WORK TRENDS

AMERICANS' ATTITUDES ABOUT WORK, EMPLOYERS AND GOVERNMENT

Nothing But Net:

American Workers and the Information Economy

A Joint Project of the

John J. Heldrich Center for Workforce Development at Rutgers, The State University of New Jersey

Center for Survey Research and Analysis at the University of Connecticut

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Table of Contents

Background

The John J. Heldrich Center for Workforce Development

The John J. Heldrich Center for Workforce Development at the Edward J. Bloustein School of Planning & Public Policy at Rutgers was founded as a research and policy organization devoted to strengthening New Jersey's and the nation's workforce during a time of global economic change. The Heldrich Center researches and puts to work strategies that increase worker skills and employability, strengthen the ability of companies to compete, create jobs where they are needed, and improve the quality and performance of the workforce development system.

The need to improve worker skills has become a crosscutting issue in the information age. Whereas in the 1950s, six in ten workers were unskilled, today, more than 60 percent of the workforce is skilled and less than 20 percent unskilled. According to Coopers and Lybrand, in 1997 nearly 70 percent of growth company CEOs pointed to the lack of skilled workers as the number one barrier to growth—a figure that had doubled since 1993. Despite the need, U.S. investment in workforce education and training trails other leading democracies.

The transformation to a new economy driven by knowledge and its application has thrust workforce investment strategy to the forefront of domestic policy. In globally competitive labor markets, workers who lack basic skills and literacy are in greater danger than ever before. Urban planning and redevelopment strategies cannot ignore the role of education and work skills in preparing young adults to compete for new jobs in the emerging service, retail, and technology sectors. Similarly, the nation's long debate over public school reform must acknowledge that our nation's "forgotten half" of young people not attending college need help now to access the economic and social mainstream.

While workers with skills and the determination to keep them sharp are in heavy demand, huge numbers of adults still cannot read, write, or perform basic math functions effectively. A fifth of working Americans have a zero or minimal literacy level in reading and math. Job seekers and young people entering the workforce need solid literacy and numeracy skills, and they need to use them to acquire the job-specific and career-building skills that will give them access to good jobs.

The Heldrich Center is the first university-based organization devoted to transforming the workforce development system at the local, state, and federal levels. The Center identifies best practices and areas where government performance should be improved, and provides professional training and development to the community of professionals and managers who run the system and are responsible for making it work. The Center provides an independent source of analysis for reform and innovation in policy making and is engaged in significant partnerships with the private sector to design effective education and training programs.

The Center for Survey Research and Analysis

Two years ago, the University of Connecticut announced the formation of its new **Center for Survey Research and Analysis (CSRA)**, thus strengthening its focus on conducting original survey research. The Center is an outgrowth of the tremendous success of original survey research conducted under the aegis of the Roper Center/Institute for Social Inquiry. For twenty years, Roper Center/ISI had conducted high quality, high profile original research; this tradition is being continued and expanded.

The Center, a nonprofit, non-partisan

To better understand the public's attitudes about work, employers and the government, and improve workplace practices and policy, the Heldrich Center and the CSRA produce the *Work Trends* survey on a quarterly basis.

research and educational facility, is a leader in conducting important public opinion research in the public and private sectors. CSRA staff have completed more than 300 survey projects, for a wide variety of clients, in the twenty years of survey research at UConn.

The Center for Survey Research and Analysis has extensive experience in surveying special populations, including studies of Members of Congress, journalists, business owners and managers, parents, teen-agers, college seniors, and university faculty.

In addition to quantitative research, CSRA also conducts in-depth qualitative research, including nationwide focus groups, one-on-one interviewing, and case studies. The staff has worked with clients to develop strong secondary research programs in support of on-going research in a variety of fields. Expert statisticians are also available for additional analysis of original and secondary data.

CSRA strictly adheres to the code of ethics published by the American Association of Public Opinion Research, which, among other things, requires us to fully divulge our research methods, treat all respondents with respect and honesty, and insure that our results are not presented in a distorted or misleading manner.

During the past three years staff now affiliated with CSRA have conducted more than seventy national, regional and local survey projects.

To better understand the public's attitudes about work, employers and the government, and improve workplace practices and policy, the Heldrich Center and the CSRA produce the *Work Trends* survey on a quarterly basis. The survey polls the general public on critical workforce issues facing Americans and American businesses, and promotes the survey's findings widely to the media and national constituencies.

Executive Summary

Introduction

As the nation records its longest economic expansion in history, there are profound changes occurring in the workforce and in the workplace. The "new economy" has been forged with explosive growth in high tech jobs and the mass application of information technologies in the workplace. *Nothing But Net: American Workers and the Information Economy* explores the implications of the information economy for American workers. The report focuses on workers' experience with computers in the workplace, workers' perceptions about their future in the information economy, and the role of government in the information age.

This report also maps the landscape of computer access and use among American workers and finds distinct categories of workers based on their access and use of computers and the Internet. Refining the concept of the "digital divide" put forth by the U.S. Department of Commerce and covered extensively in the media, *Nothing But Net* classifies workers into five categories based on their degree of computer use: Digital Exiles, 9-5 Users, Browsers, Power Users, and Technophiles.

Nothing But Net is the fifth in a series of *Work Trends* reports by the John J. Heldrich Center for Workforce Development at Rutgers, the State University of New Jersey and the Center for Survey Research and Analysis at the University of Connecticut. This survey of 1005 adults was conducted from January 5 through January 19, 2000 and has a sampling error +/- 3%.

Computers and Work

Computer use is now routine among American workers and a large part of their daily work life. The majority (68%) of workers uses a computer every day and has access to a computer at home. On average, the American worker spends 35% of his/her workday (3 hours) on the computer and 23% of his/her workday on the Internet.

Most workers using a computer (87%) report using it for work-related activities and claim they are not abusing their workplace access to computers and the Internet. Just 16% of workers report that they pay bills, shop on-line, or play games at work. Those having access to the Internet at work report that 82% of the time they spend on the Internet at work is for work-related functions.

On average, the American worker spends 35% of his/her workday (3 hours) on the computer and 23% of his/her workday on the Internet.

Despite this widespread use of computers, American workers have a strong desire to use the computer for additional applications. One of the most attractive computer applications to workers is the option to telecommute at least part of the week. A significant number (41%) of workers believe that they could perform their job as a telecommuter, yet only 16% of employers offer this option and only 9% of all workers actually telecommute. Almost half (47%) of all workers agree that government should offer tax breaks to employers who give workers the opportunity to work from home or another location outside the office.

Workers are also interested in distance learning, a technology application with the potential to provide workers with the skills needed in the new economy. Although the majority (61%) of workers would like to receive education or training via distance learning, only a fourth (26%) of workers have participated in such an opportunity.

Optimism about Technology and the Economy

Unlike past technology innovations that have alienated large numbers of workers, the information technology revolution seems to have garnered support among all workers regardless of age, gender, race, income level, or education level. The vast majority of American workers believe that new information technologies such as the Internet are good for the economy, that the jobs created by the information economy are good jobs, and that computers have changed their lives for the better.

Unlike past technology innovations that have alienated large numbers of workers, the information technology revolution seems to have garnered support among all workers regardless of age, gender, race, income level, or education level.

This optimism about the economy has somewhat quelled workers' concern about their job security. *Nothing But Net* finds that 62% of workers indicate that they are at least somewhat concerned about job security, while 37% say they are not at all concerned. These percentages represent a 9% decrease from February 1999 and a 25% decrease from September 1998 when 87% of workers were concerned about their job security.

The Role of Government in the Information Economy

American workers clearly want a proactive government to provide leadership and offer fiscal incentives to both the education and private sectors in order to stimulate their use and widespread adoption of information technologies. The public policies receiving the strongest support among workers include requiring all high school students to be computer literate as a condition of graduation and having the government provide subsidies to schools in low-income neighborhoods to assist them in purchasing computers and connecting to the Internet. In addition to supporting these education reforms, workers support government tax incentives for employers who offer computer skill training or the opportunity to telecommute.

Conclusion

Continued economic expansion for the country and individual prosperity depend on workers' ability to effectively use computers, the Internet, and other technology applications. Deepening public understanding about technology in the workplace provides important insights for employers, policymakers, and workers as they develop ways to provide better access to technology for all Americans, expand distance learning opportunities, and increase opportunities for workers to telecommute.

1. Introduction

As the nation records its longest economic expansion in history, there are profound changes occurring in the workforce and in the workplace. The "new economy" has been forged with explosive growth in high-tech jobs and the mass application of information technologies in the workplace. The information technology sector (computing and communications) accounts for over 8% of the national economy and 15% of the rise in gross national product.[1] Today, there are over 100 million adults using the Internet[2] and the computer and data processing industry is the fastest growing industry in America[3]. Clearly, the technology revolution is here.

Despite a heightened mindfulness about technology derived from the barrage of "dot.com" advertisements, the mass application of computers and email, and the media's attention on technology issues ranging from the "digital divide" to Wall Street technology stocks, little is known about how access to and the use of information technologies affect the daily lives of American workers and their workplace.

Nothing But Net: American Workers and the Information Economy explores the implications of the information economy for American workers. This report focuses on workers' experiences with computers in the workplace, workers' perceptions about the impact of information technology on their jobs and the economy, and the role of government in the information age. Continued economic expansion for the country and individual prosperity depend on workers' ability to effectively use computers, the Internet, and other technology applications. Deepening our understanding about technology in the workplace will provide important insights useful for employers, policy-makers, and workers now managing their own careers in the new economy.

Nothing But Net: American Workers and the Information Economy explores the implications of the information economy for American workers.

[1] "The Emerging Digital Economy," Department of Commerce, April 1998.
[2] "Internet Use Trends: Mid-Year 1999," The Strategis Group, October 1999.
[3] "Labor Market Projections: 1996–2006," U.S. Bureau of Labor Statistics.

2. Mapping the Digital Landscape

Access to computers and the way in which computers are used varies greatly among American workers. Workers that do not use computers differ strongly in their opinions from regular computer users about the costs and benefits of technology and the appropriate role of government in the information economy. Although research and media attention about the "digital divide" illustrates the important gap between those with access to computers/Internet and those without access, computer use, and literacy is not an 'all or nothing' problem. Some workers have computers at home; others do not. Some workers only use the computer for data input at work while others conduct research on-line, send emails to co-workers, and write reports. Even among workers who frequently use computers, some shop and bank on-line while others only use computers for email and browsing the Internet.

For the purposes of this report, American workers are broken into 5 categories along this "digital landscape"—Exiles, 9-5 Users, Browsers, Power Users, and Technophiles.

The variance among workers with different degrees of computer use is as significant as the variance among workers with different education levels, incomes, or racial/ethnic backgrounds. In order to highlight these differences, this report classifies workers and response data into 5 categories depending on the degree to which they use computers. This classification system will be used in the analysis throughout the report much like demographic classifications such as age groups or income levels.

For the purposes of this report, American workers are broken into 5 categories along this "digital landscape"—Exiles, 9-5 Users, Browsers, Power Users, and Technophiles. Descriptions of each group and their frequency within the American working population are listed in figure 2.1.

In addition to their computer use, these different groups along the technology landscape tend to have different professional and demographic profiles. The report finds that Power Users and Technophiles are likely to be younger, more educated, have higher incomes, work for large companies, and hold jobs in professional, managerial, or technical occupations.

The *Nothing But Net* analysis finds that Technophiles tend to work in professional (39%), technical (17%), or managerial occupations (17%) as compared to Exiles who are more likely to work in service (29%), professional (27%), or manufacturing (8%) occupations. Technophiles and Power Users are also more likely to work for employers with more than 250 employees.

In addition, a strong correlation exists between technology use, education level, and income. Power Users and Technophiles have higher incomes and education levels than the other groups along the digital landscape. This portrayal of how education level, income level, gender, and race describe the continuum of computer use (figure 2.2) supports and refines the concept of the "digital divide." In addition to the findings of the U.S. Department of Commerce about access to technology, these results and others throughout this report deepen understanding of the multiple gaps in how and where technology is used.

The survey finds a significant difference in race between Exiles and Technophiles, but discovers no correlation between race and technology use among the middle groups—9-5 Users, Browsers, and Power Users. Clear relationships exist, however, when examining income and education. The farther along the digital landscape, the greater the average income level and educational attainment.

Fig. 2-1: The Digital Landscape

Digital Landscape Classification	Characteristics Used to Classify Workers	Percentage of Workers
Exiles	• Have not used a computer in the last month	19%
9-5 Users	• Have used a computer in the last month • No home access to a computer	17%
Browsers	• Used a computer in the last month • Home access to a computer • Have not necessarily used a computer every day • Have used computer for some but not all applications such as email, the Internet, word processing, and getting news/information.	22%
Power Users	• Have used a computer in the last month • Home access to a computer • Have used a computer every day • Have used a computer for some all the following applications: email, the Internet, word processing, and getting news/information. • Do not bank and shop on-line.	25%
Technophiles	• Have used a computer in the last month • Home access to a computer • Have used a computer every day • Have used computer for some all the following applications: email, the Internet, word processing, and getting news/information. • Do bank and shop on-line.	16%

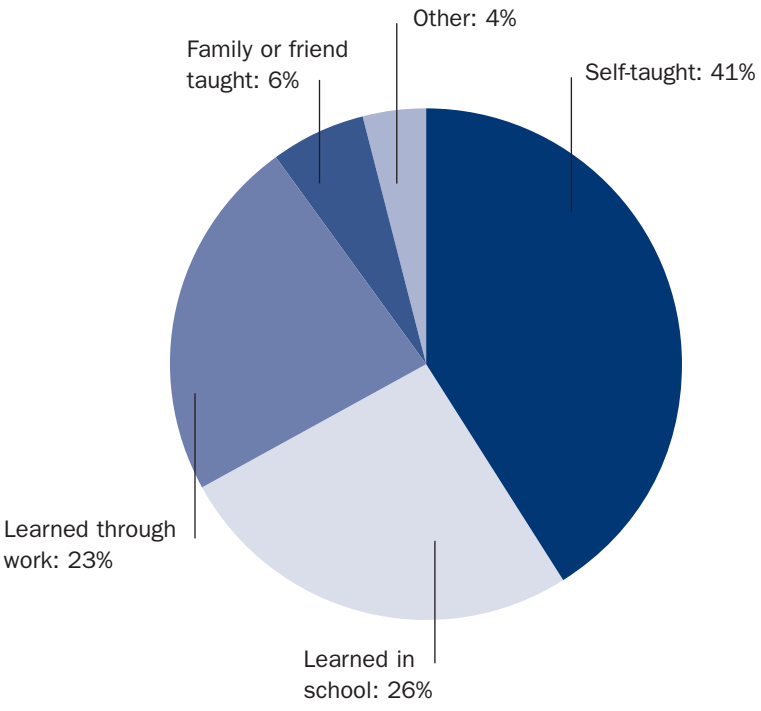
Fig. 2-2: Demographic Characteristics of the Digital Landscape Groups

Digital Landscape Classification	% Over age 50	% Black	% Earning $40,000 (+)	% With a Bachelor's Degree or More	% Working for a Company of 250 (+)
Exiles	31%	13%	51%	12%	27%
9-5 Users	26%	16%	55%	30%	48%
Browsers	19%	5%	72%	33%	34%
Power Users	17%	9%	82%	54%	51%
Technophiles	18%	7%	88%	63%	52%
Total Working Population	22%	9%	62%	39%	43%

3. How American Workers Use Computers

The widespread use of computers in the workplace has changed the experience of work and presented new challenges for workers, executives, and managers. Computer use is now standard among American workers and a large part of daily life for many. *Nothing But Net* finds that the vast majority (81%) of American workers used a computer in the past month and 68% use a computer every day. In addition, a significant number (68%) of workers have access to at least one computer at home and close to a quarter (23%) have access to more than one computer at home. Although computer use is widespread, great variation exists among workers in their access to computers, their use of computers at work and at home, and their perceptions about the role of technology in their work lives. The following section will profile how and where American workers use computers, and highlight important differences in computer use among workers of different age groups, incomes, and racial backgrounds.

Fig. 3-1: How American Workers Learned to Use a Computer



Computer Use at Work and Home

In this survey, American workers report using computers at work and home for a variety of applications including word processing, email, browsing the Internet, getting news and information, shopping, banking and financial management, and other work-related activities. Most workers (81%) have used a computer at least once a month either at home, work, or school with 80% using a computer at least once a week and 68% of workers using one each day.

Almost half of all workers learned to use a computer through informal means with 41% having taught themselves and 6% learning from family or friends. The balance of workers learned to use a computer through more formal channels at school (26%) or work (23%).

Respondents report spending a significant percentage of their time at work on the computer. On average, American workers report spending approximately 9 hours a day at work and about three hours on the computer. Almost three-fourths (70%) of workers surveyed report that they use computer at work at least one hour a day with 36% of workers stating that they spend at least half their work day on the computer.

Most (87%) workers using a computer at work report using it for job-related activities. They say their most frequently used applications are email (80%), word processing (80%), and browsing the Internet (77%). Despite the apparent temptation to use the computer and the Internet for applications not related to work (i.e. surfing the Internet, shopping

on-line, or playing computer games), workers report that they do not abuse this access. For example, less than 16% of workers report that they pay bills, shop on-line, or play games at work. A much greater percentage of workers use the computer for applications such as email and Internet browsing that may or may not be for work-related functions. Over half (57%) of workers indicate that they use email at work while close to half browse the Internet (45%) and get news or information (46%).

One-third of all workers (including those who have no computer access) spend at least one hour a day on the Internet. When looking at just the population of American workers with access to a computer and the Internet at work, the intensity of use is even greater. Among the workers who use computers and the internet, over half (51%) spend at least one hour on the Internet and 21% spend at least half their workday on the Internet.

Computer use is now standard among American workers and a large part of daily life for many.

Fig. 3-2: How and Where American Workers Use Computers

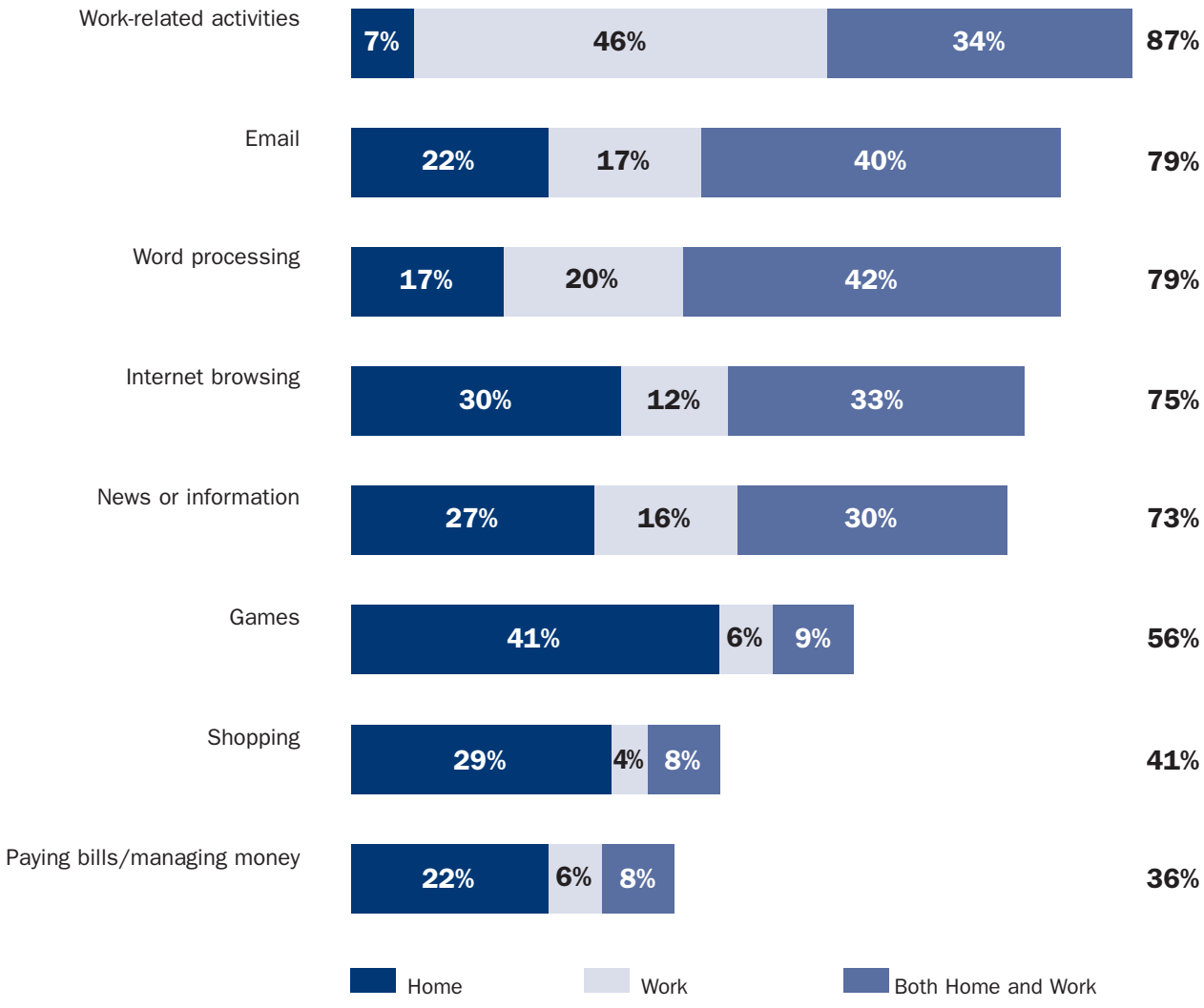
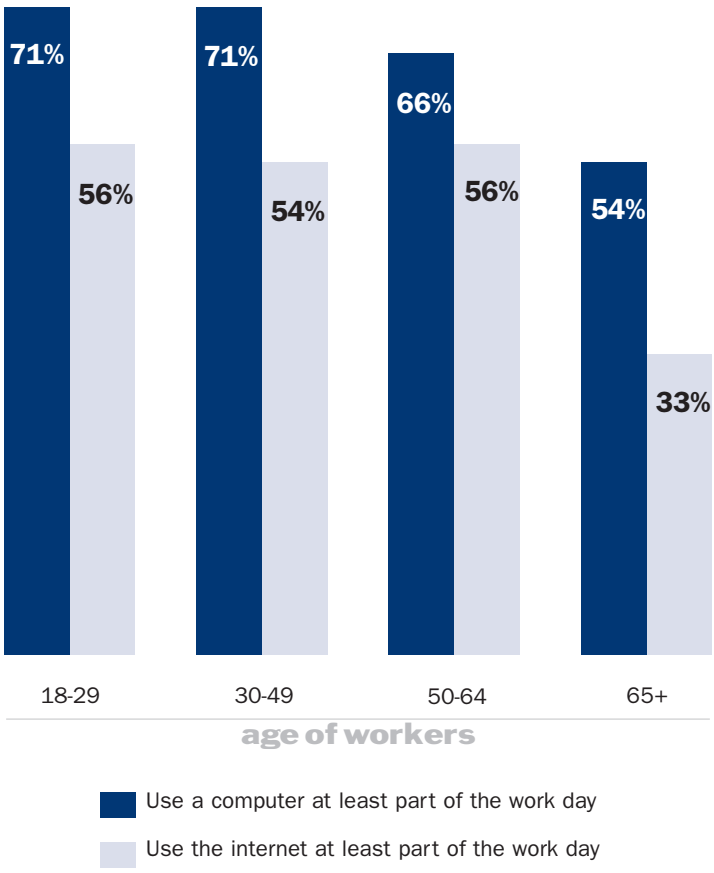


Fig. 3-3: Computer/Internet Use by Age



Those using the Internet indicate that the majority (82%) of their time spent (at work) on the Internet is for work-related purposes. One of the most popular uses of computers and the Internet is email. Of workers who use a computer at work, 76% have email and receive approximately 9 emails per day. Interestingly, more than one-fourth (28%) of all workers agree that they use email as their primary means of communicating with others during the workday.

In particular, there is a dramatic increase in computer use once workers receive education beyond high school.

Variations by Use, Age, Education, and Income

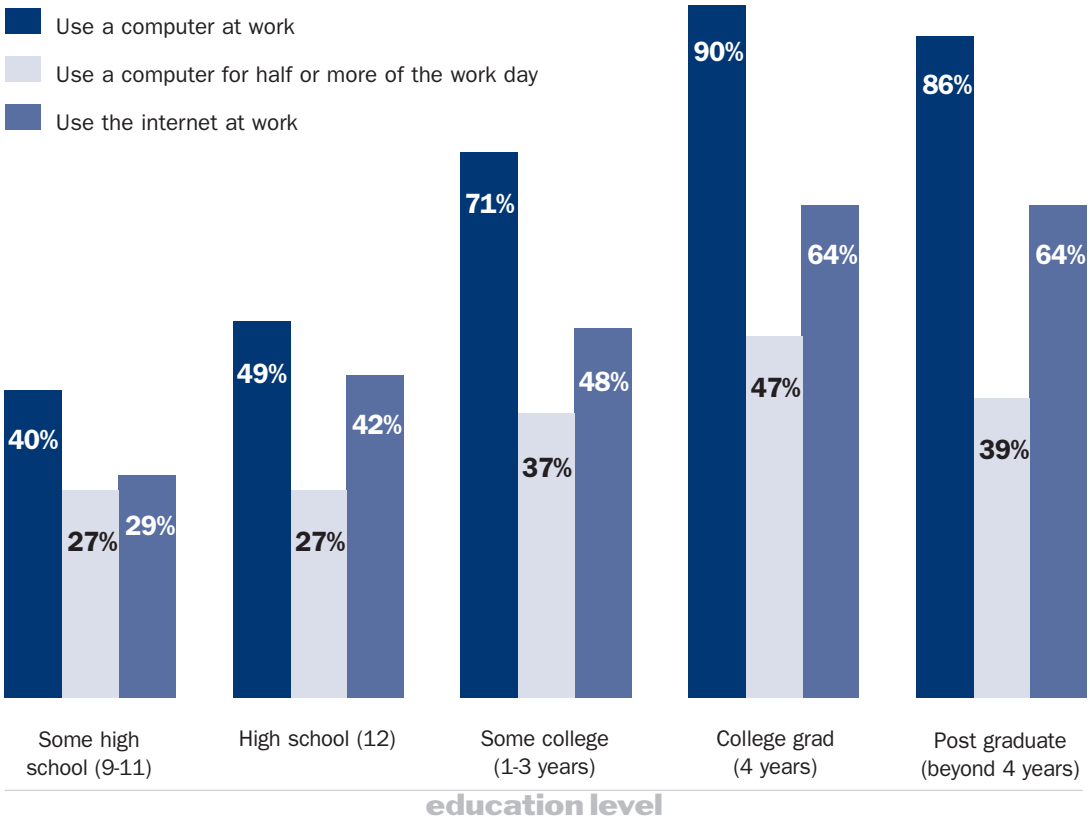
The amount of time respondents use a computer at work varies greatly as one surveys the digital use landscape. Among workers who spend more than half of their workday using a computer, 60% are Technophiles, 45% are 9-5ers, 44% are Power Users, and 29% are Browsers. Power users and Technophiles also spend the largest percent of time on the Internet. Only 21% of Technophiles and 33% of Power Users indicate that they spend no part of their workday on the Internet, compared to 71% of Browsers and 65% of 9-5ers who do not access the Internet at work.

Several factors influence the amount of time a worker spends using a computer during the workday, including age, education, and income. For example, older workers tend to use the computer less and access the Internet less during a typical day at work.

In addition, workers earning low incomes are less likely to use computers and the Internet than those in higher income brackets. More than half (57%) of workers earning less than $40,000 per year use a computer during their workday compared to more than two-thirds (77%) of workers earning more than $40,000 per year. Internet use follows a similar pattern. Less than half (43%) of workers earning less than $40,000 per year surf the Internet each day compared to 58% of workers earning more than $40,000 per year.

Finally, workers with different education levels use the computer with varying frequency; the higher the education level, the more likely a worker is to use the computer during his/her workday. In

Fig. 3-4: Computer Use by Education Level



particular, there is a dramatic increase in computer use once workers receive education beyond high school. Only 40% of workers with less than a high school education and less than half (49%) of high school graduates use a computer at work. Beyond high school, 71% of workers with at least some college education use a computer during their workday, while the vast majority (90%) of college graduates, and 86% of workers with a post-graduate education use a computer for at least a portion of their workday.

4. Worker Aspirations about the Use of Information Technology

The advent of computers, the Internet, and other forms of information technology hold great potential for addressing the needs of both workers and employers. Despite the widespread use of computers and the Internet, there are many applications of these technologies that have yet to be fully realized throughout the workplaces of America. The following section will examine the use of information technologies for telecommuting, distance learning, and career advancement. In addition, worker perceptions about their current and future computer skill levels will be explored.

Workers expressed powerful optimism about the impact of technology on the economy. By and large, U.S. workers agree (76%) that new information technology is good for the economy—and 43% strongly agree.

Respondents were asked to rate on a scale of 1-10 how strongly they agreed with a number of statements relating to technology including their views about their computer skills, employer-sponsored computer training opportunities, the impact of technology on the future of their job and the whether technology is beneficial to them and the economy. In the following analysis, the term "agree" refers to scores of 6-10 and "strongly agree" refers to scores of 9-10. Scores of 0-4 indicate 'disagree.'

Worker Confidence in the New Economy

A strong mood of worker confidence and optimism in the New Economy and the high-tech workplace is woven throughout the *Nothing But Net* survey. The economy's strong performance is being heard loud and clear by workers who have little fears of technological job displacement and embrace the job opportunities of a New Economy that is not only emerging—but arrived.

Nearly all (87%) of workers report that there has been no reduction of jobs at their workplace in the last year as a result of technological change replacing workers. Eighty-nine percent of workers strongly disagree that a computer or some sort of technology will replace their job within the next three years. Even older workers feel confident about the high-tech workplace: 74% of workers age 65 and older disagree that their job will be replaced by technology within the next three years.

A majority (58%) of workers surveyed even agree that the computer has changed their lives for the better (29% strongly agree with this statement). Technology use does matter here. Digital Exiles by a large margin strongly disagree that the computer has changed their life for the better (59%), while 83% of Technophiles and 77% of Power Users agree or strongly agree with the statement. Lower income workers (less than $40,000) are also less enthusiastic about the computer's affect on their lives (only 46% agree or strongly agree) compared to 66% for better-off workers who agree and strongly agree.

Workers expressed powerful optimism about the impact of technology on the economy. By and large, U.S. workers agree (76%) that new information technology is good for the economy—and 43% strongly agree. Confidence is secure across the diverse quilt of American life—through income, gender, and ethnic categories.

Overall, 81% of lower wage earners (below $40,000) and 68% of higher wage workers agree or strongly agree that new

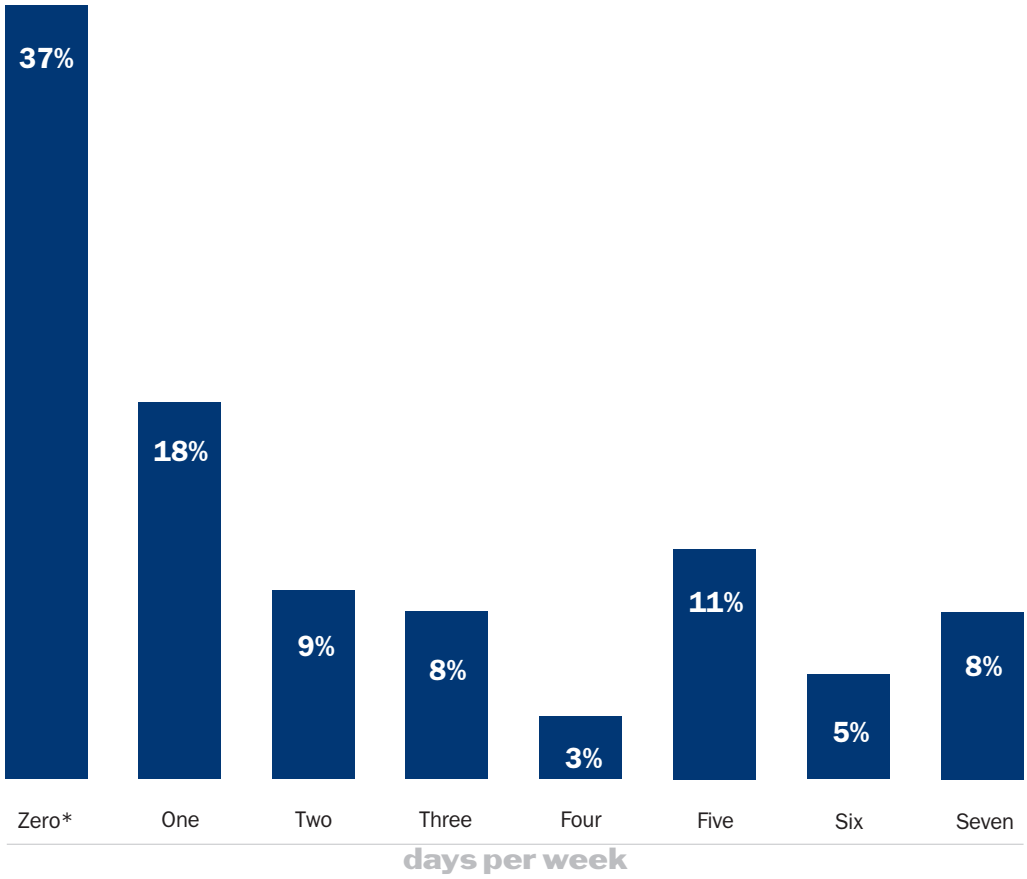
technology is good for the economy. In addition, 79% of men and 73% of women agree or strongly agree with the statement. Eighty percent of Blacks agree or strongly agree (52% strongly agree), and 76% of Whites agree or strongly agree about the impact of technology. Even 70% of adults over age 65 agree or strongly agree. In a related question, 68% of workers agree or strongly agree that the new jobs being created by information technology are good jobs. Only 8% of workers surveyed disagree with this positive assessment.

The Telecommuting Opportunity

Information technology holds the potential to liberate workers from their tether to the traditional, physical office. Using phone, FAX, and computer, workers can telecommute to their job from home or another location outside the workplace. This option is becoming increasingly attractive to workers for a number of reasons including increased worker productivity and job satisfaction. The technology is now available to make home computer equipment as fast and powerful as office computer systems, and by telecommuting, many workers can reduce their commute times and better balance work and family.

Nothing But Net finds that a significant number of today's workers are recognizing these benefits and expressing strong interest in telecommuting. Although not all jobs can be accomplished away from the office, 41% of workers say they could perform their job

Fig. 4-1: Frequency of Telecommuters Among Those Who have the Option



* Do not telecommute

Expressing further support for telecommuting options, many workers indicate that they believe incentives should be put in place to encourage or reward telecommuters and their employers. Almost half (47%) agree that government should offer tax breaks to employers who offer workers the opportunity to work from home or another location outside the office.

at a place other than their current place of employment if they had access to a phone, FAX, and a computer with Internet access. However, not all workers who can perform their job away from the office have the opportunity to do so.

Less than one fifth (16%) of workers say their employer offers them the option of telecommuting, either from home, another location, or both. The number of employers offering the telecommuting option has remained relatively steady since February 1999, when an earlier *Work Trends* survey found that 17% of employees indicated they had this option.

This survey also shows a slight increase (though statistically insignificant) in the number of workers who say they telecommute since February 1999. In *Nothing But Net,* 9% of workers say they telecommute at least one day a week as compared to 8% from the February 1999 survey. Clearly, a mismatch exists between the number of workers who indicate they could telecommute and the number who actually do so.

Of those workers in the current survey who have the opportunity to telecommute, 37% do not exercise the option, 18% telecommute one day per week, and a fifth (20%) telecommute two to four days per week.

Despite the reluctance of many employers to offer their employees the option to telecommute, *Nothing But Net* finds that telecommuting offers important benefits to both employees and employers including increased worker productivity and higher job satisfaction. Close to half (40%) of employees who telecommute report being more productive when they telecommute, and 27% indicate that they are much more productive. Only 16% of workers believe that they are less productive when working from a location other than the office. Likewise, many telecommuters report increased job satisfaction. Among workers who do not telecommute, 83% report being satisfied with their job. Among workers who have the option of telecommuting from another location, 87% are satisfied. Among workers whose employer offers them the option of telecommuting from home, 89% report being satisfied with their job. Those workers who can telecommute from home and another location, 95% report being satisfied with their job. Employees with the most telecommuting options appear

Fig. 4-2: Telecommuting Potential by Education Level

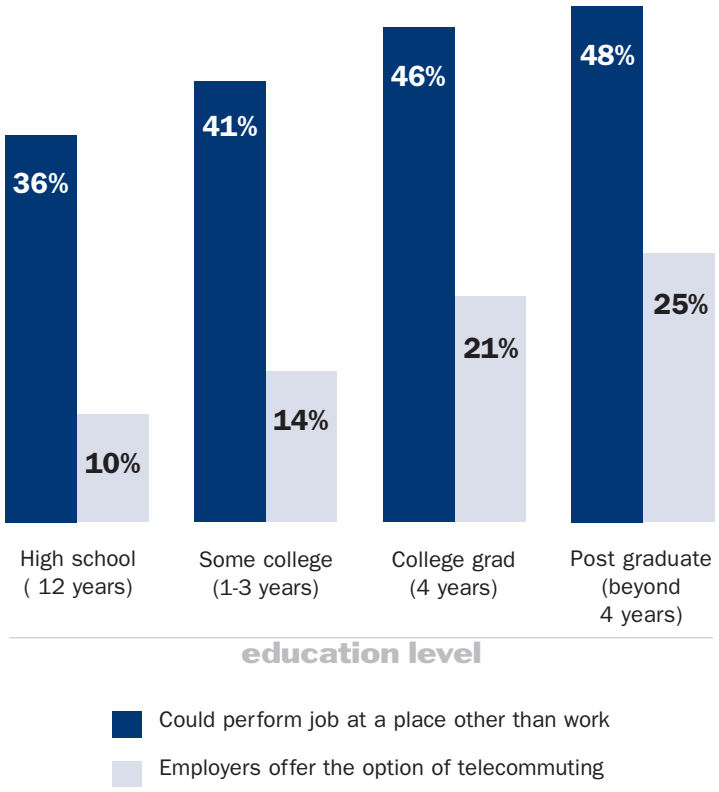
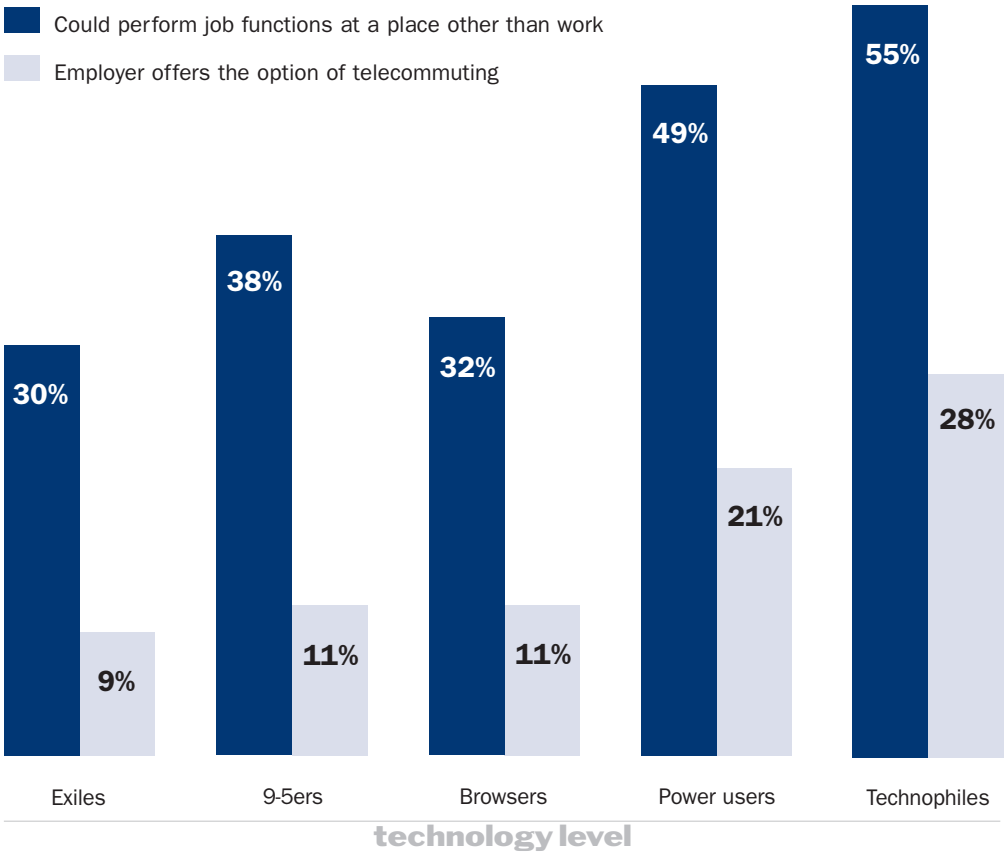


Fig. 4-3: Telecommuting Potential along the Digital Landscape



to be the most satisfied with their jobs. Past *Work Trends* surveys have also found that telecommuting can help employees balance the demands of work and family.

Expressing further support for telecommuting options, many workers indicate that they believe incentives should be put in place to encourage or reward telecommuters and their employers. Almost half (47%) agree that government should offer tax breaks to employers who offer workers the opportunity to work from home or another location outside the office.

Despite significant support for telecommuting among workers, not every employee has an equal opportunity to take advantage of this strategy. Results from *Nothing But Net* are consistent the February 1999 *Work Trends: Balancing Work and Family* in describing the gaps between telecommuting potential and opportunity among workers of different education and income levels. Workers with a higher level of education are the most likely to report that they can perform their job from someplace other than the workplace, with 46% of college graduates and 48% of workers with a post graduate degree holding positions they believe can be performed outside the office. In comparison, only 35% of people with a high school education think they could perform their job functions at a place other than work.

The ability to telecommute does not necessarily mean workers have the option of telecommuting because few workers (16%) are employed at companies offering a telecommuting program. Those that are offered this opportunity tend to be more educated. College graduates and workers with a post graduate degree are the most likely to work for an employer that offers

Workers express a significant degree of interest in distance learning, although the majority of workers have yet to engage in distance learning opportunities.

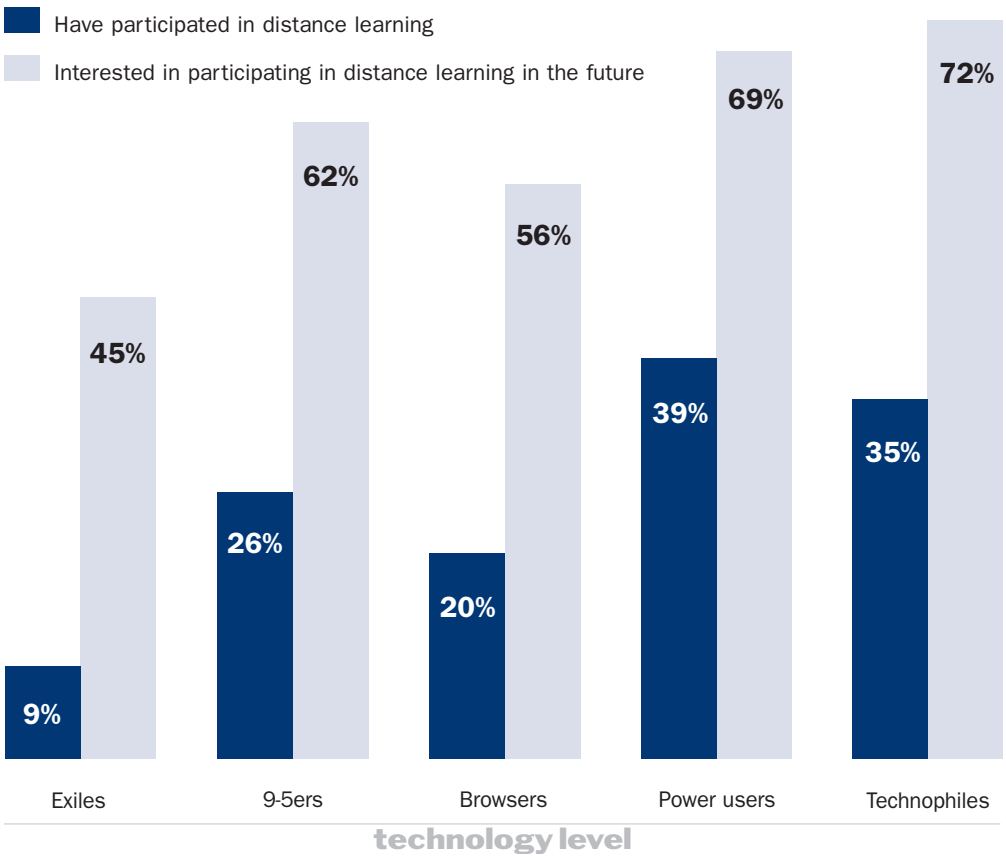
the option of telecommuting (21% and 25%, respectively).

In examining the opportunity to telecommute among different groups of workers along the digital landscape, workers who use technology more frequently are much more likely to hold jobs that can be performed outside the traditional office setting. Nearly half (49%) of Power Users and 55% of Technophiles say they could do their job from another location. In contrast, only 30% of Exiles and 32% of Browsers indicate that they could perform their job outside the office. Working for an employer who offers a telecommuting program also varies significantly among those in different groups along the digital landscape with 28% of Technophiles and 21% of Power Users saying their employer offers them the option and only 9% of Exiles and 11% of 9-5ers and Browsers indicate they have this same option.

Distance Learning

Computers and technology now allow workers to conduct business in places other than the office. This same technology also allows people to learn in places other than a traditional classroom. "Distance learning" occurs when instruction is transmitted to students via audio, video, or computer to individuals located at one or more places in a variety of educational settings. In a time when companies struggle to attract and retain workers

Fig. 4-4: Distance Learning Interest and Opportunities along the Digital Landscape



with computer skills, distance learning provides a unique opportunity to meet these demands by training workers about computers with computers.

Workers express a significant degree of interest in distance learning, although the majority of workers have yet to engage in distance learning opportunities. Slightly more than one-fourth (26%) of all respondents have participated in distance learning. However, 61% of workers express interest in receiving education and training by distance learning in the future.

Not surprisingly, people more familiar with technology express higher interest in distance learning and are more likely to have participated in a distance learning opportunity. Power Users and Technophiles are the most likely to have participated in some type of distance learning and express the most interest in pursuing distance learning in the future. More than one-third (35%) of Technophiles and 39% of Power Users have participated in some type of distance learning activity, and 72% of Technophiles and 69% of Power Users would like to participate in a distance learning activity in the future. In contrast, only 9% of Exiles have had any distance learning experience despite the high number (45%) who express interest.

Experience and interest in distance education also vary considerably by education level and income. College graduates and post-graduates are the most likely to have participated in distance learning (33% and 43%, respectively) compared to only 15% of high school graduates. In addition, 67% of college graduates and 64% of workers with a post-graduate degree have an interest in participating in distance learning in the future.

Similar trends emerge when examining income levels. Almost one-third (30%) of workers earning more than $40,000 per year have participated in distance learning while only 19% of workers earning less than $40,000 per year have done so. The gap in distance learning experience is not a result of a difference in motivation, however. Although workers who make less money are less likely to have participated in distance learning activities, they express equal interest in doing so in the future. Almost two-thirds (61%) of all workers, regardless of income, express interest in pursuing distance education opportunities in the future.

Career Management Using the Internet

In addition to working outside of the office and obtaining valuable skills via distance learning, information technology can be used to help workers manage their career. The last few years have seen a proliferation of Internet career management and job sites where companies post jobs and job seekers can post resumes and search for employment. Despite high rates of Internet access among workers, this technology application does not engender as much enthusiasm among workers as telecommuting or distance learning. Less than a third of workers strongly agree that they will use the Internet when looking for job in the future.

The likelihood of using the Internet for a job search varies considerably when looking at workers from different ages, income levels, and placement along the digital landscape. The degree of technology use among workers has an impact on their likelihood of strongly agreeing to take advantage of this technology in the future. Half (51%) of all Technophiles and 38% of Power-Users strongly agree that they will use the Internet for their next job search as compared to only 12% of Exiles, 23% of 9-5ers, and 21% of Browsers.

When comparing views between income levels, those that earn more than $40,000 are more likely than those that earn less than $40,000 to agree that they will use the Internet to look for a job. In fact, those that earn less than $40,000 are almost twice as likely as those that earn over $40,000 to strongly disagree that they will use the Internet in their next job search (29% vs.18%).

Figure 4-5: Digital Landscape and Technology Perceptions

Digital Landscape Classification	***Strongly agree*** **that I have the that I have the necessary skills to do my job**	***Strongly agree*** **that my employer does a good job of providing computer training**	***Strongly agree*** **that I need more computer skills to achieve my career goals**	***Strongly agree*** **that I plan on using the Internet to assist my next job search**
Exiles	26%	8%	25%	12%
9-5 Users	69%	30%	34%	23%
Browsers	58%	23%	28%	21%
Power Users	69%	30%	26%	38%
Technophiles	77%	37%	23%	51%
Total Population	61%	26%	27%	29%

More than a third (35%) of 18-29 year olds strongly agree that they will use the Internet to assist them in finding a job. Blacks strongly agree that they will use the Internet for job searching more readily than Whites (34% vs. 27%). In contrast, 68% of adults over 65 and 45% of 50-64 year olds strongly disagree.

Computer Skills and Training

In *Nothing But Net,* 77% of workers agree or strongly agree (61% strongly agree) that they have the necessary computer skills to perform their current job. Workers with the most technology use, more educated workers, and younger workers, all show high levels of confidence in their technology skills:

- The vast majority (77%) of Technophiles, Power Users (69%) and Browsers (69%) strongly agree that they have the necessary computer skills compared to just 26% of Exiles.
- The majority (84%) of workers age 18-29 and 76% of workers age 30-49 believe they have the necessary computer skills to perform their current job, while older workers are less confident in their skills. Sixty-nine percent of workers age 50-64, and 59% of workers age 65 or older believing their skills match the requirements of their current job.
- The vast majority of college and post college graduates express a high level of confidence in their computer skills (90% and 91%, respectively). Workers with less formal education are less confident of their skills, with 58% of high school graduates and only 51% of workers with less than a high school education agreeing that they have the necessary computer skills to perform their current job.
- Income levels are also linked to confidence about job skills. Just more than half (56%) of those that earn more than $40,000 **per year** strongly agree that they have the necessary computer skills to perform their current job compared to 45% of those that earn less than $40,000.

While workers by and large believe they have the necessary computer skills to perform their current job, many recognize the need to stay abreast of new technologies as they manage their careers. About half (49%) of workers agree or strongly agree they will need more computer skills to achieve their career goals—although more than a third (35%) of workers disagree that they will need more skills.

Employers and Training Opportunities

In *Nothing But Net,* workers were asked about the availability of computer training opportunities at work—an important tool of opportunity in the changing high-tech workplace. The survey finds that nearly half (44%) of workers disagree that their employer does a good job of providing them with computer training opportunities. Workers with less technology experience express the strongest concerns about employer training: nearly three-quarters (73%) of Exiles and almost half (49%) of Browsers disagree that their employer does a good job of providing them with computer training opportunities. Conversely, about two-thirds of 9-5ers, Power Users, and Technophiles believe their employers does a good job of providing training. Further, 36% of those that earn less than $40,000 a year strongly disagree that their employer does a good job of providing computer training compared to 21% of those earning over $40,000—with other workers having a neutral stance.

While workers by and large believe they have the necessary computer skills to perform their current job, many recognize the need to stay abreast of new technologies as they manage their careers.

As was found in the July 1999 *Work Trends* survey, *Working Hard But Staying Poor,* these data indicate that workers in danger of being left behind are eager to acquire the skills necessary to improve their chances and earnings in the economy and workplace.

Despite their employers' poor performance in providing training, workers are still relying on them to get any additional computer training they need. Only 25% of workers agree that they plan on enrolling in a computer training course **not** offered by their employer in the next twelve months, with only 12% strongly agreeing they will seek outside training.

5. Public Policy and Lifelong Learning

American workers believe that government should play an active role in fostering the use of technology to improve the lives of current and future workers—in certain areas more than others. In particular, workers feel strongly about the government providing leadership and fiscal incentives to improve the education system and to encourage employers to offer computer training and telecommuting opportunities.

As with other areas in the survey, *Nothing But Net* asked workers to rate a number of public policy statements on a scale of 1–10, with 1 meaning they strongly disagree and 10 meaning they strongly agree. The following table displays the average score among those surveyed. Those public policies with the highest average score are the ones with the strongest support among American workers.

The high number of policies with average (mean) values over 5 shows that workers are generally in favor of government working as their partners in their quest for lifelong learning in the New Economy, although respondents express strong support principally for improving the computer literacy of children, particularly those living in low-income communities. In fact, over half (54%) of the respondents said they strongly support (score of 9 or 10) computer literacy requirements in high schools and half (50%) strongly support subsidizing low-income schools to purchase computers and Internet access. Working Americans are most comfortable seeing government intervene at earlier stages of life and education.

Interestingly, the support for these public policies does not vary significantly based on income or upon placement along the digital landscape. Over half of both the Technophiles and Exiles as well as over half of those earning less than $40,000 and those earning more than $40,000 strongly support government subsidizing low-income schools in order to purchase technology.

For some public policies, the intensity of support does vary based on gender and race, however. The one question with a gender difference asks whether or not to subsidize

Fig. 5-1: Workers' Support for Public Policies

Policy Statement	Average Score (mean) on a scale of 1-10
High schools should require all students to be computer literate as a condition of graduation	7.73
The government should provide subsidies to schools in low-income areas so they can purchase computers and be connected to the Internet	7.63
Government should provide tax breaks to employers who offer computer training for their employees	5.99
Government should offer tax breaks to employers offering telecommuting opportunities	5.60
Government should offer education tax credits to anyone enrolled in a computer course	5.39
Colleges and Universities should only admit students who are computer literate.	2.12

low-income schools to purchase technology, and women are more likely to strongly agree that the government should provide this benefit with over half (57%) of women workers supported this policy and compared to 44% of men.

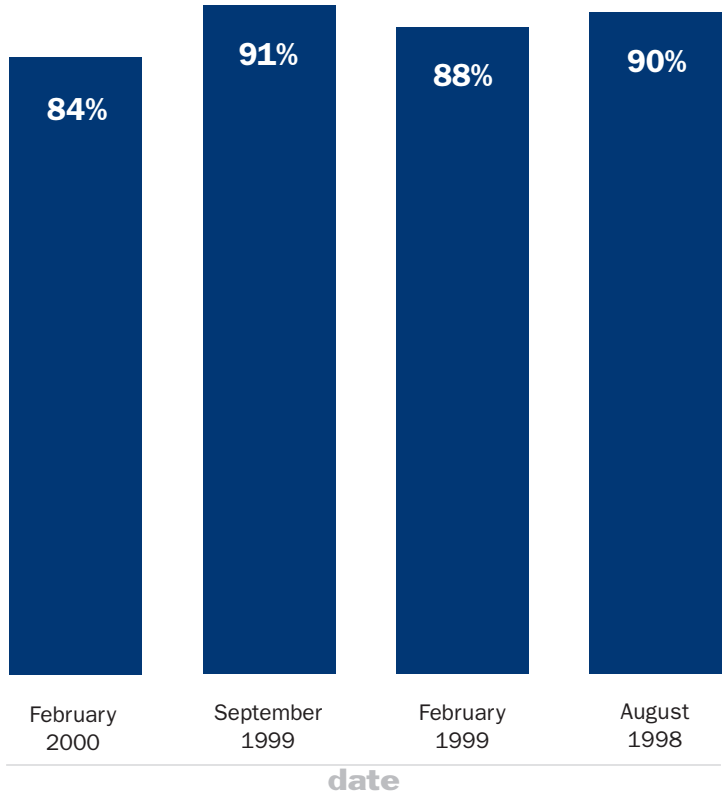
Based on the results from this survey, Blacks are more likely to strongly support an activist government than Whites. Black workers were much more likely to strongly support high school computer literacy requirements (62% to 52%), tax breaks for employers who offer computer training (38% to 23%), tax breaks for telecommuting (34% to 25%), education tax credits for those taking computer training (32% to 17%), and subsidies to low-income schools to purchase technology (72% to 46%).

In fact, over half (54%) of the respondents said they strongly support (score of 9 or 10) computer literacy requirements in high schools and half (50%) strongly support subsidizing low-income schools to purchase computers and Internet access.

6. Views on Job Satisfaction and the Economy

As the nation's economic boom continues and the unemployment rate remains low, American workers continue to report high levels of job satisfaction and job security and low levels of concern about the current state of the economy. However, workers report less job satisfaction in this study, than in other surveys in the *Work Trends* series, which began in 1998. While 84% of workers now say they are satisfied with their jobs overall (with 51% reporting they are "very satisfied"), this represents a seven point decline from the September 1999 survey that reported 91% of workers were satisfied (with 59% reporting they were "very satisfied"). This also represents a drop from one year ago when 88% said they were satisfied with their job overall (54% reported they were "very satisfied").

Fig. 6-1: Overall Job Satisfaction



In addition, the level of worker satisfaction from year-to-year has dropped compared to past surveys. When asked if they are "more," "about as", or "less satisfied" with their job compared to a year ago, more workers than in any other year report that their job satisfaction has remained status quo. Forty-two percent say they are "about as" satisfied with their current job situation compared to a year ago; 39% report they are "more satisfied;" and 18% say they are "less satisfied." In the February 1999 *Work Trends,* 46% of workers said they were more satisfied from the year before.

Over the last year and a half, the *Work Trends* series has in part documented the downsides of the economic boom—people working more hours, feeling they are not being compensated for their efforts, and the ever-growing stress of balancing work and family. One explanation for the dropping job satisfaction figures amidst general good feelings may be the boom itself. As the good times continue, workers enjoy the buffer of relative job security and earnings—and begin to look more closely at other aspects of their work life and their future needs. If the expansion continues, satisfaction levels may lessen as workers adjust to the norms of the demanding economy and 21st Century work life.

While individual job satisfaction has waned, workers remain sanguine about the nation's job situation as a whole—reflecting the widespread optimism about the economy reflected elsewhere in the survey. When asked to evaluate whether it is a good or bad time to find a quality job, 76%—up from 70% a year ago—said it was a good time. Just 19% said it was a bad time to look for a job compared to 24% in 1999.

In addition to the job market, workers are also more optimistic about job security for

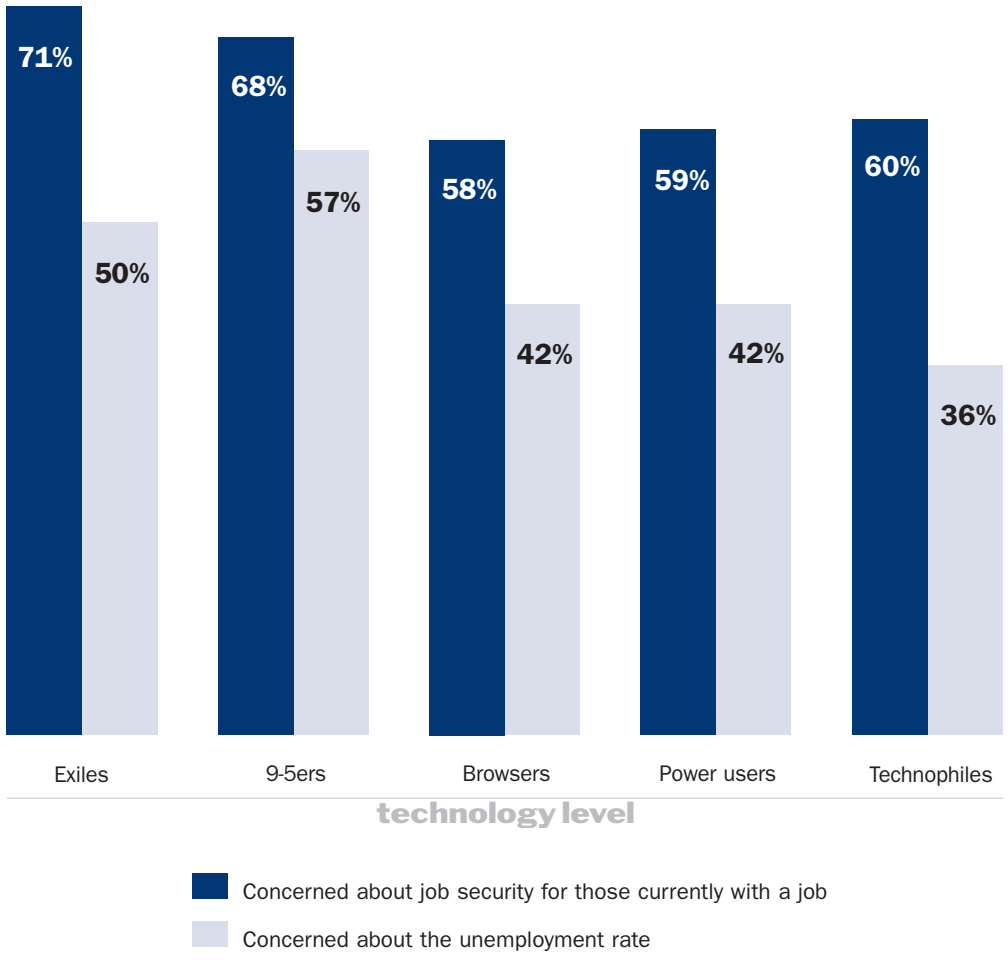
the employed compared to previous years. Sixty-two percent say they are concerned about job security and 37% say they are not concerned. This is a nine point drop from 71% who said they were concerned in February 1999 and a twenty-five point drop from 87% who said they were concerned in September 1998.

Demographic Comparisons

The survey found a number of noteworthy differences when making comparisons by income, ethnicity, gender, and education about attitudes toward the economy and job security:

- Workers earning over $40,000 report higher job satisfaction than those that earn less than $40,000 (87% vs. 76%). Eight out of ten (83%) people earning over $40,000 say it is a good time to find a job, compared to 62% of those who earn less than $40,000. Compared to other education groups, the most and least educated are most likely to report that it is a good time to find a job (86% and 85% respectively).
- Workers that have not completed high school report a higher level of job satisfaction (91%) than any other education group. Lower wage workers are more concerned (71%) than higher wage earners (59%) about job security, however.
- Among racial groups, Blacks report the lowest level of job satisfaction (70%). This

Fig. 6-2: Digital Landscape and Concern about Job Security & the Unemployment Rate



One explanation for the dropping job satisfaction figures amidst general good feelings may be the boom itself. As the good times continue, workers enjoy the buffer of relative job security and earnings—and begin to look more closely at other aspects of their work life and their future needs.

is consistent with previous studies where Blacks have reported lower levels of satisfaction than non-whites across 14 job elements used to rate overall job satisfaction. Blacks are also twice as likely as Whites to say they are "less satisfied" with their jobs this year than last (31% vs. 17%). Consistent with previous *Work Trends* reports, Blacks (73%) and other racial groups (75%) are more concerned about job security than Whites (58%).

- A majority (50%) of younger workers (18-29) say they are "more satisfied" with their current job compared to a year ago—the highest of any age group. More than three quarters, (79%) of adults over 65 say they are "about as" satisfied with 51% of 50-64 year olds concurring.
- In the lower technology-use groups (Exiles and 9-5ers), nearly 70% say they are concerned about job security compared to 58% of Browsers and 60% of Power Users and Technophiles.

7. Conclusion

Much has been written and said about the soaring fortunes of the New Economy for entrepreneurs, investors, and young high-tech engineers. This *Work Trends* report makes it clear that a strong optimism about the information economy pervades the vast and diverse U.S. workforce at every level; workers are embracing the New Economy and looking for employers and government to work with them.

The majority of American workers are on a computer each day for an average of three hours, have access to a computer at home, and use the computer for multiple applications ranging from work tasks to shopping on the Internet. In what is a surprisingly strong trend, the workforce accepts with gusto the realities of job turbulence and chaos preached by the management gurus and economists. Workers are not worried about keeping their jobs; they like the new jobs being created by the information economy; they like what computers are doing for them; they're eager to adapt and learn to keep pace with change.

The workers with the greatest anxiety about the future are those who know they're being left out of the technology revolution, the digital exiles not using or not having access to a computer. As has been seen in other *Work Trends* surveys, low-income workers don't want to sit out the boom, they want to get a skill and move ahead. For everyone, expectations are high.

The prevalent use of computers among American workers seems to have created a heightened awareness about the potential of information technology to solve problems in their workplace and work lives. As the high-tech workplace creates new demands and challenges, Americans are turning to those very same technologies to improve their skills and get more control over their economic destiny. In particular, American workers say they want more opportunities to telecommute and participate in distance learning; they want government to do more to connect schools and young children to the Internet and its wealth of opportunities, and to require young people to achieve computer literacy.

The prevalent use of computers among American workers seems to have created a heightened awareness about the potential of information technology to solve problems in their workplace and work lives. As the high-tech workplace creates new demands and challenges, Americans are turning to those very same technologies to improve their skills and get more control over their economic destiny.

The desire to embrace technology in these ways outpaces the opportunities, however. Although most workers are interested in telecommuting and increasing their skills through distance education, the vast majority of American workers have never had the opportunity for either. Perhaps as a response to this gap between desire and experience, workers feel strongly that employers and government should play a more proactive role in fostering use of technology to benefit the worker and the workplace. One reform supported by workers is for government to offer tax incentives to employers who offer computer skill training or the opportunity to telecommute.

Finally, the both experience and perceptions of American workers illustrate troubling differences among workers in terms of their access to and use of information

technologies. Despite our nation's digital and economic prosperity, one-fifth of all workers have not used a computer in the last month and approximately 35% of all workers lack access at home. In a series of reports over the last few years, the U.S. Department of Commerce has clearly demonstrated a growing gap between those with access to technology and those without. *Nothing But Net: Americans Worker* builds upon these findings and describes a digital landscape where workers are categorized along a continuum of computer use. Those on either end of this continuum—the Exiles and the Technophiles—fit the profiles played out in the media in terms of their income, education level, type of job, etc. The majority of American workers are in the middle of this continuum, however. It is this majority—the 9-5 Users, the Browsers, and the Power Users—that are pushing for their employers and their government to respond to their desires and their expectations for their children in the information technology economy.

Information technology holds the potential for offering much needed *solutions at work* in this new economy. As the nation strives to remain competitive in the global economy, upgrade the skills of its workforce, help workers balance work and family, fight poverty, and provide a meaningful education for our children, America's workers suggest that we embrace the technology in our midst and use it to its full potential.

Appendix 1: Methodology

The survey was conducted from January 5 through January 19, 2000 by the Center for Survey Research and Analysis (CSRA) at the University of Connecticut. This report is based on a total of 1,005 telephone interviews completed with adult members of the workforce in the contiguous United States.

Interviews were conducted at the CSRA's interviewing facility in Storrs, Connecticut, using a Computer Assisted Telephone Interviewing (CATI) system. All CSRA surveys are conducted by professional survey interviewers who are trained in standard protocols for administering survey instruments. All interviewers assigned to this survey participated in special training conducted by senior project staff. The draft survey questionnaire and field protocols received extensive testing prior to the start of the formal interviewing period. Interviews were extensively monitored by center staff to insure CSRA standards for quality were continually met.

The sample for this survey was stratified to insure that regions, as defined by the U.S. Bureau of the Census, were represented in proportion to their share of the total U.S. workforce. Within each of these regions, telephone numbers were generated through a random-digit-dial telephone methodology to insure that each possible residential telephone number had an equal probability of selection. Telephone banks which contain no known residential telephone numbers were removed from the sample selection process. The sample was generated using the GENESYS sampling database under the direction of a CSRA survey methodologist. Once selected, each telephone number was contacted a minimum of four times to attempt to reach an eligible respondent. Households where a viable contact was made were called up to 25 additional times. Within each household one adult was randomly selected to complete the interview.

A total of 1,698 adults received full screening interviews to determine if they were eligible for inclusion in the survey. Respondents were included if they worked full or part time, or if they were unemployed and looking for work. A total of 949 adults were not interviewed because they did not meet the screening criteria. An additional 13 respondents completed partial interviews and asked that the interview be completed after the field period had ended. The results of this report are based on a total of 1,005 complete interviews with members of the workforce. The final results were weighted to match U.S. Department of Labor estimates for age, gender, and employment status for the U.S. workforce.

The sample error associated with a survey of this size is +/- 3%, meaning that there is less than one chance in twenty that the results of a survey of this size would differ by more than 3% in either direction from the results which would be obtained if all members of the workforce in the contiguous U.S. had been selected. The sample error is larger for sub-groups. CSRA also attempted to minimize other possible sources of error in this survey.

Appendix 2: Survey Results

00/01/05 17:19
18: INT1
CALL BACK TO SPEAK TO DESIGNATED RESPONDENT

Hello, my name is $I and I'm calling from the Center for Survey Research and Analysis at the University of Connecticut. We're conducting a national survey about what people think about their jobs, and it's very important that I get the opinions of the person in this household who is at least 18 years of age, or older, and has the next birthday. Would that be you? (Or, say "Could you ask that person to come to the phone").

N=		*1005*	*100%*
Continue	*01*	*1003*	*100%*

INT1

00/01/05 17:56
19: QS1
WHEN DESIGNATED RESPONDENT IS ON THE PHONE READ THIS

QS1. Are you currently employed, are you unemployed and looking for work, or are you not employed and not looking for work?

N=		*1005*	*100%*
Employed	*01*		*95%*
Unemployed and looking for work			
	02 => IQ1		*5%*
Unemployed and not looking for work			
	03 => INT3		—
Don't know			
	98		
THANK			—
Refused	*99*		
THANK			—

QS1

20: QS2
QS2. Which statement best describes your current employment situation: (READ CHOICES 1-5)

N=		*933*	*100%*
I work full-time for only one employer			
	01		*71%*
I work full time for one employer and part-time for another employer			
	02		*5%*
I work one part-time job			
	03		*10%*
I work two or more part-time jobs			
	04		*2%*
I am self-employed			
	05		*11%*
Don't know			
	98		
			—
Refused	*99*		
			*

QS2

21: QS3
QS3. How many hours do you work in a typical week? (ENTER 2 DIGITS 00-80)

$E 0 80

N=	*933*	*100%*
0-20 hours		*7%*
21-30 hours		*5%*
31-35 hours		*5%*
36-40 hours		*38%*
41-45hours		*12%*
46-50 hours		*16%*
51 or more hours		*17%*
Donít know		
98		*1%*
Refused	*99*	*
Median		*(40.00)*
Mean		*(43.20)*
St. Deviation		*(12.55)*

QS3

00/01/05 17:24
24: IQ1
IQ1. I'm going to read you a list of some economic issues. For each issue that I read, please tell me whether you are very concerned, somewhat concerned, not too concerned, or not at all concerned about this. First is...

N=		*1005*	*100%*
Continue	*01*	*1005*	*100%*

IQ1

25: Q1
Rotation => Q2
Q1. The current unemployment rate.

N=		*1005*	*100%*
Very Concerned			
	01		*16%*
Somewhat concerned			
	02		*29%*
Not too concerned			
	03		*28%*
Not at all concerned			
	04		*25%*
Don't know			
	98		*1%*
Refused	*99*		*

Q1

26: Q2
Q2. Job security for those currently with a job

N=		*1005*	*100%*
Very Concerned			
	01		*26%*
Somewhat concerned			
	02		*36%*
Not too concerned			
	03		*21%*
Not at all concerned			
	04		*16%*
Don't know			
	98		*1%*
Refused	*99*		*

Q2

00/01/05 16:48
27: Q3
Q3. Thinking about the job situation in America today, would you say that it is now a good time or a bad time to find a quality job?

N=		*1005*	*100%*
Good time			
	01		*76%*
Bad time	*02*		*19%*
Don't know			
	98		*5%*
Refused	*99*		*1%*

Q3

28: Q4
=> IQ6 if QS1==02
Q4. Now, I'd like to find out how satisfied you are with your job overall. Please tell me whether you are very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, or very dissatisfied with your job overall?

N=		*933*	*100%*
Very Satisfied			
	01		*51%*
Somewhat Satisfied			
	02		*33%*
Neither	*03*		*5%*
Somewhat Dissatisfied			
	04		*8%*
Very Dissatisfied			
	05		*4%*
Don't know			
	98		*
Refused	*99*		—

Q4

29: Q5
Q5. Compared to one year ago, would you say you are more satisfied in your job situation, about as satisfied as you were one year ago, or less satisfied in your current job situation?

N=		*100%*
More satisfied		
	01	*39%*
About as satisfied		
	02	*42%*
Less Satisfied		
	03	*18%*
Don't know		
	98	*1%*
Refused	*99*	—

Q5

00/01/05 17:24
30: IQ6
IQ6. Now I have a few questions about computers...

N=		*1005*	*100%*
Continue	*01*	*1005*	*100%*

IQ6

31: Q6
Q6. Have you used a computer in the past month? (If yes,) How did you learn how to use a computer?

N=		*1005*	*100%*
No, haven't used			
	01		*19%*
Self-taught			
	02		*33%*
Learned in school			
	03		*21%*
Learned through work			
	04		*19%*
Friend or Children or Parents taught me			
	05		*5%*
Yes, Other (vol.)			
	06	*O*	*2%*
Don't know			
	98		*1%*
Refused	*99*		*

Q6
O_Q6

32: Q7
Q7. Do you have access to a computer at home? (If yes,) How many computers do you have access to at home?

N=		*1005*	*100%*
No, no access			
	01		*32%*
Yes, access to one			
	02		*46%*
Yes, access to two			
	03		*16%*
Yes, access to three or more			
	04		*7%*
Don't know			
	98		—
Refused	*99*		—

Q7

33: Q8
Q8. How often do you use a computer either at home, at work, at school, or any other place?

N=			*1005*	*100%*
Every day				
	01			*68%*
At least once a week				
	02			*12%*
At least once a month				
	03			*3%*
Less than once a month				
	04			*3%*
Never	*05*		*=> Q18*	*15%*
Don't know				
	98		*=> Q18*	*
Refused	*99*		*=> Q18*	*

Q8

00/01/05 17:24
34: IQ9
IQ9. Do you use a computer for any of the following? For each, please tell me whether you use a computer at home, at work, or both.

N=		*850*	*100%*
Continue	*01*	*850*	*100%*

IQ9

35: Q9
Rotation => Q16
Q9. Email

N=		*850*	*100%*
No, don't use			
	01		*20%*
Use at home			
	02		*22%*
Use at Work			
	03		*17%*
Use Both at home and work			
	04		*40%*
Use - Other location (vol.)			
	05	*O*	*1%*
Don't know			
	98		—
Refused	*99*		—

Q9
O_Q9

36: Q10
Q10. Internet Browsing or the World Wide Web

N=		*850*	*100%*
No, don't use			
	01		*23%*
Use at home			
	02		*30%*
Use at Work			
	03		*12%*
Use Both at home and work			
	04		*33%*
Use - Other location (vol.)			
	05	*O*	*2%*
Don't know			
	98		—
Refused	*99*		—

Q10
O_Q10

37: Q11
Q11. News or information

N=		*850*	*100%*
No, don't use			
	01		*25%*
Use at home			
	02		*27%*
Use at Work			
	03		*16%*
Use Both at home and work			
	04		*30%*
Use - Other location (vol.)			
	05	*O*	*2%*
Don't know			
	98		—
Refused	*99*		—

Q11
O_Q11

38: Q12
Q12. Shopping

N=		*850*	*100%*
No, don't use			
	01		*60%*
Use at home			
	02		*29%*
Use at Work			
	03		*4%*
Use Both at home and work			
	04		*8%*
Use - Other location (vol.)			
	05	*O*	*
Don't know			
	98		—
Refused	*99*		—

Q12
O_Q12

39: Q13
Q13. Paying bills, balancing checkbook or managing money

N=		*850*	*100%*
No, don't use			
	01		*65%*
Use at home			
	02		*22%*
Use at Work			
	03		*6%*
Use Both at home and work			
	04		*8%*
Use - Other location (vol.)			
	05	*O*	*
Don't know			
	98		—
Refused	*99*		—

Q13
O_Q13

40: Q14
=> +1 if QS1==02
Q14. Work-related activities

N=		*805*	*100%*
No, don't use			
	01		*13%*
Use at home			
	02		*7%*
Use at Work			
	03		*46%*
Use Both at home and work			
	04		*34%*
Use - Other location (vol.)			
	05	*O*	—
Don't know			
	98		—
Refused	*99*		—

Q14
O_Q14

41: Q15
Q15. Word processing

N=		*850*	*100%*
No, don't use			
	01		*20%*
Use at home			
	02		*17%*
Use at Work			
	03		*20%*
Use Both at home and work			
	04		*42%*
Use - Other location (vol.)			
	05	*O*	*1%*
Don't know			
	98		—
Refused	*99*		—

Q15
O_Q15

42: Q16
Q16. Games

N=		*850*	*100%*
No, don't use			
	01		*43%*
Use at home			
	02		*41%*
Use at Work			
	03		*6%*
Use Both at home and work			
	04		*9%*
Use - Other location (vol.)			
	05	*O*	*1%*
Don't know			
	98		—
Refused	*99*		—

Q16
O_Q16

43: Q17
Q17. Did you purchase anything on-line, using a computer, in the past year?

N=		*850*	*100%*
Yes	*01*		*40%*
No	*02*		*60%*
Don't know			
	98		*
Refused	*99*		—

Q17

00/01/07 16:50
44: Q18
=> Q27A if QS1=02
Q18. In a typical day, how many hours do you spend at work? (ENTER 2 DIGITS- ROUND UP. EXAMPLE-7.5=08)
$E 01 24

N=		*933*	*100%*
0-2 hours	.		*1%*
3-5 hours			*5%*
6-7 hours			*9%*
8 hours			*38%*
9 hours			*19%*
10 hours			*18%*
11 or more hours			*11%*
Don't know			
	98		*1%*
Refused	*99*		—
Median			*(8.00)*
Mean			*(8.70)*
St. Deviation			*(2.38)*

Q18

00/01/05 18:01
45: Q19
Q19. Of that/those <Q18 > hour(s), how many do you spend using a computer? (ENTER 2 DIGITS-ROUND UP. EXAMPLE-1/2 hour=01). (MAKE SURE THIS ANSWER IS NOT GREATER THAN THE # OF HOURS IN THIS QUESTION)
$E 01 24

N=		*933*	*100%*
0 hours			*30%*
1 hour			*17%*
2 hours			*9%*
3-5 hours			*17%*
6-8 hours			*22%*
9 or more hours			*5%*
Don't know			
	98	*=> Q22*	*
Refused	*99*	*=> Q22*	—
Median			*(2.00)*
Mean			*(3.10)*
St. Deviation			*(3.20)*

Summary of Percent of Workday Spent on a Computer Among All Workers:

N=	*933*	*100%*
Zero Percent of Time		*30%*
1% — 24%		*21%*
25% — 49%		*13%*
50% — 74%		*13%*
75% — 99%		*11%*
100% of time		*12%*
Don't know		*
Refused		—
Median		*(22%)*
Mean		*(35%)*
St. Deviation		*(36)*

Q19

00/01/05 17:13
46: Q20
Q20. Of that/those <Q19 > hour(s) using the computer, about how many do you spend on the Internet? (ENTER 2 DIGITS-ROUND UP. EXAMPLE-1/2=01) (MAKE SURE THIS ANSWER IS NOT GREATER THAN THE # OF HOURS IN THIS QUESTION)
$E 01 24

N=	*649*	*100%*
0 hours		*49%*
1 hour		*44%*
2 hours		*7%*
3 or more hours		—
Don't know		*
Refused		—
Median		*(1.00)*
Mean		*(.910)*
St. Deviation		*(1.60)*

Summary of Percent of Workday Computer Time Spent on Internet (Workers Who Use Computer):

N=	*649*	*100%*
Zero Percent of Time		*46%*
1% — 24%		*19%*
25% — 49%		*14%*
50% — 74%		*10%*
75% — 99%		*1%*
100% of time		*10%*
Don't know		*
Refused		—
Median		*(13%)*
Mean		*(23%)*
St. Deviation		*(31)*

Q20

00/01/05 18:01
47: Q21
Q21. Of that/those <Q20 > hour(s) on the Internet, about how many do you spend on work related activities, as opposed to your own personal use? (ENTER 2 DIGITS-ROUND UP. EXAMPLE-1/2=01) (MAKE SURE THIS ANSWER IS NOT GREATER THAN THE # OF HOURS IN THIS QUESTION)
$E 00 24

N=		*349*	*100%*
0 hours			*13%*
1 hours			*76%*
2 hours			*11%*
3 or more hours			—
Don't know			
	98	*=> Q22*	*1%*
Refused	*99*	*=> Q22*	*1%*
Median			*(1.00)*
Mean			*(1.52)*
St. Deviation			*(2.10)*

Summary of Percent of Workday Internet Time Work Related (Workers Who Use Internet):

N=	*349*	*100%*
Zero Percent of Time		*13%*
1% — 24%		*%*
25% — 49%		*1%*
50% — 74%		*8%*
75% — 99%		*2%*
100% of time		*76%*
Don't know		*1%*
Refused		*1%*
Median		*(100%)*
Mean		*(82%)*
St. Deviation		*(35)*

Q21

00/01/05 18:02
48: Q22
Q22. On average, how many e-mail messages do you receive each day at work? (ENTER 2 DIGITS)
$E 01 95

N=		*933*	*100%*
Have e-mail but get less than 1 per day			*28%*
1-5			*20%*
6-10			*12%*
11-20			*9%*
21 or more			*31%*
Don't have e-mail	*97*		*23%*
Don't know	*98*		*1%*
Refused	*99*		*
Median (Among workers with e-mail):			*(3)*
Mean (Among workers with e-mail)			*(8.76)*
St. Deviation (Among workers with e-mail)			*(3.00)*

Q22

00/01/05 16:48
49: Q23
Q23. Changing the subject a bit...In your opinion, has there been a reduction of jobs at your place of employment in the last year as a result of technology replacing the need for the same number of workers?

N=		*933*	*100%*
Yes	*01*		*10%*
No	*02*		*87%*
Don't know	*98*		*2%*
Refused	*99*		*1%*

Q23

50: Q24
Q24. Could you perform your job functions at a place other than your current place of employment if you had access to a phone, FAX and computer with Internet access?

N=		*933*	*100%*
Yes	*01*		*41%*
No	*02*		*58%*
Don't know	*98*		*2%*
Refused	*99*		*1%*

Q24

00/01/07 16:18
51: Q25
Q25. Does your employer offer you, in your current job, the opportunity to work from home or another place more convenient to get to than your jobs main location? (IF YES) Is that from home or from another location?

N=		*933*	*100%*
No	*01*	*=> Q27A*	*81%*
home	*02*		*10%*
another location	*03*		*2%*
both home and another location	*04*		*4%*
Don't know	*98*	*=> Q27A*	*2%*
Refused	*99*	*=> Q27A*	*2%*

Q25

00/01/07 16:20
52: Q26
Q26. How many days per week do you work from <Q25 > in a typical week?

N=		*145*	*100%*
Zero Days/Don't Telecommute	*00*	*=> Q27A*	*37%*
One day	*01*		*18%*
Two days	*02*		*9%*
Three days	*03*		*8%*
Four days	*04*		*3%*
Five days	*05*		*11%*
Six days	*06*		*5%*
Seven days	*07*		*8%*
Don't know	*98*	*=> Q27A*	*1%*
Refused	*99*	*=> Q27A*	*—*

Q26

53: Q27
Q27. How would you measure your productivity when you work from <Q25 > versus when you work, or used to work, in a more traditional office setting? Would you say you are (READ CODES 1 - 5)

N=		*89*	*100%*
Much more productive	*01*		*27%*
Somewhat more productive	*02*		*13%*
About the same level of production	*03*		*30%*
Somewhat less productive	*04*		*15%*
Much less productive	*05*		*1%*
Don't know	*98*		*6%*
Refused	*99*		*—*

Q27

00/01/07 16:12
54: Q27A
Q27A. Have you ever participated in distance learning, which is learning where instruction was given over distance by audio, video, or computer to individuals located at one or more places?

N=		*919*	*100%*
Yes	*01*		*26%*
No	*02*		*74%*
Don't Know	*98*		*
Refused	*99*		*—*

Q27A
Note: Questions 27A and 27B not asked of first 86 respondents

00/01/07 16:15
55: Q27B
Q27B. In the future, how interested would you be in participating in receiving education and training by distance learning, as opposed to more traditional methods or education or training? Would you be extremely interested,
very interested, somewhat interested, not very interested, or not at all interested?

N=		*919*	*100%*
Extremely interested	*01*		*10%*
Very interested	*02*		*20%*
Somewhat interested	*03*		*31%*
Not very interested	*04*		*17%*
Not at all interested	*05*		*22%*
Don't Know	*98*		*1%*
Refused	*99*		*—*

Q27B

00/01/05 17:24

56: IQ28

Now I'm going to read you a series of statements. Please rate each statement from 0 to 10, where 0 means strongly disagree, 10 means strongly agree, and 5 means neither agree nor disagree. You can use any number between 0 and 10. The first statement is...

N=		*1001*	*100%*
Continue	*01*	*1001*	*100%*

IQ28

57: Q28

Rotation => Q43

=> +1 if QS1==02

Q28. I have the necessary computer skills to perform my current job. (00=Strongly Disagree 0 5=Neutral 10=Strongly Agree ENTER 2 DIGITS)

$E 00 10

N=		*933*	*100%*
0-4			*15%*
5			*8%*
6-8			*16%*
9-10			*61%*
Don't know			
	98		*—*
Refused	*99*		*1%*
Mean			*(7.70)*
St. Deviation			*(3.33)*

Q28

58: Q29

=> +1 if QS1==02

Q29. My employer does a good job of providing me with computer training opportunities. (00=Strongly Disagree 05=Neutral 10=Strongly Agree ENTER 2 DIGITS)

$E 00 10

N=		*933*	*100%*
0-4			*44%*
5			*14%*
6-8			*16%*
9-10			*26%*
Don't know			
	98		*1%*
Refused	*99*		*2%*
Mean			*(4.90)*
St. Deviation			*(3.84)*

Q29

59: Q30

Q30. I will need more computer skills to achieve my career goals. (00=Strongly Disagree 05=Neutral 10=Strongly Agree ENTER 2 DIGITS)

$E 00 10

N=		*1005*	*100%*
0-4			*35%*
5			*16%*
6-8			*22%*
9-10			*27%*
Don't know			
	98		*—*
Refused	*99*		*—*
Mean			*(5.33)*
St. Deviation			*(3.80)*

Q30

60: Q31

Q31. High schools should require all students to be computer literate as a condition of graduation. (00=Strongly Disagree 05=Neutral 10=Strongly Agree ENTER 2 DIGITS)

$E 00 10

N=		*1005*	*100%*
0-4			*13%*
5			*8%*
6-8			*26%*
9-10			*54%*
Don't know			
	98		*—*
Refused	*99*		*—*
Mean			*(7.73)*
St. Deviation			*(3.00)*

Q31

61: Q32

Q32. Colleges and Universities should only admit students who are computer literate. (00=Strongly Disagree 05=Neutral 10=Strongly Agree ENTER 2 DIGITS)

$E 00 10

N=		*1005*	*100%*
0-4			*77%*
5			*13%*
6-8			*6%*
9-10			*4%*
Don't know			
	98		*—*
Refused	*99*		*—*
Mean			*(2.12)*
St. Deviation			*(2.80)*

Q32

62: Q33

Q33. Government should offer tax breaks to employers who offer computer training for their employees. (00=Strongly Disagree 05=Neutral 10=Strongly Agree ENTER 2 DIGITS)

$E 00 10

N=		*1005*	*100%*
0-4			*24%*
5			*22%*
6-8			*28%*
9-10			*27%*
Don't know			
	98		*1%*
Refused	*99*		*—*
Mean			*(6.00)*
St. Deviation			*(3.30)*

Q33

00/01/05 16:49

63: Q34

Q34. Government should offer tax breaks to employers who offer workers the opportunity to work from home or another location outside the office such as a neighborhood telecommunications center. (00=Strongly Disagree 05=Neutral 10=Strongly Agree ENTER 2 DIGITS)

$E 00 10

N=		*1005*	*100%*
0-4			*25%*
5			*28%*
6-8			*27%*
9-10			*20%*
Don't know			
	98		*1%*
Refused	*99*		*—*
Mean			*(5.60)*
St. Deviation			*(3.10)*

Q34

64: Q35
Q35. Government should offer education tax credits to anyone enrolled in a computer course. (00=Strongly Disagree 05=Neutral 10=Strongly Agree ENTER 2 DIGITS)
$E 00 10

N=		*1005*	*100%*
0-4			*30%*
5			*26%*
6-8			*25%*
9-10			*20%*
Don't know			
	98		*1%*
Refused	*99*		—
Mean			*(5.40)*
St. Deviation			*(3.30)*

Q35

00/01/06 13:26
65: Q36
Q36. I plan on enrolling in a computer training course not offered by my employer in the next twelve months. (00=Strongly Disagree 05=Neutral 10=Strongly Agree ENTER 2 DIGITS)
$E 00 10

N=		*1005*	*100%*
0-4			*62%*
5			*13%*
6-8			*13%*
9-10			*12%*
Don't know			
	98		—
Refused	*99*		*1%*
Mean			*(3.13)*
St. Deviation			*(3.54)*

Q36

66: Q37
Q37. The government should provide subsidies to schools in low-income areas so they can purchase computers and be connected to the Internet. (00=Strongly Disagree 05=Neutral 10=Strongly Agree ENTER 2 DIGITS)
$E 00 10

N=		*1005*	*100%*
0-4			*11%*
5			*14%*
6-8			*25%*
9-10			*50%*
Don't know			
	98		—
Refused	*99*		—
Mean			*(7.63)*
St. Deviation			*(2.90)*

Q37

67: Q38
=> +1 if QS1==02
Q38. I use the computer or email as my primary means of communicating with others during the workday. (00=Strongly Disagree 05=Neutral 10=Strongly Agree ENTER 2 DIGITS)
$E 00 10

N=		*933*	*100%*
0-4			*61%*
5			*11%*
6-8			*16%*
9-10			*12%*
Don't know			
	98		—
Refused	*99*		—
Mean			*(3.30)*
St. Deviation			*(3.60)*

Q38

68: Q39
=> +1 if QS1==02
Q39. I believe that my job will be replaced by a computer or some sort of technology within the next 3 years. (00=Strongly Disagree 05=Neutral 10=Strongly Agree ENTER 2 DIGITS)
$E 00 10

N=		*933*	*100%*
0-4			*89%*
5			*4%*
6-8			*3%*
9-10			*4%*
Don't know			
	98		*1%*
Refused	*99*		—
Mean			*(1.20)*
St. Deviation			*(2.40)*

Q39

69: Q40
Q40. If I look for another job, I plan to use the Internet to assist my job search efforts. (00=Strongly Disagree 05=Neutral 10=Strongly Agree ENTER 2 DIGITS)
$E 00 10

N=		*1005*	*100%*
0-4			*33%*
5			*18%*
6-8			*20%*
9-10			*29%*
Don't know			
	98		—
Refused	*99*		—
Mean			*(5.50)*
St. Deviation			*(3.80)*

Q40

70: Q41
Q41. The computer has changed my life for the better. (00=Strongly Disagree 05=Neutral 10=Strongly Agree ENTER 2 DIGITS)
$E 00 10

N=		*1005*	*100%*
0-4			*20%*
5			*21%*
6-8			*29%*
9-10			*29%*
Don't know			
	98		*1%*
Refused	*99*		—
Mean			*(6.22)*
St. Deviation			*(3.30)*

Q41

00/01/05 16:50
71: M42
Q42. New information technology such as the Internet is good for the economy. (00=Strongly Disagree 05=Neutral 10=Strongly Agree ENTER 2 DIGITS)
$E 00 10

N=		*1005*	*100%*
0-4			*7%*
5			*17%*
6-8			*33%*
9-10			*43%*
Don't know			
	98		*1%*
Refused	*99*		—
Mean			*(7.64)*
St. Deviation			*(2.50)*

M42

72: Q43
Q43. The new jobs created by information technology are good jobs. (00=Strongly Disagree 05=Neutral 10=Strongly Agree ENTER 2 DIGITS)
$E 00 10

N=		*1005*	*100%*
0-4			*8%*
5			*25%*
6-8			*38%*
9-10			*30%*
Don't know			
	98		*2%*
Refused	*99*		—
Mean			*(7.10)*
St. Deviation			*(2.40)*

Q43

00/01/05 17:25
95: ID1
=> D2A if QS1==02
ID1. Now I have a few questions about you and your work:

N=		*933*	*100%*
Continue	*01*	*933*	*100%*

ID1

96: D1
D1. I am going to read you a list of occupations, please tell me the one that most closely corresponds to the work you do for your primary employer.

N=			*933*	*100%*
Professional				
	01			*32%*
Managerial				
	02			*13%*
Service	*03*			*16%*
Manufacturing				
	04			*5%*
Processing	*05*			*2%*
Technical	*06*			*10%*
Clerical and sales				
	07			*10%*
Agriculture				
	08			*2%*
Other	*09*	*O*		*9%*
Don't know				
	98			*
Refused	*99*			*

D1
O_D1

00/01/05 17:21
97: D2
D2. Which best describes your current, primary employer? Is it a (READ CHOICES 1-4)....

N=		*933*	*100%*
Private, for profit business			
	01		*57%*
The government			
	02		*20%*
A non-profit organization			
	03		*11%*
Myself-I am self-employed			
	04		*12%*
Don't know			
	98		*1%*
Refused	*99*		*

D2

98: D2A
=> D4 if QS1==02
D2A. How many years in total have you been working full or part time? (ENTER 2 DIGITS)
$E 01 80

N=		*933*	*100%*
0-5 years			*20%*
6-10 years			*17%*
11-20 years			*28%*
21-30 years			*22%*
31-40 years			*10%*
41 or more years			*3%*
Don't know			
	98		*
Refused	*99*		*
Median			*(16)*
Mean			*(17.6)*
St. Deviation			*(12.2)*

D2A

99: D3
D3. How many people does the organization or company where you work employ? Is it (READ CHOICES 1-4)...

N=		*933*	*100%*
Less than 25 people			
	01		*28%*
more than 25 , but less than 100 people			
	02		*18%*
more than 100, but less than 250 people			
	03		*11%*
more than 250 people			
	04		*43%*
Don't know			
	98		*1%*
Refused	*99*		*

D3

100: D4
QD4. What was the last grade of school you completed?

N=		*1005*	*100%*
Grade school or less (0-8)			
	01		*1%*
Some high school (9-11)			
	02		*5%*
High school (12)			
	03		*28%*
Some college (1-3 years)			
	04		*27%*
College grad (4 years)			
	05		*23%*
Post graduate (beyond 4 years)			
	06		*16%*
Don't know			
	98		—
Refused	*99*		*

D4

101: D5
D5. [Age]

N=	*1005*	*100%*
18-29		*26%*
30-49		*53%*
50-64		*19%*
65 and over		*3%*
Don't know 1998		*
Refused 1999		*2%*

D5

102: D6
D6. [Total Household Income]

N=	*1005*	*100%*
Under $10,000		*2%*
$10,000 to less than $20,000		*8%*
$20,000 to less than $30,000		*11%*
$30,000 to less than $40,000		*11%*
$40,000 to less than $50,000		*15%*
$50,000 to less than $75,000		*21%*
$75,000 or more		*26%*
Don't know		*1%*
Refused		*3%*

D6B

105: D7
D7. Are you black, white, Hispanic, Asian, Native American or something else?

N=			*1005*	*100%*
Black	*01*			*9%*
White	*02*			*76%*
Hispanic	*03*			*6%*
Asian	*04*			*2%*
Native American	*05*			*1%*
Other-SPECIFY	*06*	*O*		*2%*
Biracial	*07*			*1%*
Don't know	*98*			*
Refused	*99*			*2%*

D7
O_D7

109: QD8
=> END if QS1>=03
QD8. GENDER BY OBSERVATION

N=		*1005*	*100%*
Male	*01*		*54%*
Female	*02*		*47%*

QD8

00/01/07 9:20

Notes:
Results reported reflect weighted percentages and unweighted sample sizes
***% Indicates less than .5% of responses in category**
— Indicates no responses in category
Percentages of all responses to a question may add to more than 100% because of rounding.

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