75	62	116	41	74	183	82	89	74	55	84	72	62	69	
1998	90	76	133	47	87	217	104	99	93	64	95	91	81	85	
1999	100	83	159	51	98	229	110	113	91	75	109	90	89	98	
2000	110	89	178	57	106	259	120	128	97	82	120	111	94	99	
1998 (standard error)	(2.3)	(2.4)	(4.9)	(2.6)	(2.5)	(13.0)	(3.6)	(4.9)	(5.2)	(3.6)	(3.7)	(6.1)	(4.5)	(7.7)	
1999 (standard error)	(2.2)	(2.2)	(6.4)	(2.5)	(2.3)	(10.7)	(4.7)	(4.2)	(4.2)	(3.6)	(2.8)	(6.8)	(5.6)	(5.2)	
2000 (standard error)	(2.0)	(2.4)	(5.3)	(3.1)	(2.3)	(9.0)	(4.9)	(4.3)	(5.6)	(3.6)	(3.4)	(5.9)	(5.7)	(5.5)	
Number of instructional computers with access to the Internet, in thousands															
1995 ⁴	447	232	187	59	315	73	96	131	126	94	286	46	57	36	
1998	3,569	2,100	1,450	407	2,276	887	1,026	1,334	481	727	2,064	608	439	458	
1999	4,809	2,773	1,945	663	2,988	1,158	1,265	1,887	691	966	2,762	778	810	428	
2000	6,759	3,813	2,779	882	4,191	1,686	1,782	2,688	955	1,335	3,608	1,064	1,215	858	
1998 (standard error)	(173)	(148)	(79)	(38)	(140)	(73)	(87)	(105)	(46)	(73)	(151)	(79)	(48)	(78)	
1999 (standard error)	(145)	(111)	(89)	(60)	(132)	(68)	(94)	(93)	(50)	(70)	(140)	(59)	(79)	(55)	
2000 (standard error)	(174)	(136)	(113)	(69)	(114)	(97)	(148)	(178)	(111)	(91)	(139)	(80)	(93)	(87)	
Percent of instructional computers with access to the Internet															
1995 ⁴	8	7	9	7	9	6	6	9	9	8	10	6	6	4	
1998	50	46	57	43	52	51	48	51	46	55	57	55	39	37	
1999	62	56	71	65	60	63	55	63	68	65	71	62	57	37	
2000	77	72	85	78	76	80	70	79	83	79	82	77	76	62	
1998 (standard error)	(1.7)	(2.5)	(2.1)	(3.4)	(2.2)	(3.4)	(3.0)	(2.8)	(4.1)	(3.4)	(2.0)	(4.2)	(2.9)	(4.6)	
1999 (standard error)	(1.4)	(1.6)	(2.4)	(3.0)	(1.7)	(3.6)	(2.6)	(2.4)	(3.1)	(2.7)	(2.2)	(3.6)	(2.8)	(3.6)	
2000 (standard error)	(1.1)	(1.5)	(1.2)	(2.6)	(1.3)	(1.8)	(2.1)	(1.7)	(2.5)	(2.1)	(1.2)	(2.9)	(2.6)	(3.1)	
Number of instructional rooms,⁵ in thousands															
1997	2,625	1,720	906	335	1,725	566	830	902	388	505	1,336	375	462	447	
1998	2,709	1,772	916	349	1,740	620	839	981	390	498	1,372	413	451	471	
1999	2,811	1,830	926	360	1,805	645	857	1,049	375	530	1,325	477	541	437	
2000	2,905	1,864	972	377	1,871	657	866	1,086	413	541	1,380	465	570	482	
1998 (standard error)	(41)	(29)	(25)	(35)	(34)	(21)	(22)	(24)	(14)	(17)	(60)	(39)	(29)	(42)	
1999 (standard error)	(36)	(33)	(29)	(26)	(39)	(30)	(29)	(33)	(16)	(23)	(46)	(34)	(42)	(34)	
2000 (standard error)	(35)	(28)	(24)	(22)	(23)	(23)	(56)	(61)	(47)	(39)	(46)	(28)	(36)	(29)	
Percent of instructional rooms⁵ with access to the Internet															
1994	3	3	4	3	3	3	4	4	3	3	3	2	4	2	
1995	8	8	8	9	8	4	6	8	8	9	6	6	6	3	
1996	14	13	16	15	13	16	12	16	14	14	17	12	11	5	
1997	27	24	32	27	28	25	20	29	34	30	33	33	20	14	
1998	51	51	52	54	53	45	47	50	55	57	57	60	41	38	
1999	63	62	67	71	64	58	52	67	72	71	73	69	61	38	
2000	77	76	79	83	78	70	66	78	87	85	82	81	77	60	
1998 (standard error)	(1.7)	(2.3)	(2.1)	(5.4)	(5.3)	(4.5)	(3.2)	(2.9)	(4.0)	(3.6)	(2.4)	(5.1)	(3.9)	(4.3)	
1999 (standard error)	(1.6)	(1.8)	(2.6)	(3.2)	(1.9)	(3.0)	(2.6)	(2.5)	(3.4)	(3.0)	(2.3)	(3.4)	(3.1)	(4.4)	
2000 (standard error)	(1.1)	(1.5)	(1.6)	(2.8)	(1.5)	(2.2)	(2.2)	(2.0)	(2.6)	(1.7)	(1.5)	(2.9)	(2.8)	(3.3)	

¹ Excludes combined elementary/secondary schools because of small sample size.

² Excludes schools missing data for free and reduced price lunch participation.

³ This estimate fell between 99.5 percent and 100.0 percent and therefore was rounded to 100 percent.

⁴ Includes computers used for instructional or administrative purposes.

⁵ Includes all classrooms, computer labs, and library/media centers.

NOTE: Data are derived from sample surveys and are subject to sampling error. Detail may not sum to totals because of rounding of weighted estimates. Standard errors appear in parentheses.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, *Internet Access in U.S. Public Schools and Classrooms: 1994-2000*; and unpublished data (This table was prepared July 2001.)

Table 422.—General statistics of college and university libraries: 1976–77 to 1997–98

Item	1976–77 ¹	1978–79 ¹	1981–82	1984–85	1987–88	1991–92	1994–95	1996–97	1997–98
1	2	3	4	5	6	7	8	9	10
Number of libraries	3,058	3,122	3,104	3,322	3,438	3,274	3,303	3,408	3,658
General collection transactions, in thousands	—	—	—	—	—	—	183,123	186,545	175,409
Reserve collection transactions, in thousands	—	—	—	—	—	—	48,380	44,189	40,658
Total enrollment, in thousands ²	11,121	11,392	12,372	12,242	12,767	14,359	14,279	14,300	14,502
Full-time-equivalent enrollment, in thousands ²	8,313	8,348	9,015	8,952	9,230	10,361	10,348	10,402	10,217
Collections, thousands of units									
Number of volumes at end of year	481,442	519,895	567,826	631,727	718,504	749,429	776,447	806,717	878,906
Number of volumes added during year	22,367	21,608	19,507	20,658	21,907	20,982	21,544	21,346	24,551
Number of serial subscriptions at end of year	4,670	4,775	4,890	6,317	6,416	6,966	6,212	5,709	³ 10,908
Microform units at end of year	—	—	—	—	—	—	—	—	1,062,082
Electronic units at end of year ⁴	—	—	—	—	—	—	465	983	3,473
Library staff, in full-time equivalents (FTE)									
Total staff in regular positions ⁵	57,087	58,416	58,476	58,476	67,251	67,166	67,433	67,581	68,337
FTE student enrollment per FTE staff	145.6	142.9	154.2	153.1	137.2	154.3	153.5	153.9	149.5
Librarians and professional staff	23,308	23,676	23,816	21,822	25,115	26,341	26,726	27,268	30,041
Other paid staff	33,779	34,740	34,660	38,026	40,733	40,421	40,381	40,022	38,026
Contributed services	—	—	—	—	1,403	404	326	291	270
Student assistants	—	—	—	—	33,821	29,075	28,411	27,998	28,373
Hours of student and other assistance, in thousands	39,950	39,552	40,068	28,360	—	—	—	—	—
Library operating expenditures (excluding capital outlay)									
Operating expenditures, total, in thousands	\$1,259,637	\$1,502,158	\$1,943,769	\$2,404,524	\$2,770,075	\$3,648,654	\$4,013,333	\$4,301,815	\$4,592,657
Salaries ⁶	698,090	824,438	1,081,894	1,156,138	1,451,551	1,889,368	2,021,233	2,147,842	2,314,380
Hourly wages	68,683	79,535	100,847	—	—	—	—	—	—
Fringe benefits	—	—	—	231,209	—	—	—	—	—
Preservation	22,521	25,274	30,351	32,939	34,144	43,126	46,554	45,610	42,919
Furniture/equipment	—	—	—	—	—	—	55,915	56,128	57,013
Computer hardware/software	—	—	—	—	—	—	128,128	157,949	164,379
Utilities/networks/consortia	—	—	—	—	—	—	81,106	85,113	89,618
Information resources	373,699	450,180	561,199	750,282	891,281	1,197,293	1,348,933	1,499,249	1,600,995
Books and serial backfiles-paper	—	—	—	—	—	—	—	—	514,048
Books and serial backfiles-electronic	—	—	—	—	—	—	—	—	28,061
Current serials- paper	—	—	—	—	—	—	—	—	849,399
Current serials- electronic	—	—	—	—	—	—	—	—	125,470
Audiovisual materials	—	—	—	—	—	23,879	28,753	28,879	30,623
Document delivery/interlibrary loan	—	—	—	—	—	—	12,238	17,645	19,309
Other collection expenditures	373,699	450,180	561,199	750,282	891,281	1,173,414	1,307,942	1,452,725	34,086
Other library operating expenditures	96,643	122,731	169,478	233,957	393,099	518,867	331,463	309,925	323,354
Operating expenditures per FTE student	152	180	216	269	300	352	388	414	450
Operating expenditures per FTE student in constant 1997–98 dollars	418	425	371	411	419	412	417	421	450
Operating expenditures, total, in percents	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Salaries ⁶	55.4	54.9	55.7	48.1	52.4	51.8	50.4	49.9	50.4
Hourly wages	5.5	5.3	5.2	—	—	—	—	—	—
Fringe benefits	—	—	—	9.6	—	—	—	—	—
Preservation	1.8	1.7	1.6	1.4	1.2	1.2	1.2	1.1	0.9
Information resources	29.7	30.0	28.9	31.2	32.2	32.8	33.6	34.9	34.9
Other library operating expenditures ⁷	7.7	8.2	8.7	9.7	14.2	14.2	14.9	14.2	13.8
Library operating expenditures as percent of total institutional expenditures for educational and general purposes	3.8	3.7	3.5	3.4	3.2	3.0	2.8	—	—

—Not available.

¹ Includes data for U.S. territories.² Fall enrollment for the academic year specified.³ Includes microform and electronic serials.⁴ Electronic files, formerly labeled "Computer files."⁵ Excludes student assistants.⁶ Includes expenditures for fringe benefits (except for 1984–85 and 1987–88), salary equivalents of contributed services staff, and hourly wages for 1996–97 and 1997–98.⁷ Includes furniture/equipment, computer hardware/software, and utilities/networks/consortia as well as expenditures classified above as "other library operating expenditures."

NOTE: Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Library Statistics of Colleges and Universities*, various years; and Integrated Postsecondary Education Data System, "Academic Library Survey," various years, and "Fall Enrollment Survey 1997." (This table was prepared July 2001.)

Table 423.—Selected statistics on the collections, staff, and operating expenditures of 60 large college and university libraries: 1998

Institution	Rank order, by number of volumes	Number of volumes at end of year, in thousands	Full-time-equivalent staff		Operating expenditures, in thousands		Public service hours per week	Gate count per week	Reference transactions per week
			Total	Professional	Total	Salaries and wages			
1	2	3	4	5	6	7	8	9	10
Harvard University (MA)	1	13,982	1,188	351	\$84,473	\$38,250	104	37,560	12,138
Yale University (CT)	2	10,108	611	163	48,331	18,393	111	14,080	1,476
University of Illinois, Urbana Campus	3	9,171	543	115	26,207	14,221	107	34,521	12,743
University of Texas, Austin	4	7,649	574	132	28,744	13,788	147	143,570	5,781
University of California, Berkeley	5	7,263	642	77	29,922	16,611	83	34,521	7,130
University of California, Los Angeles	6	7,212	546	129	38,092	20,419	87	86,602	7,510
University of Michigan, Ann Arbor	7	7,072	594	145	34,655	15,941	168	48,236	4,420
Stanford University (CA)	8	7,036	601	113	47,211	22,997	49	14,080	2,197
Columbia University, Main Division (NY)	9	7,018	513	128	30,743	15,369	104	—	—
University of Chicago (IL)	10	6,271	336	69	21,285	9,140	111	34,120	1,327
Indiana University, Bloomington	11	6,039	499	106	24,336	12,343	115	73,799	11,844
University of Wisconsin, Madison	12	5,902	501	125	29,187	15,833	131	140,386	7,034
University of Washington	13	5,820	502	138	26,605	14,598	106	34,521	7,130
Ohio State University, Main Campus	14	5,784	417	91	23,417	10,786	109	45,696	29,439
University of Minnesota, Twin Cities	15	5,613	431	88	28,490	13,258	106	34,521	4,786
Cornell University (NY)	16	5,218	468	97	22,218	11,078	104	—	2,057
Princeton University (NJ)	17	5,095	371	106	27,049	12,403	112	—	—
University of North Carolina, Chapel Hill	18	4,928	431	122	24,333	11,315	145	—	4,510
Duke University (NC)	19	4,764	359	110	23,919	10,220	122	—	3,426
University of Pennsylvania	20	4,673	392	112	28,838	11,837	143	35,590	7,582
Rutgers University (NJ)	21	4,643	327	72	17,640	10,830	108	74,268	4,473
University of Virginia, Main Campus	22	4,514	363	95	22,854	12,230	117	34,521	8,173
Michigan State University	23	4,188	273	57	16,596	7,798	114	—	3,183
New York University	24	4,167	419	92	26,646	13,112	115	38,000	5,995
University of Kansas, Main Campus	25	4,106	238	59	13,144	6,186	102	34,521	7,130
University of Arizona	26	4,080	293	69	16,157	6,569	154	26,651	2,510
Northwestern University (IL)	27	3,954	351	92	18,443	9,189	123	35,940	1,700
University of Iowa	28	3,927	298	76	20,095	9,040	106	53,661	6,717
University of Oklahoma, Norman Campus	29	3,797	146	33	8,787	3,197	108	16,996	3,529
University of Pittsburgh, Main Campus (PA)	30	3,552	335	85	17,909	7,798	120	49,933	6,107
University of Georgia	31	3,458	360	71	18,825	8,164	104	22,898	2,348
University of Florida	32	3,401	416	111	19,920	9,403	108	57,272	4,600
University of Southern California	33	3,337	338	80	23,975	10,128	24	60,846	3,129
Washington University (MO)	34	3,295	265	73	18,040	6,727	117	47,046	8,494
University of Hawaii, Manoa	35	3,167	243	65	11,934	6,574	87	29,671	3,513
State U. of New York, Buffalo, Main Campus	36	3,107	263	72	14,733	7,427	90	62,400	6,890
Johns Hopkins University (MD)	37	3,098	308	58	22,904	8,907	120	31,258	43,066
Arizona State University	38	3,074	295	82	17,332	7,920	102	30,944	4,948
University of South Carolina at Columbia	39	3,067	277	78	15,232	6,492	111	21,000	3,500
Wayne State University (MI)	40	3,046	278	46	16,050	7,631	97	50,144	17,256
Syracuse University, Main Campus (NY)	41	3,036	273	49	10,354	5,284	105	14,852	4,536
University of Colorado, Boulder	42	3,022	258	62	17,875	7,248	106	2,045	4,582
Louisiana State U. & A&M & Hebert Laws Center	43	3,014	203	50	10,816	4,953	111	41,287	2,931
University of Rochester (NY)	44	2,996	216	59	12,256	5,377	116	21,811	1,232
Brown University (RI)	45	2,979	241	61	13,528	6,574	111	20,392	1,451
University of Missouri, Columbia	46	2,856	246	58	11,274	5,365	104	30,874	2,677
Pennsylvania State University, Main Campus	47	2,832	415	77	22,642	10,769	168	71,665	5,191
University of Massachusetts at Amherst	48	2,826	194	46	11,163	5,571	105	27,000	2,750
Brigham Young University (UT)	49	2,823	386	84	13,494	6,612	101	71,917	9,968
Kansas State University	50	2,770	139	42	7,302	3,208	90	15,407	1,549
Southern Illinois University, Carbondale	51	2,740	229	40	11,097	5,239	92	15,340	3,035
University of Kentucky	52	2,719	362	87	17,418	7,962	144	45,284	3,881
North Carolina State University at Raleigh	53	2,713	324	85	17,222	6,924	146	35,654	2,952
University of Maryland, College Park Campus	54	2,700	329	108	16,373	9,213	98	58,789	6,311
University of Utah	55	2,684	381	67	19,778	8,563	105	76,231	7,538
University of California, Davis	56	2,672	267	50	14,781	8,464	87	24,217	4,431
University of Notre Dame (IN)	57	2,644	237	46	15,032	6,192	126	20,000	1,080
University of California, San Diego	58	2,578	322	49	18,729	9,693	109	36,180	3,501
Vanderbilt University (TN)	59	2,512	291	80	15,946	7,299	111	21,600	2,103
Auburn University, Main Campus (AL)	60	2,505	142	32	9,267	3,792	99	11,799	3,280

—Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Academic Library Survey 1998." (This table was prepared August 2001.)

Table 424.—General statistics of public libraries, by population of legal service area: 1998

Item	Population of legal service area						
	Total	Under 10,000	10,000 to 49,999	50,000 to 99,999	100,000 to 249,999	250,000 to 499,999	500,000 and over
1	2	3	4	5	6	7	8
Number of public library service outlets	17,113	5,690	4,179	1,790	2,177	1,133	2,144
Central libraries	8,887	5,370	2,548	493	330	82	64
Branch libraries	7,293	248	1,317	1,108	1,662	980	1,978
Bookmobiles	933	72	314	189	185	71	102
Collections, in thousands							
Books and serial volumes ¹	739,168	97,416	180,593	88,086	108,978	73,215	190,880
Audio and video materials and films	45,394	4,448	10,769	5,466	7,100	4,581	13,030
Serial subscriptions	1,913	268	483	219	261	178	503
Paid staff, in full-time equivalents							
Librarians	40,689	5,727	10,659	4,831	5,856	4,093	9,522
Librarians with ALA-MLS ²	28,178	1,182	6,639	3,566	4,642	3,290	8,859
Other staff	82,755	4,955	19,688	11,130	14,566	9,101	23,315
Income, in thousands							
Total operating income	\$6,737,820	\$435,326	\$1,548,994	\$842,681	\$1,116,459	\$765,433	\$2,028,927
	Percentage distribution						
Source of operating income							
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Federal ³	0.8	1.5	0.6	0.7	0.9	0.7	0.9
State	12.6	8.1	12.5	14.1	11.3	12.9	13.2
Local	77.6	70.4	77.4	76.8	80.9	79.8	76.5
Other	9.0	20.2	9.6	8.3	7.0	6.5	9.5

¹ Some data are different from other tables due to a different population base.² ALA-MLS=A master's degree from a graduate library education program accredited by the American Library Association (ALA).³ Excludes some federal funds received through state library agencies.

NOTE: Detail may not sum to totals due to rounding. Totals may be underestimated due to nonresponse on item or legal service area. In three states (Michigan, Pennsyl-

vania, and Texas), some public libraries reported data for fiscal year 1997. Most of West Virginia's data are for fiscal year 1997.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Public Libraries in the United States: FY 1998*. (This table was prepared June 2001.)**Table 425.—Public libraries, books and serial volumes, library visits, and reference transactions, by state: Fiscal year 1998**

State	Number of public libraries	Number of books and serial volumes ¹ (in thousands)	Number of books and serial volumes per capita	Library visits per capita ²	Circulation per capita	Public library reference transactions per capita ³	State	Number of public libraries	Number of books and serial volumes ¹ (in thousands)	Number of books and serial volumes per capita	Library visits per capita ²	Circulation per capita	Public library reference transactions per capita ³
1	2	3	4	5	6	7	1	2	3	4	5	6	7
United States	8,964	739,168	2.9	4.2	6.6	1.1							
Alabama	207	8,285	2.1	3.4	4.0	0.6	Missouri	154	22,409	4.7	4.6	8.6	1.0
Alaska	83	2,026	3.3	4.9	6.1	0.7	Montana	79	2,565	3.0	3.8	5.8	0.5
Arizona	40	8,289	1.8	4.3	6.2	1.1	Nebraska	235	5,391	3.8	4.6	8.1	0.8
Arkansas	38	5,080	2.1	2.4	4.0	0.4	Nevada	23	4,046	2.3	3.4	5.0	1.1
California	176	64,554	1.9	3.8	5.0	1.1	New Hampshire	228	5,267	4.5	4.6	7.5	0.8
Colorado	111	10,501	2.7	5.3	9.2	1.4	New Jersey	307	30,096	3.7	4.8	5.9	1.0
Connecticut	194	14,413	4.4	6.2	8.5	1.3	New Mexico	72	4,138	2.9	5.1	5.6	0.8
Delaware	30	1,302	2.0	3.8	5.5	0.8	New York	746	77,121	4.6	6.2	7.4	1.9
District of Columbia	1	2,951	5.7	3.4	2.7	(4)	North Carolina	75	14,892	2.0	3.7	5.7	1.0
Florida	76	26,787	1.8	3.5	4.9	1.7	North Dakota	79	2,098	3.8	4.3	7.3	0.7
Georgia	57	14,556	1.9	3.0	4.5	0.8	Ohio	250	44,766	4.0	5.5	12.5	1.4
Hawaii	1	3,036	2.5	4.8	6.5	2.0	Oklahoma	115	5,916	2.2	4.1	5.9	0.7
Idaho	103	3,299	3.2	5.4	7.8	0.8	Oregon	127	7,752	2.5	(4)	10.2	0.7
Illinois	626	40,720	3.8	5.4	7.9	1.5	Pennsylvania ⁵	458	25,734	2.2	3.3	4.8	0.7
Indiana	238	22,213	4.4	5.8	10.9	1.4	Rhode Island	48	4,126	4.1	5.1	6.6	0.8
Iowa	530	11,518	4.0	5.1	9.0	0.7	South Carolina	40	7,415	1.9	3.0	4.5	1.2
Kansas	316	9,855	4.7	5.4	9.7	1.3	South Dakota	111	2,572	5.0	5.0	8.9	(4)
Kentucky	116	7,507	2.1	3.1	5.5	0.5	Tennessee	142	8,611	1.6	2.9	4.0	0.9
Louisiana	65	10,372	2.4	2.9	4.3	0.8	Texas ⁵	522	35,737	2.0	2.9	4.3	1.0
Maine	269	5,543	5.4	5.0	7.9	0.8	Utah	70	5,454	2.7	5.1	9.7	(4)
Maryland	24	14,657	2.9	(4)	8.9	1.5	Vermont	193	2,705	5.0	5.0	6.9	(4)
Massachusetts	371	29,711	4.9	(4)	7.7	(4)	Virginia	90	17,327	2.6	4.5	7.6	1.1
Michigan ⁵	379	25,622	2.8	4.1	5.5	0.9	Washington	66	14,634	2.7	(4)	9.7	(4)
Minnesota	134	15,024	3.2	4.6	9.1	1.2	West Virginia ⁶	97	4,939	2.8	3.2	5.1	0.9
Mississippi	48	5,524	2.0	2.6	3.3	0.4	Wisconsin	381	17,822	3.4	5.5	9.0	1.2
							Wyoming	23	2,287	4.7	5.1	7.8	1.0

¹ Some data are different from other tables due to a different population base.² The total number of persons entering the library for whatever purpose during the year.³ A reference transaction is an information contact which involves the knowledge, use, recommendations, interpretation or instructions in the use of one or more information sources by a member of the library staff.⁴ Response rate less than 70 percent.⁵ Some public libraries reported data for fiscal year 1997.⁶ Most data are for fiscal year 1997.

NOTE: Totals may be underestimated due to nonresponse.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Public Libraries in the United States: FY 1998*. (This table was prepared July 2001.)

Table 426.—Percent of workers, 18 years old and over, using computers on the job, by selected characteristics and computer activities: October 1993 and October 1997

Selected characteristics	Percent using computers at work, 1993	1997											
		Percent using computers at work	Number using computers at work, in thousands	Analysis/spread-sheets	Book-keeping, invoicing, and inventory	Com-muni-ca-tions ²	Cal-en-dar/ sched-u-le	Data bases	Desk-top pub-lishing/ graph-ics	Program-ming	Sales and tele-mar-keting	Word proc-ess-ing	Using 4 or more cat-egories
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Total	45.8	49.8 (0.2)	63,885	40.9	66.4	47.0	37.5	34.1	26.1	15.0	22.1	57.0	44.0
Age													
18 to 24	34.4	37.1 (0.7)	6,007	28.2	70.3	35.3	28.0	23.4	18.4	11.0	23.5	43.1	30.5
25 to 29	48.3	52.5 (0.7)	7,984	41.7	69.8	46.6	38.3	35.0	25.8	16.3	23.4	58.3	45.7
30 to 39	50.7	53.3 (0.5)	18,864	44.0	67.0	49.1	39.6	35.4	28.3	16.7	24.0	58.5	46.8
40 to 49	51.3	54.9 (0.5)	18,182	43.6	65.8	48.6	39.5	36.9	27.1	15.7	20.6	58.9	46.4
50 to 59	43.9	50.7 (0.6)	10,092	39.1	62.8	49.0	37.2	33.5	26.1	13.5	19.6	58.8	43.1
60 or older	27.2	32.6 (0.9)	2,755	33.5	62.1	42.2	29.4	28.8	21.6	10.0	21.3	54.1	35.9
Educational attainment and sex													
Not high school graduate	10.0	11.9 (0.5)	1,645	18.6	68.9	23.4	22.1	17.3	10.7	8.7	19.7	30.7	20.2
High school graduate	34.2	36.4 (0.4)	15,395	28.7	72.0	34.1	29.0	23.1	16.6	10.1	21.0	41.5	30.7
Some college	50.4	53.6 (0.5)	14,172	36.5	71.6	42.6	36.0	31.3	24.1	13.7	24.0	52.7	40.6
Associate degree	58.2	60.7 (0.8)	6,580	38.9	69.8	43.7	36.0	33.0	25.5	15.1	19.7	52.7	41.2
Bachelor's degree	68.8	73.9 (0.5)	17,335	52.7	63.9	57.1	44.0	43.1	32.4	18.9	25.8	67.6	55.3
Master's degree	71.2	78.7 (0.8)	6,004	53.8	51.7	63.4	48.1	45.8	39.7	20.8	18.4	80.1	59.8
Doctor's or professional degree	66.9	74.6 (1.2)	2,754	46.6	47.5	64.9	42.0	39.0	30.3	16.2	10.5	75.2	50.2
Male	40.3	44.1 (0.3)	30,336	46.5	64.3	51.4	39.2	36.8	29.4	20.0	24.6	53.9	47.2
Not high school graduate	8.5	9.8 (0.5)	854	20.9	70.1	25.6	22.6	15.6	11.8	9.3	17.8	26.1	20.6
High school graduate	24.2	27.1 (0.5)	6,096	29.5	67.4	33.1	25.3	22.9	17.8	11.8	20.5	29.4	27.7
Some college	42.8	46.0 (0.7)	6,188	39.3	69.4	44.4	35.5	31.3	27.0	19.6	27.1	46.4	41.4
Associate degree	52.6	55.2 (1.2)	2,790	42.8	64.2	45.5	34.9	34.9	28.7	20.4	20.6	45.3	41.8
Bachelor's degree	69.8	74.3 (0.7)	9,258	60.0	64.0	62.1	47.4	46.9	35.7	24.1	30.5	66.6	60.0
Master's degree	75.4	79.8 (1.1)	3,201	63.3	56.6	70.6	54.6	50.8	41.9	27.8	23.8	80.5	67.4
Doctor's or professional degree	66.5	73.4 (1.4)	1,949	47.9	50.3	67.3	43.7	38.6	31.9	18.2	11.6	74.6	52.0
Female	52.4	56.5 (0.3)	33,549	35.8	68.3	43.1	36.0	31.6	23.1	10.5	19.9	59.8	41.0
Not high school graduate	12.5	15.4 (0.8)	791	16.0	67.7	20.9	21.6	19.1	9.4	8.0	21.7	35.6	19.8
High school graduate	45.2	46.9 (0.6)	9,299	28.3	75.0	34.7	31.5	23.3	15.9	8.9	21.4	49.4	32.6
Some college	58.6	61.5 (0.7)	7,984	34.4	73.2	41.1	36.4	31.3	21.8	9.1	21.7	57.5	40.1
Associate degree	63.7	65.4 (1.0)	3,790	36.0	73.9	42.4	36.8	31.7	23.2	11.2	19.0	58.1	40.7
Bachelor's degree	67.6	73.5 (0.7)	8,077	44.4	63.8	51.4	40.1	38.8	28.7	12.9	20.4	68.8	50.0
Master's degree	66.5	77.5 (1.1)	2,804	43.0	46.0	55.2	40.7	40.1	37.3	12.8	12.2	79.7	51.0
Doctor's or professional degree	68.2	77.6 (2.1)	805	43.7	41.0	59.1	37.8	39.9	26.4	11.4	7.9	76.8	45.9
Race/ethnicity													
White, non-Hispanic	48.7	53.8 (0.3)	51,904	42.1	67.1	47.7	38.0	34.9	27.1	15.2	23.2	57.9	45.3
Black, non-Hispanic	36.2	40.0 (0.7)	5,462	33.1	64.3	43.7	36.1	29.6	21.2	14.1	17.1	52.0	37.2
Hispanic	29.3	30.2 (0.8)	3,843	32.2	67.0	40.5	33.7	27.0	20.2	10.6	19.0	50.0	35.1
Other	43.9	49.2 (1.3)	2,675	45.8	57.4	49.5	35.8	37.8	25.0	19.3	16.2	59.4	44.7
Occupational group													
Managerial and professional specialty	67.7	74.6 (0.4)	28,427	52.4	61.0	58.6	45.2	42.6	36.3	19.1	20.6	71.7	56.0
Executive, administrative, and managerial	72.3	77.5 (0.5)	14,528	60.1	76.3	61.4	49.7	47.2	32.6	17.6	30.9	74.5	63.7
Professional specialty occupations	68.3	71.7 (0.6)	13,900	44.4	45.1	55.8	40.4	37.8	40.3	20.8	9.8	68.7	47.8
Teachers, except college and university	49.1	60.3 (1.2)	2,961	33.1	31.9	39.7	38.4	27.5	42.3	10.8	4.6	73.6	39.8
Teachers, college and university	72.5	79.9 (2.2)	759	51.5	27.1	74.6	37.3	40.2	41.3	23.9	5.4	83.5	48.9
Technical, sales, and administrative support	65.5	79.1 (0.4)	25,739	35.1	74.6	41.8	33.9	30.4	19.4	11.9	28.1	52.1	39.5
Technicians and related support	69.9	75.1 (1.1)	3,226	42.9	51.8	49.4	35.5	36.9	26.1	31.2	7.7	49.6	41.4
Sales occupations	48.8	54.8 (0.7)	8,277	38.4	83.0	43.0	34.3	31.3	21.0	10.5	57.2	46.1	44.8
Administrative support, including clerical	76.7	77.6 (0.5)	14,235	31.4	75.0	39.4	33.3	28.3	17.0	8.3	15.9	56.2	36.0
Service occupations	14.7	16.4 (0.5)	2,752	15.7	52.3	27.6	27.9	17.4	9.6	6.6	11.0	34.4	17.9
Precision production, craft, and repair	23.2	25.0 (0.6)	3,501	29.6	62.8	31.6	27.0	22.5	18.2	16.3	11.1	29.0	26.2
Operators, fabricators, and laborers	14.9	17.3 (0.5)	3,154	19.1	63.1	21.3	19.0	14.6	12.6	9.7	9.2	17.4	15.4
Farming, forestry, and fishing	8.5	9.3 (0.9)	311	40.2	79.3	22.8	27.3	33.0	11.2	10.2	19.1	33.7	33.0
Family income ³													
Less than \$20,000	25.1	26.7 (0.5)	5,915	27.6	67.8	34.0	28.7	24.0	19.4	11.7	22.2	44.9	31.4
\$20,000 to \$29,999	38.4	38.4 (0.6)	7,310	30.3	69.4	36.9	30.2	26.1	21.8	10.5	20.0	48.0	34.3
\$30,000 to \$39,999	45.7	45.8 (0.6)	8,915	35.7	67.4	42.2	33.7	29.4	23.8	12.8	20.8	50.8	38.0
\$40,000 to \$49,999	51.9	52.3 (0.7)	7,737	40.0	69.0	43.6	36.9	31.8	25.4	15.0	21.0	53.8	42.5
\$50,000 to \$74,999	60.6	59.9 (0.5)	16,966	42.7	65.8	48.6	38.9	36.1	27.2	16.5	20.6	58.4	45.5
\$75,000 or more	65.9	69.7 (0.5)	17,042	51.4	63.6	58.4	44.6	42.3	30.6	17.8	25.7	68.4	54.7

¹ Individuals may be counted in more than one computer activity.² Includes bulletin boards and electronic mail.³ Excludes persons whose income data were not available.

NOTE: Data are based on a sample survey of households and are subject to sampling and nonsampling error. Standard errors appear in parentheses.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1997, unpublished data. (This table was prepared August 1998.)

**Table 427.—Access to and use of home computers, by selected characteristics of students and other users:
October 1997**

Selected characteristics	Percent with computers at home	Number using computers at home, in thousands	Percent using computers at home	Distribution of frequency of use per week for persons using computers in home				Percent of persons whose home computer has specific capabilities ¹			
				6 or 7 days	4 or 5 days	2 or 3 days	1 day or less	CD-ROM drive	Printer	Modem	Internet
1	2	3	4	5	6	7	8	9	10	11	12
Total, all persons ...	43.0 (0.2)	81,013	30.3 (0.2)	23.4 (0.2)	20.1 (0.2)	32.6 (0.2)	24.0 (0.2)	71.3 (0.2)	85.5 (0.2)	71.1 (0.2)	52.1 (0.3)
Sex											
Male	44.3 (0.2)	41,260	31.6 (0.2)	27.1 (0.2)	20.1 (0.2)	30.6 (0.2)	22.2 (0.2)	72.1 (0.3)	85.5 (0.2)	71.7 (0.3)	52.9 (0.3)
Female	41.7 (0.2)	39,753	29.1 (0.2)	19.6 (0.2)	20.0 (0.2)	34.6 (0.2)	25.8 (0.2)	70.6 (0.3)	85.6 (0.2)	70.5 (0.3)	51.2 (0.3)
Race/ethnicity											
White, non-Hispanic	49.2 (0.2)	68,026	35.5 (0.2)	23.5 (0.2)	20.2 (0.2)	32.1 (0.2)	24.3 (0.2)	72.4 (0.3)	87.1 (0.2)	72.8 (0.3)	53.7 (0.3)
Black, non-Hispanic	22.8 (0.4)	4,943	14.7 (0.3)	20.8 (0.7)	20.5 (0.7)	37.6 (0.8)	21.2 (0.7)	58.2 (1.0)	75.2 (0.9)	57.7 (1.0)	40.3 (1.0)
Hispanic	22.2 (0.5)	4,081	13.5 (0.4)	23.3 (0.8)	17.3 (0.7)	36.4 (0.9)	23.1 (0.8)	69.1 (1.1)	78.2 (1.0)	60.8 (1.2)	44.4 (1.2)
Age											
Under 5	39.0 (0.6)	1,675	8.5 (0.3)	12.2 (0.5)	16.3 (0.5)	38.1 (0.7)	33.5 (0.7)	71.9 (0.8)	83.3 (0.7)	74.5 (0.8)	53.8 (0.9)
5 to 9	46.4 (0.6)	7,599	37.1 (0.6)	11.8 (0.4)	17.6 (0.5)	44.2 (0.6)	26.4 (0.6)	74.7 (0.7)	83.8 (0.6)	71.5 (0.8)	50.5 (0.8)
10 to 14	55.1 (0.6)	9,500	48.7 (0.6)	21.1 (0.5)	21.8 (0.5)	38.0 (0.6)	19.1 (0.5)	75.5 (0.7)	87.9 (0.5)	70.6 (0.7)	50.3 (0.8)
15 to 19	53.0 (0.6)	8,395	43.1 (0.5)	24.7 (0.5)	22.4 (0.5)	32.4 (0.6)	20.5 (0.5)	73.7 (0.7)	88.0 (0.5)	69.9 (0.7)	52.3 (0.8)
20 to 24	41.2 (0.6)	4,975	28.5 (0.6)	28.3 (0.8)	20.2 (0.7)	28.9 (0.8)	22.6 (0.7)	69.5 (1.0)	83.4 (0.8)	69.8 (1.0)	53.0 (1.1)
25 to 29	39.3 (0.6)	5,963	31.7 (0.6)	26.1 (0.7)	22.3 (0.6)	30.0 (0.7)	21.7 (0.6)	70.1 (0.9)	80.4 (0.8)	75.8 (0.9)	58.4 (1.0)
30 to 39	47.0 (0.4)	15,393	35.8 (0.4)	24.2 (0.4)	20.6 (0.4)	32.0 (0.4)	23.2 (0.4)	71.9 (0.5)	84.5 (0.4)	72.8 (0.5)	53.5 (0.6)
40 to 49	54.0 (0.4)	15,346	38.3 (0.4)	24.3 (0.4)	18.8 (0.3)	30.3 (0.4)	26.6 (0.4)	73.9 (0.5)	87.4 (0.4)	73.0 (0.5)	54.4 (0.6)
50 to 59	44.2 (0.5)	7,679	28.5 (0.5)	26.6 (0.5)	19.8 (0.5)	28.0 (0.5)	25.7 (0.5)	66.5 (0.7)	86.2 (0.5)	67.6 (0.7)	50.7 (0.8)
60 to 69	27.5 (0.6)	3,162	16.2 (0.5)	29.7 (0.8)	17.5 (0.7)	24.1 (0.8)	28.6 (0.8)	61.0 (1.2)	86.8 (0.8)	63.5 (1.1)	42.3 (1.2)
70 or older	13.2 (0.4)	1,327	5.9 (0.3)	29.4 (1.1)	17.8 (1.0)	25.4 (1.1)	27.5 (1.1)	59.0 (1.6)	86.1 (1.1)	60.4 (1.5)	38.6 (1.5)
Family income											
Less than \$5,000	19.4 (0.6)	1,517	13.3 (0.5)	31.1 (1.3)	16.7 (1.1)	26.8 (1.3)	25.3 (1.3)	63.2 (1.8)	81.9 (1.4)	66.2 (1.8)	44.6 (1.8)
\$5,000 to \$9,999	12.1 (0.4)	1,575	8.1 (0.3)	24.8 (1.2)	19.6 (1.1)	29.4 (1.3)	26.1 (1.3)	59.6 (1.8)	81.0 (1.4)	56.7 (1.8)	40.5 (1.8)
\$10,000 to \$14,999	15.6 (0.4)	2,197	9.7 (0.3)	26.2 (1.1)	17.7 (0.9)	31.4 (1.1)	24.8 (1.0)	55.9 (1.5)	74.5 (1.3)	54.7 (1.5)	38.7 (1.4)
\$15,000 to \$19,999	18.4 (0.5)	2,084	12.0 (0.4)	25.9 (1.1)	20.4 (1.0)	29.9 (1.1)	23.8 (1.1)	60.5 (1.5)	77.8 (1.3)	60.0 (1.5)	42.7 (1.5)
\$20,000 to \$24,999	25.5 (0.5)	3,645	17.1 (0.4)	25.1 (0.8)	18.9 (0.7)	31.4 (0.9)	24.5 (0.8)	59.9 (1.2)	80.9 (0.9)	58.1 (1.2)	38.8 (1.2)
\$25,000 to \$29,999	31.4 (0.6)	4,174	21.0 (0.5)	23.3 (0.7)	19.3 (0.7)	33.3 (0.8)	24.1 (0.8)	62.2 (1.1)	77.6 (0.9)	61.0 (1.1)	42.0 (1.1)
\$30,000 to \$34,999	38.3 (0.6)	5,003	25.7 (0.5)	22.5 (0.7)	20.5 (0.6)	32.9 (0.7)	24.1 (0.7)	66.4 (1.0)	82.6 (0.8)	64.1 (1.0)	43.7 (1.0)
\$35,000 to \$39,999	43.6 (0.6)	5,367	29.1 (0.6)	22.7 (0.6)	18.5 (0.6)	34.1 (0.7)	24.7 (0.6)	65.9 (0.9)	84.3 (0.7)	66.3 (0.9)	46.1 (1.0)
\$40,000 to \$49,999	51.1 (0.5)	9,627	35.4 (0.5)	22.2 (0.5)	19.5 (0.4)	33.3 (0.5)	25.1 (0.5)	68.2 (0.7)	86.0 (0.5)	67.6 (0.7)	46.4 (0.7)
\$50,000 to \$74,999	62.3 (0.4)	21,685	44.6 (0.4)	22.1 (0.3)	20.2 (0.3)	32.5 (0.4)	25.1 (0.3)	73.9 (0.4)	87.2 (0.3)	74.3 (0.4)	53.9 (0.5)
\$75,000 or more	77.6 (0.4)	24,138	58.0 (0.4)	24.1 (0.3)	21.1 (0.3)	32.8 (0.3)	22.0 (0.3)	80.9 (0.4)	89.8 (0.3)	81.1 (0.4)	64.5 (0.5)
Total, all students	54.6 (0.3)	32,459	45.1 (0.3)	21.7 (0.2)	21.2 (0.2)	36.3 (0.3)	20.8 (0.2)	74.6 (0.3)	86.9 (0.3)	71.9 (0.4)	52.9 (0.4)
Sex											
Preprimary	45.2 (0.9)	2,493	29.6 (0.8)	10.8 (0.6)	17.7 (0.8)	41.2 (1.0)	30.3 (0.9)	74.8 (1.2)	85.4 (0.9)	73.4 (1.2)	53.5 (1.3)
1st to 8th grade	50.7 (0.5)	14,056	43.4 (0.5)	16.5 (0.4)	19.9 (0.4)	41.5 (0.5)	22.1 (0.4)	75.2 (0.6)	86.0 (0.4)	71.0 (0.6)	50.3 (0.6)
9th to 12th grade	55.7 (0.6)	7,699	48.8 (0.6)	23.9 (0.5)	22.8 (0.5)	33.6 (0.6)	19.6 (0.5)	74.6 (0.7)	88.6 (0.5)	70.2 (0.8)	51.5 (0.8)
Undergraduate	64.7 (0.7)	6,179	49.8 (0.7)	30.8 (0.7)	22.3 (0.6)	29.0 (0.7)	17.9 (0.6)	73.3 (0.9)	88.9 (0.7)	73.6 (0.9)	57.6 (1.0)
Graduate	75.3 (1.2)	2,032	67.2 (1.3)	34.1 (1.2)	25.4 (1.1)	26.9 (1.1)	13.6 (0.9)	73.6 (1.5)	89.4 (1.0)	78.9 (1.4)	65.1 (1.6)
Family income											
Male	54.8 (0.4)	16,213	45.2 (0.4)	24.4 (0.4)	21.1 (0.3)	35.1 (0.4)	19.4 (0.3)	75.5 (0.5)	86.5 (0.4)	72.3 (0.5)	53.4 (0.6)
Preprimary	46.5 (1.3)	1,308	30.3 (1.2)	13.4 (0.9)	20.1 (1.1)	37.1 (1.3)	29.4 (1.3)	74.3 (1.6)	83.3 (1.4)	72.3 (1.6)	53.6 (1.8)
1st to 8th grade	50.9 (0.6)	7,257	43.6 (0.6)	18.0 (0.5)	20.8 (0.5)	41.2 (0.7)	20.1 (0.5)	75.1 (0.8)	85.6 (0.6)	70.8 (0.8)	50.2 (0.9)
9th to 12th grade	56.1 (0.9)	3,971	49.3 (0.9)	27.3 (0.8)	21.8 (0.7)	31.4 (0.8)	19.6 (0.7)	76.4 (1.0)	88.7 (0.7)	71.9 (1.0)	53.0 (1.1)
Undergraduate	66.6 (1.0)	2,841	51.3 (1.0)	36.9 (1.1)	20.4 (0.9)	26.9 (1.0)	15.8 (0.8)	76.9 (1.3)	87.2 (1.0)	76.1 (1.3)	60.8 (1.5)
Graduate	73.8 (1.9)	834	64.1 (2.0)	40.3 (1.9)	24.5 (1.7)	25.4 (1.7)	9.8 (1.2)	74.2 (2.2)	88.3 (1.7)	77.8 (2.1)	63.7 (2.5)
Female	54.4 (0.4)	16,246	44.9 (0.4)	19.0 (0.3)	21.3 (0.3)	37.4 (0.4)	22.3 (0.4)	73.7 (0.5)	87.3 (0.4)	71.6 (0.5)	52.4 (0.6)
Preprimary	43.9 (1.3)	1,185	28.8 (1.2)	8.0 (0.8)	15.0 (1.0)	45.6 (1.4)	31.4 (1.3)	75.5 (1.7)	87.7 (1.3)	74.7 (1.7)	53.4 (1.9)
1st to 8th grade	50.5 (0.7)	6,799	43.3 (0.7)	15.0 (0.5)	18.9 (0.5)	41.7 (0.7)	24.3 (0.6)	75.3 (0.8)	86.4 (0.6)	71.3 (0.8)	50.4 (0.9)
9th to 12th grade	55.2 (0.9)	3,728	48.1 (0.9)	20.3 (0.7)	23.9 (0.8)	36.1 (0.8)	19.7 (0.7)	72.6 (1.1)	88.5 (0.8)	68.4 (1.1)	49.9 (1.2)
Undergraduate	63.1 (0.9)	3,337	48.6 (0.9)	25.7 (0.9)	23.9 (0.9)	30.7 (0.9)	19.7 (0.8)	70.4 (1.2)	86.7 (0.9)	71.7 (1.2)	55.0 (1.3)
Graduate	76.5 (1.6)	1,197	69.6 (1.7)	29.7 (1.5)	26.0 (1.4)	28.0 (1.5)	16.3 (1.2)	73.2 (1.9)	90.2 (1.3)	79.7 (1.7)	66.0 (2.1)
Race/ethnicity											
White, non-Hispanic	65.4 (0.3)	26,229	54.9 (0.4)	21.4 (0.3)	21.4 (0.3)	35.8 (0.3)	21.4 (0.3)	76.4 (0.4)	89.1 (0.3)	74.1 (0.4)	55.2 (0.4)
Preprimary	56.9 (1.1)	2,080	38.4 (1.1)	11.2 (0.7)	17.4 (0.8)	41.8 (1.1)	29.6 (1.0)	77.1 (1.3)	87.3 (1.0)	74.9 (1.3)	54.9 (1.5)
1st to 8th grade	62.0 (0.6)	11,340	54.4 (0.6)	16.0 (0.4)	20.3 (0.4)	41.1 (0.5)	22.6 (0.4)	77.2 (0.6)	88.5 (0.5)	74.0 (0.6)	53.2 (0.7)
9th to 12th grade	68.7 (0.7)	6,265	60.9 (0.7)	23.9 (0.6)	23.0 (0.6)	32.8 (0.6)	20.3 (0.5)	76.3 (0.8)	90.6 (0.5)	72.1 (0.8)	53.5 (0.9)
Undergraduate	71.3 (0.7)	4,927	55.1 (0.8)	31.1 (0.8)	22.1 (0.7)	27.9 (0.8)	18.9 (0.7)	74.6 (1.0)	89.0 (0.7)	75.4 (1.0)	59.9 (1.1)
Graduate	78.9 (1.3)	1,617	70.3 (1.5)	33.0 (1.3)	25.8 (1.2)	27.1 (1.2)	14.0 (1.0)	74.3 (1.6)	90.5 (1.1)	78.6 (1.5)	65.2 (1.8)
Black, non-Hispanic	28.2 (0.7)	2,330	21.1 (0.6)	20.3 (1.0)	21.9 (1.0)	41.1 (1.2)	16.6 (0.9)	57.8 (1.5)	75.3 (1.3)	58.6 (1.5)	39.1 (1.5)
Preprimary	17.8 (1.5)	139	9.8 (1.2)	11.3 (2.4)	19.8 (3.0)	31.0 (3.5)	37.8 (3.7)	55.5 (4.7)	80.5 (3.8)	62.0 (4.6)	43.0 (4.7)
1st to 8th grade	26.8 (0.9)	1,078	20.6 (0.8)	19.7 (1.3)	17.2 (1.3)	47.3 (1.7)	15.8 (1.2)	58.3 (2.0)	74.0 (1.8)	55.4 (2.0)	34.8 (3.1)
9th to 12th grade	26.6 (1.4)	534	21.0 (1.3)	19.9 (2.1)	27.6 (2.4)	38.4 (2.6)	14.1 (1.8)	56.2 (3.1)	73.8 (2.8)	57.5 (3.1)	39.4 (3.1)
Undergraduate	37.8 (2.0)	394	25.6 (1.8)	19.2 (2.7)	26.4 (3.0)	38.4 (3.3)	16.0 (2.5)	56.2 (4.1)	73.1 (3.6)	61.3 (4.0)	40.3 (4.0)
Graduate	63.0 (4.4)	185	56.3 (4.5)	34.4 (4.3)	24.7 (3.9)	26.5 (4.0)	14.3 (3.2)	67.0 (5.5)	87.6 (3.8)	75.6 (5.0)	61.0 (5.7)
Hispanic	27.2 (0.8)	1,944	21.1 (0.7)	22.2 (1.1)	18.7 (1.1)	41.1 (1.4)	18.0 (1.1)	72.8 (1.6)	77.9 (1.5)	60.8 (1.7)	45.2 (1.8)
Preprimary	21.2 (1.5)	134	11.2 (1.1)	9.6 (1.9)	17.3 (2.4)	43.3 (3.1)	29.9 (2.9)	65.8 (3.7)	74.7 (3.4)	67.4 (3.7)	46.0 (3.9)
1st to 8th grade	24.0 (0.8)	863	18.6 (0.7)	18.0 (1.1)	17.3 (1.1)	44.2 (1.5)	20.4 (1.2)	72.8 (1.7)	75.7 (1.6)	57.7 (1.9)	43.6 (1.9)
9th to 12th grade	25.8 (1.7)	458	21.6 (1.6)	25.0 (2.5)	19.3 (2.3)	37.1 (2.8)	18.6 (2.2)	73.2 (3.3)	81.0 (2.9)	58.0 (3.7)	41.0 (3.7)
Undergraduate	45.8 (2.6)	430	37.3 (2.5)	29.1 (2.9)	21.1 (2.6)	38.7 (3.1)	11.2 (2.0)	74.4 (3.6)	81.1 (3.2)	65.0 (3.9)	50.9 (4.1)
Graduate	(2) —	(2) —	(2) —	(2) —	(2) —	(2) —	(2) —	85.2 (0.6)	89.6 (0.5)	75.7 (0.7)	55.2 (0.8)
Family income											
Less than \$5,000	29.5 (1.2)	812	22.6 (1.1)	30.7 (1.7)	16.7 (1.4						

Table 428.—Percent of home computer users using specific applications, by selected characteristics: October 1997

Selected characteristics	Number of home computer users, in thousands	Percent of computer users using specific applications ¹										
		Home book-keeping ²	School assignments	Games	Job-related ²	Home connection to school or work	Word processing	Data bases ²	Graphics	Desktop publishing ²	Spread-sheets ²	Internet
1	2	3	4	5	6	7	8	9	10	11	12	13
Total, all persons ...	81,013 (600)	—	29.9	62.6	—	10.6 (0.2)	60.9	—	23.4	—	—	44.9 (0.3)
Total, all persons over 15	53,845 (461)	45.2 (0.4)	16.0	53.2	35.5	14.6 (0.3)	70.6	26.7	26.0	17.9	29.4	52.4 (0.4)
Sex												
Male	41,260 (413)	32.4 (0.4)	28.5	66.4	26.8	12.9 (0.3)	57.0	21.0	24.0	12.4	23.1	48.4 (0.4)
Female	39,753 (304)	28.8 (0.4)	31.3	58.5	21.8	8.3 (0.2)	64.9	16.4	22.8	13.2	17.8	41.3 (0.4)
Race/ethnicity												
White, non-Hispanic	68,026 (330)	31.5 (0.3)	28.9	62.9	24.8	10.9 (0.2)	61.7	19.3	24.0	13.2	21.1	46.1 (0.3)
Black, non-Hispanic	4,943 (108)	28.1 (1.1)	32.9	62.5	22.5	8.8 (0.7)	55.6	15.2	20.5	11.0	17.9	34.3 (1.2)
Hispanic	4,081 (93)	24.3 (1.3)	34.6	59.6	19.9	7.5 (0.8)	55.8	14.3	20.1	10.4	14.6	38.1 (1.5)
Other	3,963 —	24.3 (1.3)	38.3	59.1	22.4	11.7 (1.0)	59.1	17.7	21.3	10.0	19.4	44.2 (1.6)
Age												
Under 15	18,774 (222)	—	49.0	87.0	—	1.2 (0.1)	31.5	—	17.2	—	—	22.8 (0.5)
15 to 19	8,395 (153)	5.6 (0.4)	75.9	67.7	7.1	6.1 (0.5)	64.2	9.3	20.9	8.9	9.4	46.1 (0.9)
20 to 24	4,975 (119)	24.0 (1.0)	51.3	60.9	16.4	16.3 (0.9)	70.9	19.0	22.6	12.1	21.6	55.9 (1.2)
25 to 29	5,963 (130)	44.3 (1.1)	23.4	58.5	34.8	17.9 (0.9)	71.5	26.3	25.1	19.8	30.5	59.0 (1.1)
30 to 39	15,393 (203)	48.3 (0.7)	13.3	58.3	39.2	15.8 (0.5)	68.7	27.0	27.7	19.3	31.1	53.2 (0.7)
40 to 49	15,346 (203)	46.5 (0.7)	12.2	50.4	39.2	14.9 (0.5)	71.4	28.0	27.3	18.9	30.8	52.8 (0.7)
50 to 59	7,679 (147)	48.2 (1.0)	8.3	43.7	41.2	13.5 (0.7)	73.4	30.3	25.8	18.0	30.7	50.0 (1.0)
60 to 69	3,162 (96)	51.3 (1.5)	3.5	47.9	25.1	5.8 (0.7)	69.9	25.1	22.4	15.1	25.7	42.3 (1.5)
70 or older	1,327 (62)	44.5 (2.4)	2.1	43.0	17.3	4.4 (1.0)	63.8	22.4	17.1	9.2	20.2	35.3 (2.3)
Family income												
Under \$20,000	7,374 (144)	25.8 (0.9)	34.2	61.8	16.2	9.3 (0.6)	58.0	15.3	21.8	9.9	17.4	38.9 (1.0)
\$20,000 to \$29,999	7,819 (148)	29.3 (0.9)	30.8	66.4	18.7	6.7 (0.5)	57.2	15.6	22.4	12.4	16.6	37.6 (0.9)
\$30,000 to \$39,999	10,370 (169)	30.2 (0.8)	29.4	64.5	20.4	7.6 (0.5)	55.3	17.5	23.2	12.0	17.4	38.7 (0.8)
\$40,000 to \$49,999	9,627 (164)	29.3 (0.8)	28.3	66.3	20.4	8.1 (0.5)	55.5	16.6	23.9	12.1	18.0	38.6 (0.9)
\$50,000 to \$74,999	21,685 (236)	30.4 (0.5)	29.9	63.6	24.6	10.4 (0.4)	61.7	18.6	24.0	13.2	20.7	45.6 (0.6)
\$75,000 or more	24,138 (247)	33.4 (0.5)	29.1	58.2	31.7	14.9 (0.4)	66.8	22.2	23.7	14.1	25.0	53.6 (0.6)

—Not available.

¹Individuals may be counted in more than one computer activity.²Data are for persons 15 years old and over.

NOTE: Data are based on a sample survey of households and are subject to sampling and nonsampling error. Detail may not sum to totals due to rounding. Standard errors appear in parentheses.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1997, unpublished data. (This table was prepared October 1998.)

Table 429.—Percent of student home computer users using specific applications, by selected characteristics: October 1997

Selected characteristics	Number of home computer users, in thousands	Percent of computer users using specific applications ¹										
		Home book-keeping ²	School assignments	Games	Job-related ²	Home connection to school or work	Word processing	Data bases ²	Graphics	Desktop publishing ²	Spread-sheets ²	Internet
1	2	3	4	5	6	7	8	9	10	11	12	13
Total, all students	32,459 (310)	—	65.9 (0.4)	78.0	—	7.4 (0.2)	52.5	—	21.4	—	—	36.3 (0.4)
Preprimary	2,493 (83)	—	5.2 (0.7)	89.5	—	0.4 (0.2)	4.6	0.0	10.8	—	—	4.4 (0.7)
1st to 8th grade	14,056 (205)	—	58.3 (0.7)	93.0	—	1.3 (0.2)	36.1	0.0	19.2	—	—	25.1 (0.6)
White, non-Hispanic	11,340 (182)	—	55.6 (0.8)	89.1	—	1.2 (0.2)	35.7	0.0	19.5	—	—	26.4 (0.7)
Black, non-Hispanic	1,078 (50)	—	49.8 (2.3)	84.1	—	1.0 (0.5)	23.6	0.0	9.5	—	—	16.0 (1.7)
Hispanic	863 (37)	—	51.0 (2.1)	77.5	—	2.0 (0.6)	28.2	0.0	14.3	—	—	19.4 (1.7)
9th to 12th grade	7,699 (139)	2.9	84.8 (0.6)	76.0	5.2	3.1 (0.3)	65.9	6.1	22.3	7.0	6.5	42.2 (0.9)
White, non-Hispanic	6,265 (125)	2.8	80.4 (0.8)	72.5	4.2	3.1 (0.3)	64.3	6.0	22.2	7.1	6.3	43.6 (1.0)
Black, non-Hispanic	534 (38)	1.7	74.3 (3.1)	69.7	9.9	1.4 (0.8)	47.2	2.4	15.3	4.0	2.2	27.6 (3.2)
Hispanic	458 (37)	3.1	73.0 (3.6)	64.2	4.4	2.2 (1.2)	55.2	4.1	13.4	3.9	4.5	37.3 (3.9)
Undergraduate	6,179 (124)	22.5	82.0 (0.8)	54.3	17.8	20.3 (0.8)	79.7	0.0	25.4	14.3	24.6	57.9 (1.0)
Graduate	2,032 (70)	38.1	73.4 (1.5)	44.3	43.4	32.0 (1.6)	88.0	0.0	32.9	25.5	36.6	65.9 (1.6)
Males	16,213 (208)	7.2	62.5 (0.6)	79.9	7.2	7.7 (0.3)	47.0	0.0	20.3	5.4	8.9	37.3 (0.6)
Preprimary	1,308 (60)	—	5.5 (1.0)	90.3	—	0.8 (0.4)	3.8	0.0	11.2	—	—	5.9 (1.1)
1st to 8th grade	7,257 (144)	—	54.8 (1.0)	89.8	—	1.4 (0.2)	31.3	0.0	16.3	—	—	25.0 (0.8)
9th to 12th grade	3,971 (98)	3.0	78.6 (1.0)	78.8	5.5	3.4 (0.4)	58.9	0.0	21.9	6.6	6.7	44.5 (1.2)
Undergraduate	2,841 (83)	23.5	82.7 (1.1)	59.8	18.8	23.7 (1.2)	78.8	0.0	28.6	13.8	28.4	63.6 (1.4)
Graduate	834 (45)	44.2	73.7 (2.3)	50.4	48.1	39.0 (2.6)	85.9	0.0	34.5	26.0	43.0	68.8 (2.5)
Females	16,246 (208)	7.5	64.3 (0.6)	70.2	7.4	6.6 (0.3)	54.1	0.0	20.8	6.4	8.0	35.4 (0.6)
Preprimary	1,185 (57)	—	4.9 (1.0)	88.6	—	0.0 0.0	5.3	0.0	10.4	—	—	2.7 (0.8)
1st to 8th grade	6,799 (139)	—	55.4 (1.0)	85.9	—	1.1 (0.2)	37.0	0.0	20.0	—	—	25.1 (0.9)
9th to 12th grade	3,728 (95)	2.5	81.3 (1.0)	64.0	4.1	2.5 (0.4)	65.5	0.0	20.0	6.5	5.5	39.7 (1.2)
Undergraduate	3,337 (90)	21.6	81.5 (1.0)	49.5	17.0	17.4 (1.0)	80.6	0.0	22.7	14.7	21.3	53.1 (1.3)
Graduate	1,197 (54)	33.9	73.2 (2.0)	40.0	40.2	27.0 (2.0)	89.4	0.0	31.8	25.2	32.2	63.8 (2.1)

—Not available.

¹Individuals may be counted in more than one computer activity.²Data are for persons 15 years old and over.

NOTE: Data are based on a sample survey of households and are subject to sampling and nonsampling error. Standard errors appear in parentheses.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1997, unpublished data. (This table was prepared October 1998.)

Table 430.—Student use of computers, by level of instruction and selected characteristics: 1984 to 1997

Student and school characteristics	October, 1984 total	October 1989, total	October 1993						October 1997					
			Total	Pre-kindergarten and kindergarten	Grades 1 to 8	Grades 9 to 12	1st to 4th year of college	5th or later year of college	Total	Pre-kindergarten and kindergarten	Grades 1 to 8	Grades 9 to 12	1st to 4th year of college	5th or later year of college
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Percent of students using computers at school														
Total	27.3	42.7	59.0	26.2	68.9	58.2	55.2	52.1	68.8	36.5	79.3 (0.4)	70.5 (0.6)	64.7	55.5
Sex														
Male	29.0	43.5	59.4	25.9	69.5	56.5	57.5	56.7	70.1	37.1	79.5 (0.5)	71.3 (0.8)	67.8	59.9
Female	25.5	41.9	58.7	26.5	68.4	60.0	53.3	47.8	67.6	35.7	79.0 (0.5)	69.6 (0.8)	62.2	52.1
Race/ethnicity														
White, non-Hispanic	30.0	45.7	61.6	29.4	73.7	59.9	54.9	49.8	71.1	38.7	84.0 (0.4)	71.9 (0.7)	64.3	53.8
Black, non-Hispanic	16.8	32.6	51.5	16.5	56.5	54.5	56.9	57.9	66.3	33.5	71.6 (0.9)	72.9 (1.4)	69.2	55.8
Hispanic	18.6	34.9	52.3	19.2	58.4	54.1	51.9	53.7	61.5	31.0	68.3 (0.9)	63.1 (1.8)	63.3	54.7
Other	28.6	42.7	59.0	23.5	65.7	57.3	60.9	69.4	65.3	32.7	74.9 (1.3)	63.6 (2.9)	63.1	68.9
Household income														
Less than \$5,000	18.7	36.7	51.2	19.6	55.0	50.6	61.7	66.7	62.1	25.4	69.6 (1.9)	67.9 (2.9)	61.1	74.1
\$5,000 to \$9,999	21.0	36.1	53.3	24.4	60.3	51.9	53.9	56.2	63.5	35.1	70.1 (1.6)	61.6 (2.4)	69.8	74.8
\$10,000 to \$14,999	22.4	38.4	56.4	20.1	64.7	56.7	50.7	76.1	66.2	33.3	74.1 (1.4)	68.2 (2.1)	64.1	70.5
\$15,000 to \$19,999	25.9	41.5	58.1	23.8	67.5	57.4	51.2	58.5	65.9	33.0	74.9 (1.6)	66.7 (2.4)	62.1	69.4
\$20,000 to \$24,999	26.7	42.4	56.4	23.7	64.3	53.0	57.4	52.4	66.9	34.2	74.9 (1.5)	69.2 (2.0)	64.0	65.8
\$25,000 to \$29,999	30.5	46.1	60.0	28.0	70.1	60.3	51.5	58.0	68.5	38.9	77.7 (1.5)	72.0 (2.2)	63.1	53.7
\$30,000 to \$34,999	30.5	44.2	59.1	23.7	69.6	59.7	51.7	45.3	67.6	34.6	79.9 (1.3)	70.4 (2.1)	55.2	47.7
\$35,000 to \$39,999	32.3	45.2	60.7	27.1	72.1	61.7	49.2	47.9	69.0	34.6	79.9 (1.4)	70.1 (2.2)	61.5	55.2
\$40,000 to \$49,999	32.8	44.7	59.3	28.5	70.3	57.2	53.9	48.6	70.5	34.7	81.6 (1.1)	74.1 (1.6)	63.3	52.0
\$50,000 to \$74,999	35.5	47.0	62.6	28.6	75.6	61.5	57.4	44.2	71.7	39.3	84.0 (0.8)	72.8 (1.2)	67.2	48.5
\$75,000 or more	36.0	51.2	64.6	33.5	78.7	62.5	60.9	47.7	72.1	43.2	85.7 (0.8)	71.6 (1.3)	68.1	50.1
Control of school														
Public	27.4	43.3	60.2	30.1	68.6	58.1	53.9	54.1	70.2	40.1	79.0 (0.4)	70.5 (0.6)	63.4	56.7
Private	26.5	38.9	52.1	18.7	72.5	60.7	48.0	60.7	29.6	82.1 (1.1)	69.6 (2.1)	70.4	53.0	
Percent of students using computers at home														
Total	11.5	18.8	27.0	15.6	24.7	28.7	32.8	52.6	45.1	29.6	43.4 (0.5)	48.8 (0.6)	49.8	67.2
Sex														
Male	14.0	20.7	27.4	15.1	24.8	28.2	36.6	56.1	45.2	30.3	43.6 (0.6)	49.3 (0.9)	51.3	64.1
Female	9.0	17.0	26.6	16.1	24.6	29.2	29.7	49.5	44.9	28.8	43.3 (0.7)	48.1 (0.9)	48.6	69.6
Race/ethnicity														
White, non-Hispanic	13.7	22.7	32.8	19.4	31.4	35.9	36.0	53.6	54.9	38.4	54.4 (0.6)	60.9 (0.7)	55.1	70.3
Black, non-Hispanic	4.9	7.3	10.9	4.2	9.0	10.4	19.4	48.1	21.1	9.8	20.6 (0.8)	21.0 (1.3)	25.6	56.3
Hispanic	3.6	7.5	10.4	5.7	7.5	9.8	22.0	52.2	21.1	11.2	18.6 (0.7)	21.6 (1.6)	37.3	56.1
Other	9.0	18.8	28.7	17.0	23.2	37.0	33.0	47.1	49.1	34.1	46.9 (1.5)	51.8 (3.0)	55.2	59.1
Household income														
Less than \$5,000	2.9	8.4	9.7	1.1	4.1	6.8	25.6	45.2	22.6	4.7	17.4 (1.6)	17.3 (2.3)	40.8	57.1
\$5,000 to \$9,999	3.2	5.4	8.0	0.9	4.5	5.3	21.3	45.6	15.8	7.6	9.9 (1.0)	9.1 (1.4)	41.0	55.4
\$10,000 to \$14,999	5.0	7.2	11.4	4.6	6.4	8.7	29.8	50.0	18.4	9.4	12.8 (1.1)	18.1 (1.8)	34.9	64.2
\$15,000 to \$19,999	7.5	11.3	15.1	6.9	10.9	14.1	28.9	43.0	20.7	9.4	16.4 (1.4)	20.6 (2.1)	35.1	74.8
\$20,000 to \$24,999	9.9	12.9	16.8	7.4	13.1	17.9	27.7	49.6	30.5	14.5	26.1 (1.5)	31.7 (2.0)	44.1	61.3
\$25,000 to \$29,999	12.8	17.0	21.1	12.3	19.3	22.0	26.1	47.0	34.6	20.9	32.2 (1.6)	37.9 (2.3)	42.8	53.4
\$30,000 to \$34,999	15.8	17.7	24.1	18.7	20.5	29.1	26.4	44.4	38.7	22.7	36.4 (1.6)	42.3 (2.3)	45.8	65.4
\$35,000 to \$39,999	19.4	21.4	27.1	13.0	26.3	28.1	32.7	52.7	44.1	28.1	44.5 (1.7)	45.9 (2.4)	47.0	67.4
\$40,000 to \$49,999	20.4	25.7	32.2	21.6	32.9	33.9	32.5	45.9	50.6	37.3	51.0 (1.4)	56.2 (1.9)	51.1	54.1
\$50,000 to \$74,999	24.2	31.6	43.0	25.5	45.3	46.4	40.1	58.2	61.7	44.3	64.2 (1.0)	67.3 (1.3)	56.3	73.2
\$75,000 or more	22.1	43.8	56.1	38.2	62.3	61.0	47.0	64.7	74.2	58.5	80.3 (0.9)	80.7 (1.1)	62.8	76.1
Control of school														
Public	11.2	17.9	25.3	12.1	23.0	27.2	31.9	50.0	43.2	24.0	41.2 (0.5)	46.9 (0.6)	49.7	66.1
Private	13.8	24.4	37.4	22.4	41.5	47.2	36.9	57.7	56.1	40.2	65.0 (1.4)	72.8 (2.0)	50.3	69.5
Percent of students using computers at home for school work														
Total	4.6	8.9	14.9	0.6	10.8	20.9	23.1	36.6	28.6	1.5	23.9 (0.4)	39.0 (0.6)	40.8	49.3
Sex														
Male	5.9	9.5	14.8	0.9	10.1	20.5	26.3	40.3	28.3	1.7	23.8 (0.5)	38.8 (0.8)	42.4	47.2
Female	3.3	8.3	15.0	0.4	11.5	21.4	20.5	33.2	28.9	1.4	24.0 (0.6)	39.1 (0.9)	39.6	50.9
Race														
White, non-Hispanic	5.4	10.7	18.2	0.8	13.8	26.5	25.7	37.8	35.0	1.7	30.2 (0.5)	49.0 (0.8)	45.9	51.3
Black, non-Hispanic	2.3	3.4	5.7	—	4.0	6.9	11.5	30.1	12.5	1.5	10.3 (0.6)	15.6 (1.2)	19.2	39.8
Hispanic	1.4	3.6	5.6	—	2.9	6.7	15.9	36.8	12.5	0.7	9.5 (0.5)	15.8 (1.4)	27.6	46.2
Other	3.8	9.1	16.0	1.1	9.3	27.0	23.7	29.2	33.6	1.9	28.2 (1.4)	44.9 (3.0)	45.2	45.8
Household income														
Less than \$5,000	1.0	5.0	6.7	—	2.5	4.0	18.7	36.0	15.1	—	8.8 (1.2)	11.7 (2.0)	31.6	53.7
\$5,000 to \$9,999	1.5	3.2	4.8	—	1.1	3.6	16.1	35.5	10.4	1.1	3.9 (0.7)	7.3 (1.3)	35.3	44.8
\$10,000 to \$14,999	1.9	3.5	7.3	—	2.6	5.6	25.9	34.6	11.4	0.8	5.3 (0.7)	13.5 (1.6)	28.9	50.1
\$15,000 to \$19,999	3.0	4.5	8.6	0.4	4.7	10.8	18.7	31.0	13.2	1.0	8.4 (1.0)	13.2 (1.7)	31.0	63.3
\$20,000 to \$24,999	3.1	5.7	9.8	0.7	5.1	12.6	22.9	35.0	19.4	1.7	12.5 (1.2)	25.4 (1.9)	35.2	44.6
\$25,000 to \$29,999	5.1	6.4	10.4	1.1	6.3	13.4	19.5	34.9	21.9	2.1	18.6 (1.4)	27.5 (2.2)	34.4	40.8
\$30,000 to \$34,999	4.9	8.0	13.0	0.8	8.1	21.9	18.0	35.1	24.4	0.8	19.0 (1.3)	33.2 (2.2)	38.7	48.9
\$35,000 to \$39,999	7.1	10.5	15.4	0.8	12.4	21.0	22.6	37.2	26.5	0.4	22.3 (1.4)	35.5 (2.3)	38.7	55.7
\$40,000 to \$49,999	9.2	11.9	17.1	1.1	14.7	24.2	22.2	32.1	30.1	2.9	26.7 (1.2)	45.5 (1.9)	38.9	36.8
\$50,000 to \$74,999	11.5	15.2	23.2	1.0	19.7	35.0	27.0	38.2	39.3	1.2	36.1 (1.0)	46.9 (1.4)	46.9	53.1
\$75,000 or more	9.8	22.0	30.4	0.8	29.4	45.2	30.6	41.5	48.3	2.8	48.5 (1.2)	66.4 (1.4)	51.5	50.4
Control of school														
Public	4.5	8.5	14.2	0.5	10.1	19.8	22.7	34.7	27.9	1.5	22.5 (0			