

Computer and Internet use at work in 2001

In 2001, more than half of all workers used a computer on the job; the most commonly reported use was connecting to the Internet or accessing e-mail

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The personal computer is becoming a hallmark of the workplace in postindustrial America. The advent of microcomputers in the mid-1970s expanded both the use of computers and employees' computer skills in the workplace. For many people, computers have become an indispensable tool on the job. In September 2001, 72.3 million individuals used a computer at work, accounting for 53.5 percent of total employment; in addition, about 2 of every 5 employed persons connected to the Internet or used e-mail while on the job.¹

These findings are from a special supplement to the Current Population Survey (CPS) conducted in September 2001.² The Computer and Internet Use Survey obtained information on computer and Internet or e-mail use at home, school, and work, as well as on the use of the Internet for job searches. The data presented in this article pertain to computer and Internet use at work and to job searches using the Internet.³ (For further information about the survey, see the appendix.)

Occupation and industry

The extent to which workers use computers varies by age, sex, education, and other characteristics. Most of these differences probably

are tied to the occupational composition of the groups in question. The computer and the Internet, after all, are tools that are more useful for some tasks than others. Computer and Internet use at work was most common among managerial and professional specialty occupations, with 79.6 percent reporting that they used a computer at work and 65.8 percent using the Internet. Technicians and related support occupations (including computer programmers) and administrative support (including clerical) occupations also had high rates of computer and Internet use: about three-fourths of both groups said that they used a computer at work, and roughly half reported that they used the Internet. In contrast, computer and Internet use rates were very low for service workers (23.3 percent and 11.9 percent, respectively); operators, fabricators, and laborers (19.5 percent and 8.4 percent, respectively); and workers in farming, forestry, and fishing occupations (19.1 percent and 12.8 percent, respectively). (See chart 1 and table 1.)

As with occupations, there was a great deal of variation in the use of computers and the Internet among the different industries. In the private sector, the finance, insurance, and real estate industry had the highest rates of computer (81.4 percent) and Internet use (66.2 percent). In

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contrast, computer and Internet use rates were lowest in the agriculture (22.6 percent and 12.2 percent, respectively) and construction (21.3 percent and 14.5 percent, respectively) industries. (See table 1.)

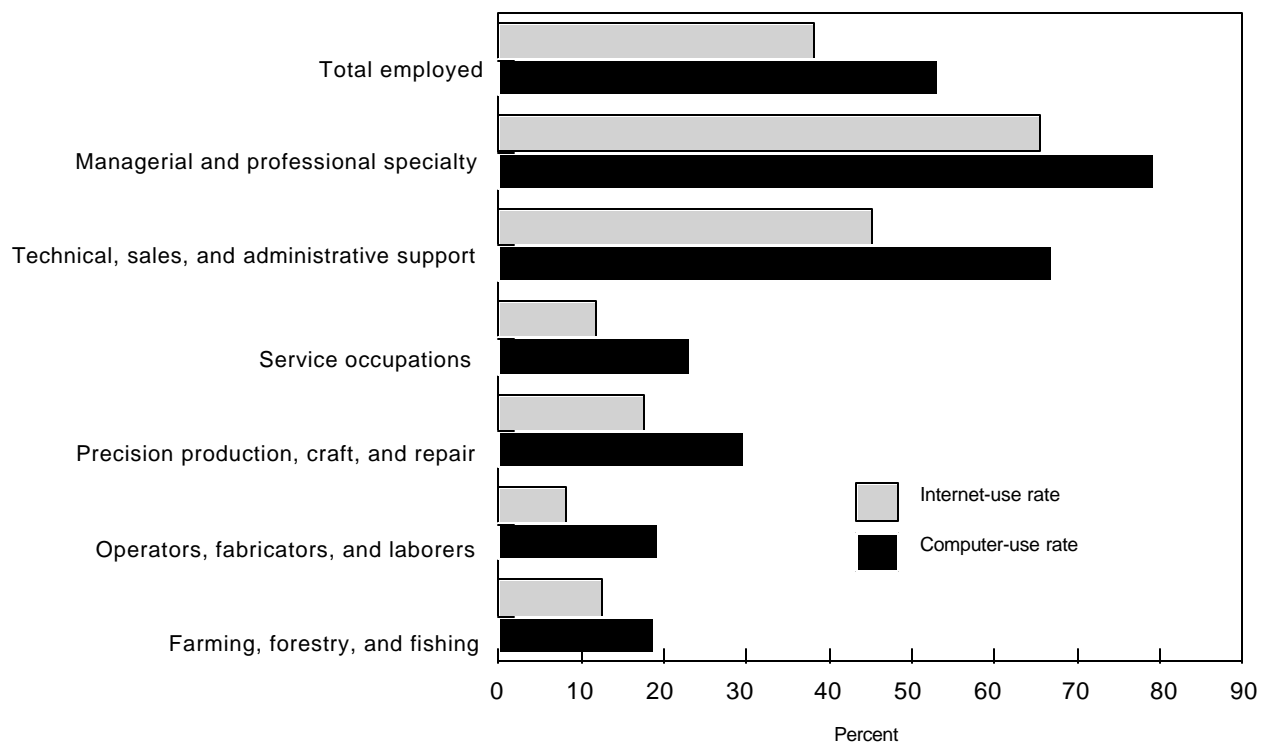
Workers in the public sector had above-average rates of computer and Internet use. Among government workers, 67.2 percent used a computer on the job and 52.5 percent used the Internet. By comparison, the proportions for all private-sector wage and salary workers were 51.2 percent and 35.6 percent, respectively. The higher rates of computer and Internet use among government workers can be explained by their occupational makeup. For example, nearly half of all government workers hold managerial and professional specialty jobs, an occupational category that has very high rates of computer and Internet use. In contrast, the proportion of private-sector wage and salary workers employed in managerial and professional occupations is much lower—about one-fourth. (See table 1.)

Demographics

Younger and older workers were least likely to use a computer or the Internet on the job. Among workers aged 16 to 24 years and among those workers aged 65 years and older, roughly 1 in every 3 used a computer at work, and only about 1 in every 5 reported using the Internet. In contrast, more than half of workers aged 25 to 64 years used a computer, and about two-fifths used the Internet. (See table 2.)

Women were more likely than men to use a computer or the Internet. Computer-use rates for women and men were 59.9 percent and 47.9 percent, respectively; the Internet use rate for women was 41.2 percent, compared with 36.0 percent for men. The higher rate of on-the-job computer use among women is due largely to their concentration in occupations in which computer use is most common. For example, nearly three-fifths of women hold managerial, professional, or administrative support occupations, whose combined comput-

Chart 1. Internet- and computer-use rates by occupation, September 2001



er-use rate for women was a very high 78.4 percent. In contrast, about two-fifths of men are employed in precision production, craft, and repair; operator, fabricator, and laborer; and farming occupations, whose combined computer-use rate for men was 23.1 percent, about 30 percentage points lower than that for all workers.

Computer use at work was more common among white workers (54.9 percent) than black (43.2 percent) or Hispanic (32.0 percent) workers. With regard to Internet use, 39.6 percent of whites used the Internet at work, compared with 28.8 percent of blacks and 19.8 percent of Hispanics. (See chart 2 and table 2.)

Workers with more education were much more likely than those with less education to use a computer or the Internet at work. For example, 84.2 percent of workers with advanced

degrees (that is, master's degrees, doctoral degrees, or professional degrees, such as M.D.'s or J.D.'s) used a computer at work, and 73.4 percent used the Internet. At the other end of the educational spectrum, computer and Internet use rates for workers with less than a high school diploma were 16.2 percent and 7.6 percent, respectively. (See chart 3 and table 2.)

Computer activity at work

Although there was a great deal of variation by worker characteristic, the most common use for a computer at work was to access the Internet or e-mail. Of the 72.3 million workers who used a computer on the job, 71.8 percent said that they used the computer to connect to the Internet or to their e-mail. Other common uses included word processing (67.0 percent),

Table 1. Employed persons who used a computer or the Internet at work, by occupation and industry, September 2001
 [Numbers in thousands]

Occupation and industry	Total employed	Used a computer at work		Used the Internet at work	
		Total	Percent of employed	Total	Percent of employed
Occupation					
Total, 16 years and older	135,089	72,277	53.5	51,929	38.4
Managerial and professional specialty	41,936	33,374	79.6	27,607	65.8
Executive, administrative, and managerial	20,279	16,297	80.4	13,616	67.1
Professional specialty	21,657	17,077	78.9	13,990	64.6
Technical, sales, and administrative support	38,761	26,056	67.2	17,539	45.3
Technicians and related support	4,617	3,462	75.0	2,439	52.8
Sales occupations	15,905	9,173	57.7	6,360	40.0
Administrative support, including clerical	18,238	13,421	73.6	8,741	47.9
Service occupations	18,279	4,259	23.3	2,175	11.9
Precision production, craft, and repair	14,850	4,447	29.9	2,662	17.9
Operators, fabricators, and laborers	17,737	3,465	19.5	1,493	8.4
Farming, forestry, and fishing	3,527	675	19.1	453	12.8
Industry					
Total, 16 years and older ¹	135,089	72,277	53.5	51,929	38.4
Private wage and salary workers	101,187	51,764	51.2	36,015	35.6
Agriculture	1,779	401	22.6	218	12.2
Nonagricultural industries	99,408	51,362	51.7	35,798	36.0
Mining	529	233	44.1	173	32.7
Construction	7,242	1,544	21.3	1,053	14.5
Manufacturing	17,364	8,787	50.6	6,454	37.2
Durable goods	10,687	5,450	51.0	4,020	37.6
Nondurable goods	6,678	3,337	50.0	2,434	36.5
Transportation and public utilities	7,470	4,179	55.9	3,052	40.9
Wholesale trade	4,322	2,467	57.1	1,865	43.2
Retail trade	20,758	7,815	37.6	3,814	18.4
Finance, insurance, and real estate	7,514	6,114	81.4	4,971	66.2
Services ²	34,155	20,209	59.2	14,403	42.2
Business, automobile, and repair services	7,976	4,772	59.8	3,676	46.1
Personal services, except private households	2,784	985	35.4	571	20.5
Entertainment and recreation services	1,951	861	44.1	566	29.0
Professional services	20,672	13,517	65.4	9,536	46.1
Government workers	19,264	12,945	67.2	10,108	52.5
Federal	3,383	2,262	66.9	1,822	53.9
State	5,631	4,016	71.3	3,269	58.0
Local	10,249	6,667	65.0	5,017	48.9
Self-employed workers	14,516	7,500	51.7	5,758	39.7

¹ Includes unpaid family workers, not shown separately.
² Includes other industries, not shown separately.

NOTE: Data refer to computer or Internet use on the sole or primary job. "Used the Internet at work" refers to either connecting to the Internet or accessing e-mail.

Table 2. Employed persons who used a computer or the Internet at work, by selected characteristics, September 2001

[Numbers in thousands]

Characteristic	Total employed	Used a computer at work		Used the Internet at work	
		Total	Percent of employed	Total	Percent of employed
Age and sex					
Total, 16 years and older	135,089	72,277	53.5	51,929	38.4
16 to 24 years	20,024	7,087	35.4	3,973	19.8
16 to 19 years	6,633	1,532	23.1	565	8.5
20 to 24 years	13,391	5,555	41.5	3,408	25.4
25 years and older	115,065	65,190	56.7	47,956	41.7
25 to 34 years	29,638	17,038	57.5	12,739	43.0
35 to 44 years	35,881	20,909	58.3	15,410	42.9
45 to 54 years	30,831	18,075	58.6	13,387	43.4
55 to 64 years	14,293	7,681	53.7	5,495	38.4
65 years and older	4,423	1,488	33.6	925	20.9
Men	72,306	34,663	47.9	26,040	36.0
Women	62,784	37,614	59.9	25,889	41.2
Race and Hispanic origin					
White	113,130	62,063	54.9	44,746	39.6
Black	15,367	6,635	43.2	4,433	28.8
Hispanic origin	14,848	4,754	32.0	2,933	19.8
Full- or part-time status					
Usually full time on primary job	102,228	58,918	57.6	43,578	42.6
Usually part time on primary job	21,265	8,414	39.6	4,854	22.8
Hours vary on primary job	11,596	4,945	42.6	3,497	30.2
Educational attainment					
Total, 25 years and older	115,065	65,190	56.7	47,956	41.7
Less than a high school diploma	11,275	1,831	16.2	859	7.6
High school graduate, no college	35,220	14,227	40.4	8,518	24.2
Some college, no degree	21,319	12,565	58.9	8,679	40.7
Associate's degree	11,154	7,013	62.9	4,725	42.4
College degree	36,096	29,553	81.9	25,176	69.7
Advanced degree	12,695	10,685	84.2	9,316	73.4

NOTE: Data refer to computer or Internet use on the sole or primary job. Details for the race and Hispanic-origin groups do not sum to totals, because

data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

working with spreadsheets or databases (62.3 percent), and engaging in calendar-related or scheduling activities (52.9 percent). Less commonly reported uses were graphics and design (28.8 percent) and programming (15.2 percent). (See table 3.)

Men and women used computers at work for different tasks. A higher proportion of men than women reported using the computer to access the Internet or e-mail (75.1 percent, compared with 68.8 percent). Men were also more likely than women to use a computer for spreadsheets and databases (64.9 percent, compared with 59.9 percent), graphics and design (32.0 percent and 25.8 percent, respectively), and computer programming (20.4 percent, compared with 10.5 percent). Women were more likely than men to report using the computer to do word processing (69.4 percent and 64.3 percent, respectively). As mentioned previously, nearly three-fifths of all

women were employed as managers, professionals, or clerical workers; the proportion of workers in these three occupations who used a computer to do word processing was a very high (74.4 percent).

In terms of occupation, workers in managerial and professional specialty occupations, who had the highest rate of computer use on the job, reported some of the highest proportions for specific uses of a computer. For example, 82.7 percent used a computer to access the Internet or their e-mail, 78.3 percent performed word processing or desktop publishing on the computer, and 70.3 percent worked with spreadsheets or databases. (See table 4.)

Job search activity on the Internet

In addition to asking questions on computer and Internet

Chart 2. Internet- and computer-use rates by sex, race, and Hispanic origin, September 2001

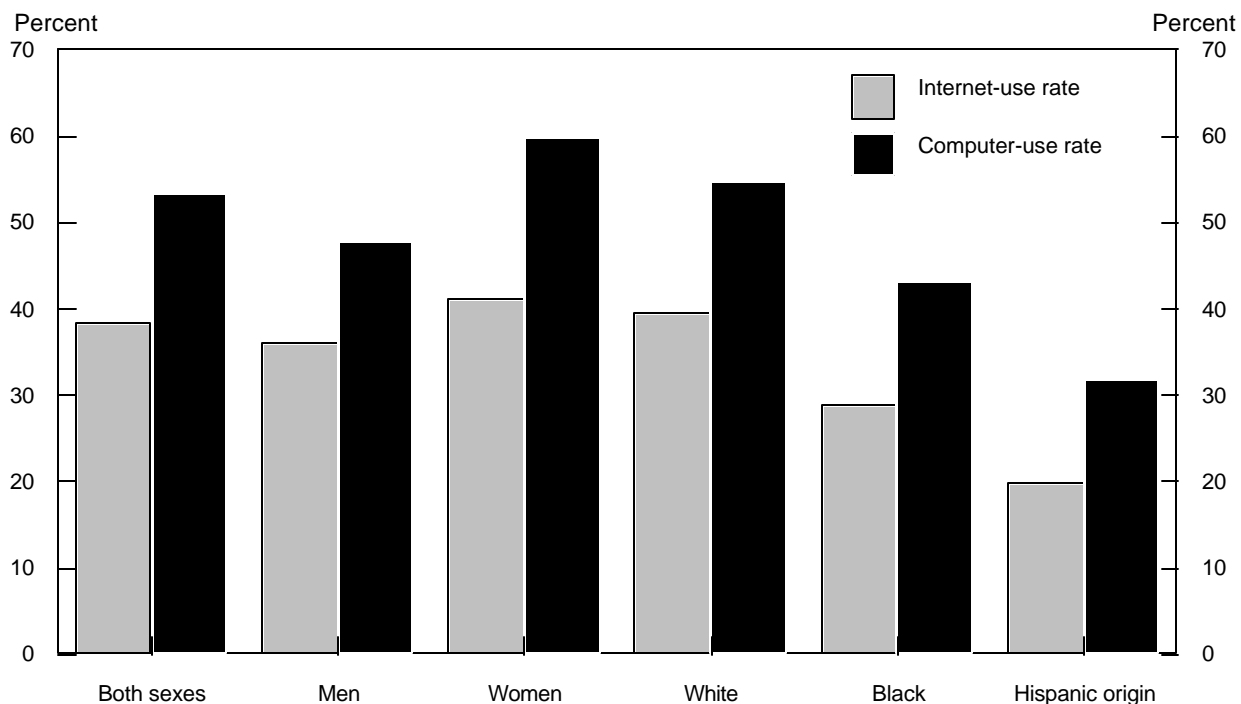


Chart 3. Internet- and computer-use rates by educational attainment, September 2001

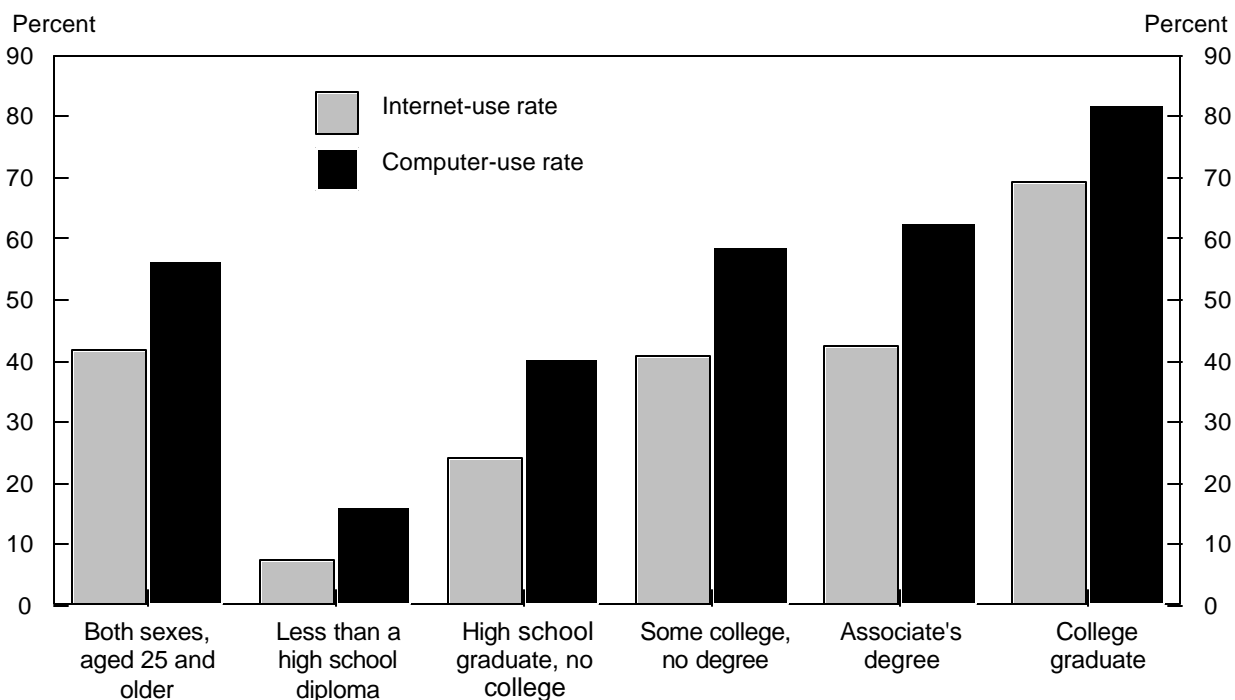


Table 3. Type of computer activity at work, by selected characteristics, September 2001

Characteristic	Employed persons who used a computer at work (in thousands)	Percent who use a computer for—						Other activities
		Word processing or desktop publishing	Internet or e-mail	Calendar or scheduling	Spreadsheets or data-bases	Graphics or design	Programming	
Age and sex								
Total, 16 years and older	72,277	67.0	71.8	52.9	62.3	28.8	15.2	13.1
16 to 24 years	7,087	53.6	56.1	45.6	52.2	20.8	12.2	14.3
16 to 19 years	1,532	39.8	36.9	32.1	35.7	12.8	7.4	19.6
20 to 24 years	5,555	57.4	61.3	49.3	56.7	22.9	13.6	12.8
25 years and older	65,190	68.4	73.6	53.7	63.4	29.7	15.6	12.9
25 to 34 years	17,038	68.8	74.8	56.3	66.4	30.0	17.6	12.6
35 to 44 years	20,909	68.8	73.7	55.5	65.2	31.3	16.9	12.0
45 to 54 years	18,075	69.4	74.1	53.5	62.3	29.9	13.5	13.7
55 to 64 years	7,681	66.4	71.5	47.0	57.5	25.5	12.9	13.8
65 years and older	1,488	58.0	62.2	37.2	47.2	20.6	12.1	16.6
Men	34,663	64.3	75.1	55.2	64.9	32.0	20.4	13.0
Women	37,614	69.4	68.8	50.9	59.9	25.8	10.5	13.1
Race and Hispanic origin								
White	62,063	67.4	72.1	52.7	62.7	28.9	14.7	13.2
Black	6,635	62.6	66.8	53.9	56.9	26.1	15.8	13.0
Hispanic origin	4,754	64.0	61.7	49.7	57.9	22.8	12.7	11.9
Full- or part-time status								
Usually full time on primary job	58,918	68.4	74.0	55.2	64.3	29.6	16.2	12.7
Usually part time on primary job	8,414	59.7	57.7	39.2	49.8	22.8	9.1	16.0
Hours vary on primary job	4,945	62.7	70.7	49.6	59.5	29.1	14.0	12.1
Educational attainment								
Total, 25 years and older	65,190	68.4	73.6	53.7	63.4	29.7	15.6	12.9
Less than a high school diploma	1,831	45.5	46.9	40.7	45.7	15.5	11.3	19.2
High school graduate, no college	14,227	55.2	59.9	46.2	53.8	19.9	11.6	14.5
Some college, no degree	12,565	64.1	69.1	51.1	60.6	26.5	14.0	13.4
Associate's degree	7,013	61.6	67.4	51.2	58.2	25.9	14.9	14.9
College degree	29,553	79.6	85.2	59.9	71.5	37.4	18.6	11.1
Advanced degree	10,685	83.8	87.2	60.0	70.0	38.4	18.7	11.3

NOTE: Data refer to computer use on the sole or primary job. The percentage of persons who used computers for various activities may exceed 100 percent, because some may report multiple activities. Details

for the race and Hispanic-origin groups do not sum to totals, because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

use at work, the survey gathered information on Internet job searching.⁴ Respondents were asked whether they had used the Internet (at any location) to search for a job "that year"—that is, from January to September 2001. About 19.6 million individuals, or 9.2 percent of the civilian noninstitutional population aged 16 and older, reported using the Internet (at any location) to search for a job.⁵ Job search rates using the Internet were highest for individuals in the 20- to 24-year-old (17.4 percent), 25- to 34-year-old (16.8 percent), and 35- to 44-year-old (11.0 percent) age groups. (See table 5.)

Men and women were about equally likely to have used the Internet to search for a job: nearly 1 in every 10 reported such use. Also, individuals with more years of schooling were much more likely than the less educated to have used the

Internet to search for a job. The Internet job search rate for college graduates was 15.6 percent, in contrast to only 1.5 percent for those with less than a high school diploma. (See table 5.)

Table 6 shows data on job searching by occupation. The estimates given are limited to the experienced labor force—the sum of the employed and the unemployed whose last job was in one of the occupations or industries listed. Of the 141.4 million individuals in this group in September 2001, 17.2 million, or 12.2 percent of the total, used the Internet to search for a job between January and September 2001. As was the case for Internet use, individuals in managerial and professional specialty occupations had the highest rate of Internet job searching (16.9 percent). Job search rates for the

Table 4. Type of computer activity at work, by occupation and industry, September 2001

Occupation and industry	Employed persons who used a computer at work (in thousands)	Percent who use a computer for—						
		Word processing or desktop publishing	Internet or e-mail	Calendar or scheduling	Spreadsheets or databases	Graphics or design	Programming	Other activities
Occupation								
Total, 16 years and older	72,277	67.0	71.8	52.9	62.3	28.8	15.2	13.1
Managerial and professional specialty	33,374	78.3	82.7	60.8	70.3	37.2	18.6	11.0
Executive, administrative, and managerial ...	16,297	79.0	83.5	65.3	76.9	34.4	16.6	9.4
Professional specialty	17,077	77.6	81.9	56.5	63.9	39.9	20.5	12.5
Technical, sales, and administrative support ..	26,056	62.6	67.3	48.4	59.7	22.5	12.4	13.2
Technicians and related support	3,462	58.5	70.4	52.3	59.3	29.5	27.0	14.3
Sales occupations	9,173	59.9	69.3	48.6	60.1	25.6	11.1	14.5
Administrative support, including clerical	13,421	65.6	65.1	47.2	59.6	18.5	9.6	11.9
Service occupations	4,259	52.6	51.1	45.7	43.8	17.2	8.9	18.2
Precision production, craft, and repair	4,447	46.5	59.9	45.4	51.7	23.7	17.4	17.4
Operators, fabricators, and laborers	3,465	35.7	43.1	32.4	41.2	17.1	9.5	20.8
Farming, forestry, and fishing.	675	60.9	67.1	43.7	61.3	21.7	10.6	12.5
Industry								
Total, 16 years and older ¹	72,277	67.0	71.8	52.9	62.3	28.8	15.2	13.1
Private wage and salary workers	51,764	63.4	69.6	53.6	62.1	26.6	15.4	13.3
Agriculture	401	58.0	54.2	47.7	65.6	18.2	8.3	15.6
Nonagricultural industries	51,362	63.5	69.7	53.7	62.1	26.7	15.5	13.3
Mining	233	63.5	74.1	54.7	76.1	28.1	20.1	8.9
Construction	1,544	65.1	68.2	56.5	67.1	31.1	18.2	11.5
Manufacturing	8,787	63.9	73.4	54.2	67.0	34.2	20.0	12.0
Durable goods	5,450	62.2	73.8	54.8	67.4	35.1	23.1	12.9
Nondurable goods	3,337	66.7	72.9	53.4	66.3	32.8	15.0	10.5
Transportation and public utilities	4,179	56.7	73.0	56.1	63.3	24.0	15.7	13.6
Wholesale trade	2,467	63.9	75.6	52.8	66.2	25.0	14.0	13.6
Retail trade	7,815	44.4	48.8	41.7	48.3	17.0	9.3	19.2
Finance, insurance, and real estate	6,114	73.1	81.3	58.6	69.8	24.5	14.5	10.3
Services ²	20,209	68.9	71.3	55.9	61.6	28.3	16.0	12.6
Business, automobile, and repair services	4,772	65.6	77.0	59.9	68.5	33.2	27.9	12.0
Personal services, except private households	985	58.2	58.0	55.6	56.5	20.1	9.3	14.1
Entertainment and recreation services	861	62.2	65.8	51.9	57.4	31.2	14.0	12.7
Professional services	13,517	71.3	70.5	54.9	60.1	27.0	12.5	12.6
Government workers	12,945	77.9	78.1	53.8	62.5	32.4	14.5	12.2
Federal	2,262	74.3	80.6	56.6	64.0	30.1	17.0	11.5
State	4,016	79.2	81.4	55.8	66.2	33.7	16.7	12.3
Local	6,667	78.2	75.2	51.7	59.7	32.3	12.2	12.3
Self-employed workers	7,500	72.6	76.8	46.9	63.1	37.5	15.6	13.0

¹ Includes unpaid family workers, not shown separately.

² Includes other industries, not shown separately.

NOTE: Data refer to computer or Internet use on the sole or primary job. The percentage of persons who use computers for various activities may exceed 100 percent, because some may report multiple activities.

other major occupations ranged from 14.3 percent for technical, sales, and administrative support occupations to 4.1 percent for farming, forestry, and fishing.

The most common Internet job search methods reported were reading online ads or job listings (92.2 percent of Internet jobseekers) and researching information on potential employers (68.5 percent). The least common methods used were posting a resume on a job-listing site or with a service (37.4 percent) and posting a resume on a personal Web site (4.8 percent). This pattern of Internet job

searching was essentially the same, regardless of demographic characteristic, occupation, or industry. (See tables 5 and 6.)

THE RESULTS FROM THE 2001 COMPUTER AND INTERNET USE SURVEY show that computer and Internet use has become a fixture in the U.S. workplace. Although there was a great deal of variation in terms of occupation and industry, individuals employed in managerial and professional specialty occupations and workers in the finance, insurance, and real estate industry were most likely to use a computer or the Internet on the job. Computer and Internet

Table 5. Job search activity¹ using the Internet, by selected characteristics, September 2001

[Numbers in thousands]

Characteristic	Total civilian noninstitutional population			Job search activity of persons who used the Internet to search for a job (percent)					
	Total	Total who used the Internet to search for a job	Percent of total	Read online ads or searched online job listings	Researched information on potential employers	Submitted a resume or application	Posted a resume on a job-listing site or with a service	Posted a resume on own Web site	Other activities
Age and sex									
Total, 16 years and older	212,357	19,616	9.2	92.0	67.4	49.5	36.7	4.8	3.7
16 to 24 years	35,195	4,415	12.5	92.3	63.2	45.9	35.6	4.8	2.7
16 to 19 years	16,206	1,108	6.8	91.5	54.1	34.0	26.3	3.0	1.7
20 to 24 years	18,990	3,308	17.4	92.5	66.2	49.9	38.7	5.4	3.0
25 years and older	177,162	15,201	8.6	91.9	68.7	50.5	37.0	4.8	3.9
25 to 34 years	37,032	6,238	16.8	92.3	70.7	52.9	42.2	5.5	3.5
35 to 44 years	44,318	4,890	11.0	91.9	68.6	50.4	35.4	4.4	3.8
45 to 54 years	38,642	3,051	7.9	91.3	66.2	48.9	32.5	4.3	4.4
55 to 64 years	24,328	877	3.6	89.9	67.4	41.3	26.9	2.7	5.4
65 years and older	32,842	145	.4	94.1	46.5	43.2	24.6	6.6	10.0
Men	102,110	9,700	9.5	91.5	71.5	53.4	40.5	5.9	3.8
Women	110,247	9,916	9.0	92.5	63.4	45.6	33.0	3.6	3.6
Race and Hispanic origin									
White	176,220	16,018	9.1	91.9	67.1	48.2	35.1	4.5	3.8
Black	25,644	2,396	9.3	92.3	67.1	52.9	41.5	5.5	3.2
Hispanic origin	23,288	1,377	5.9	89.2	67.7	47.0	36.6	5.8	2.4
Educational attainment									
Total, 25 years and older	177,162	15,201	8.6	91.9	68.7	50.5	37.0	4.8	3.9
Less than a high school diploma	27,484	402	1.5	88.8	58.2	38.9	30.3	4.6	1.9
High school graduate, no college	57,386	2,812	4.9	90.9	59.2	42.0	31.7	3.3	3.1
Some college, no degree	30,641	3,029	9.9	92.2	63.1	48.2	34.7	3.8	3.1
Associate's degree	14,779	1,667	11.3	93.7	65.4	48.3	34.7	4.7	3.7
College degree	46,872	7,291	15.6	91.9	76.0	55.9	40.8	5.7	4.8
Advanced degree	16,283	2,390	14.7	91.6	77.8	55.6	39.3	6.4	4.8

¹ Refers to use of the Internet to search for a job "this year"—that is, from January to September 2001.

100 percent, because some may perform more than one activity. Details for the race and Hispanic-origin groups do not sum to totals, because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

NOTE: The percentage of persons performing each activity may exceed

Table 6. Job search activity¹ using the Internet, by occupation and industry, September 2001

[Numbers in thousands]

Occupation and industry	Total	Total who used the Internet to search for a job	Percent of total	Job search activity of persons who used the Internet to search for a job (percent)					
				Read online ads or searched online job listings	Researched information on potential employers	Submitted a resume or application	Posted a resume on a job-listing site or with a service	Posted a resume on own Web site	Other activities
Occupation									
Total, 16 years and older	141,447	17,235	12.2	92.2	68.5	50.7	37.4	4.8	3.8
Managerial and professional specialty	43,058	7,258	16.9	92.8	74.3	56.0	40.1	5.9	4.8
Executive, administrative, and managerial	20,851	3,484	16.7	93.4	75.3	58.3	42.1	4.8	4.9
Professional specialty	22,206	3,775	17.0	92.4	73.3	53.9	38.2	6.9	4.7
Technical, sales, and administrative support	40,521	5,809	14.3	92.7	65.7	50.8	38.1	4.3	3.3
Technicians and related support	4,784	868	18.1	90.1	72.6	54.8	42.4	6.0	2.7
Sales occupations	16,709	2,151	12.9	94.5	71.2	54.0	40.5	4.8	3.6
Administrative support, including clerical	19,028	2,790	14.7	92.1	59.3	47.0	34.9	3.3	3.3
Service occupations	19,541	1,477	7.6	90.1	59.4	37.9	29.7	4.0	3.2
Precision production, craft, and repair	15,528	1,172	7.5	89.7	65.5	45.3	35.4	2.9	3.0
Operators, fabricators, and laborers	19,082	1,361	7.1	91.0	62.6	42.0	32.9	4.4	1.4
Farming, forestry, and fishing	3,705	152	4.1	87.5	62.8	37.1	19.9	2.2	2.5

Table 6. Continued—Job search activity¹ using the Internet, by occupation and industry, September 2001

[Numbers in thousands]

Occupation and Industry	Total	Total who used the Internet to search for a job	Percent of total	Job search activity of persons who used the Internet to search for a job (percent)					
				Read online ads or searched online job listings	Researched information on potential employers	Submitted a resume or application	Posted a resume on a job-listing site or with a service	Posted a resume on own Web site	Other activities
Industry									
Total, 16 years and older ²	141,447	17,235	12.2	92.2	68.5	50.7	37.4	4.8	3.8
Private wage and salary workers	106,847	13,819	12.9	92.7	69.7	52.0	38.8	4.7	3.7
Agriculture	1,895	123	6.5	89.2	66.7	51.3	27.8	2.5	5.5
Nonagricultural industries	104,951	13,697	13.1	92.7	69.8	52.0	38.9	4.7	3.7
Mining	554	52	9.4	98.1	62.3	35.0	11.2	6.1	.0
Construction	7,747	548	7.1	88.3	64.2	44.9	29.2	5.0	1.6
Manufacturing	18,412	2,216	12.0	93.2	72.2	53.9	39.8	4.6	4.0
Durable goods	11,348	1,454	12.8	92.9	74.4	57.1	41.0	4.8	5.0
Nondurable goods	7,064	763	10.8	93.7	68.0	47.7	37.7	4.1	2.0
Transportation and public utilities	7,784	1,069	13.7	91.0	70.2	53.2	41.8	6.9	3.4
Wholesale trade	4,549	618	13.6	94.7	68.2	55.1	40.4	4.6	5.0
Retail trade	22,123	2,348	10.6	93.8	64.1	47.2	36.3	4.7	2.4
Finance, insurance, and real estate	7,753	1,307	16.9	92.3	71.6	56.2	42.0	4.7	4.1
Services ³	35,971	5,537	15.4	92.7	71.5	52.6	39.4	4.4	4.1
Business, automobile, and repair services	8,727	1,739	19.9	94.0	78.6	63.5	49.5	7.0	4.1
Personal services, except private households	2,995	324	10.8	91.7	59.8	48.7	35.0	3.6	5.6
Entertainment and recreation services ...	2,157	323	15.0	87.7	71.2	45.8	32.8	2.6	4.9
Professional services	21,278	3,097	14.6	92.7	68.8	48.4	35.3	3.2	4.0
Government workers	19,697	2,524	12.8	90.9	61.4	43.8	29.1	3.9	3.4
Federal	3,495	480	13.7	91.7	55.0	46.0	30.7	2.3	3.5
State	5,760	891	15.5	90.6	60.8	43.3	28.2	5.1	3.5
Local	10,443	1,153	11.0	90.9	64.5	43.2	29.1	3.8	3.2
Self-employed workers	14,778	889	6.0	87.6	69.7	49.4	40.0	9.4	6.0

¹ Refers to use of the Internet to search for a job "this year"—that is, from January to September 2001.

² Includes unpaid family workers, not shown separately.

³ Includes other industries, not shown separately.

NOTE: Data refer to computer or Internet use on the sole or primary job.

use at work also was most common among women, whites, and those with higher levels of educational attainment. Data from the 2001 survey show the importance of the Internet in assisting

individuals in searching for new jobs, with nearly 1 in every 10 persons reporting that he or she used the Internet to search for a job in the 9 months prior to responding to the survey.

Notes

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¹ In the survey that is to be discussed, respondents were asked whether they "connected to the Internet or used e-mail." In this article, these two tasks will be collectively referred to as "Internet use."

² The cps is a monthly sample survey of about 60,000 households that provides information on demographic characteristics of the labor

force and the employment status of the noninstitutionalized population aged 16 years and older.

³ A recent report by the National Telecommunications and Information Administration of the U.S. Department of Commerce, also based on the cps Computer and Internet Use Survey, provides a comprehensive overview of computer and Internet use at all locations: home, school, and work. (See *A Nation Online: How Americans Are Expanding Their Use of the Internet* (National Telecommunications

and Information Administration, February 2002); on the Internet at <http://www.ntia.doc.gov/ntiahome/dn/index.html>.)

⁴ The Internet job search questions in the supplement are different from the job search questions that are asked in the basic labor force section of the CPS and that are used in the classification of unemployment. The supplement's questions on Internet job searching cannot be used to determine the official classification of unemployment, for several reasons. In the basic CPS, job search questions are not asked of persons with jobs, whereas the Internet job search questions were asked of all Internet users, including employed persons. Also, in the basic CPS, job searching among the unemployed must have occurred within the 4 weeks prior to collection of the survey, but the Internet job search activity could have occurred at any time from January to September 2001. Moreover, there is no information about respondents' labor force status during this longer reference period.

Finally, in the basic CPS, job search methods are divided into active and passive, and only active methods—those which can lead to a job offer—classify a person as unemployed. By contrast, the Internet job search methods in the supplement are not restricted to active methods. For example, reading job ads or listings online and researching information on potential employers are not considered to be active job search methods in the basic CPS. However, tables 5 and 6, showing Internet job search activity, display both passive and active job search methods. As measured in the basic CPS, job search activity may or may not have involved the Internet.

⁵ In a recent study, Richard B. Freeman contends that the low cost of transmitting information over the Internet is shifting job search and recruiting efforts of employers to that medium. (See Richard B. Freeman, "The Labour Market in the New Information Economy," Working Paper 9254 (National Bureau of Economic Research, October 2002).)

Appendix: Data collection

The data presented in this article and other information on computer and Internet use were obtained from a supplement to the September 2001 Current Population Survey (CPS), a monthly sample survey of about 60,000 households conducted by the U.S. Census Bureau for the Bureau of Labor Statistics, principally to gather information on employment and unemployment. Respondents to the September 2001 supplement answered questions

about their computer and Internet use at home, school, and work, in addition to giving other information. The data cover the incidence of computer and Internet use at work and job search activity using the Internet. Since 1984, surveys of computer use and (later) Internet use have been conducted periodically by the Census Bureau. However, because of comparability issues, the data pertain only to the September 2001 supplement.

Questions

The data on computer and Internet use at work and on job searching using the Internet were obtained from the following questions in the Computer and Internet Use Survey:

Do you use a computer at your main job?

1. Yes
2. No

At your main job, what do you do on the computer? Do you do word processing or desktop publishing?

1. Yes
2. No

Do you connect to the Internet or use e-mail?

1. Yes
2. No

(Respondents who answer "yes" to this question are considered to be Internet users at work.)

Do you use a calendar or do scheduling on the computer?

1. Yes
2. No

Do you use spreadsheets or databases?

1. Yes
2. No

Do you do graphics and design?

1. Yes
2. No

Do you do programming?

1. Yes
2. No

Do you use your work computer for any other purpose?

1. Yes
2. No

Data on job searching using the Internet pertain to *all* individuals in the survey who used the Internet:

This year, have you used the Internet to search for a job?

1. Yes
2. No

("This year" refers to January through September 2001.)

How did you use the Internet to search for a job? Did you read online job ads or search online job listings?

1. Yes
2. No

Did you research information about potential employers?

1. Yes
2. No

Did you submit a resume or application to an employer online?

1. Yes
2. No

Did you post a resume on a job-listing site or with a service online?

1. Yes
2. No

Did you post a resume on your own Web site?

1. Yes
2. No

Did you do anything else to search for a job online?

1. No
2. Yes