

THE UCLA INTERNET REPORT

Surveying the Digital Future

UCLA Center for Communication Policy

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Surveying the Digital Future

Jeffrey I. Cole, Ph.D.

Director, UCLA Center for Communication Policy

Founder and Organizer, World Internet Project

Michael Suman, Ph.D., research director

Phoebe Schramm, associate director

Daniel van Bel, research analyst

Bob Lunn, Ph.D., research analyst

Phyllisann Maguire, Ph.D., research analyst

Koren Hanson, graduate associate

Rajesh Singh, graduate associate

Jedrix-Sean Aquino, research assistant

Written by Harlan Lebo

Design by Robin Weisz

Production editing by Monica Dunahee

THE UCLA INTERNET REPORT

“Surveying the Digital Future”

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QUESTIONS

E-mail: internet@ucla.edu
UCLA Center for Communication Policy
Box 951586
Los Angeles, CA 90095-1586
(310)825-3711
www.ccp.ucla.edu

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THE UCLA INTERNET REPORT:

Surveying the Digital Future

Welcome to the first UCLA Internet Report, “Surveying the Digital Future.” This project – in planning for four years and now the result of more than nine months of field research, data gathering, and analysis – was created to serve as a comprehensive, year-to-year examination of the impact of the Internet. Our goal is to explore how the Internet influences social, political, cultural, and economic behavior and ideas, as measured by the attitudes, values, and perceptions of both Internet users and non-users.

We believe that the UCLA study and its partner projects around the world will create a benchmark of the global effects of the Internet in the broadest terms. The Internet represents the most important technological development of our generation; its effects may surpass those of television and could, over the decades, equal the influence of the printing press. We hope our findings about the Internet will have broad implications for government policymaking, corporate planning, and social and cultural study. To begin this project now is critical if we hope to fully understand the Internet as it evolves. Had this type of research been conducted on the evolution of television as it emerged in the late 1940s, the information would have provided policy makers, the media, and ultimately historians with invaluable insights about how broadcasting has changed the world.

Our objective is to ensure that the UCLA Internet Project and its yearly report capitalize on the opportunity that was missed as television evolved. This way we can better understand the effects of the Internet as it grows, and not as a postscript after it has already matured. (For the research methods used in this project, see page 49.)

To achieve this objective, we surveyed 2,096 households across America, comparing Internet users with non-users. Each year we will contact the same individuals to explore how the role of Internet technology evolves in the lives of those who are continuing users, those who remain non-users, and those who move from being non-users to users. We will also be noting changes as continuing users move from modem to broadband. (Note: the household is the point of contact. We are interested in changes in the household, but we also investigate how the Internet affects many other realms of life.)

The project is not restricted to any particular method of accessing the Internet. As methods of access – such as wireless or methods yet unknown – become available, the project will track them. Also, the project is not restricted to the Internet in its present form, and will monitor online technology as it transforms in yet-unexpected ways.

WHY A COMPREHENSIVE REPORT ON THE INTERNET?

Already we have seen other studies that examine the Internet, whether from a business, political or academic viewpoint. The UCLA project differs greatly from others in these ways:

- **The UCLA project looks at the social impact of the Internet**

Most studies of the Internet thus far have compiled data about who is online, how long they are online, and what they do online. The UCLA Internet Project also compiles such data, but then examines the implications of the use of online technology, and links this use to a broad range of attitudes and behavior. The UCLA study is the first project that comprehensively tracks shifts in a wide range of behavior, attitudes, values, and perceptions.

- **Equal focus on Internet users and non-users**

Other surveys of the Internet focus almost exclusively on users of the technology. One of the principal goals of the UCLA Internet Project is to identify how the behavior and views of Internet users differ from those of non-users. Especially important will be noting the changes in behavior and views of individuals who are initially non-users and later become users, and of modem users as they move to broadband.

- **Year-to-year data**

While one-time surveys have been conducted of specific aspects of the Internet, the UCLA Internet Project will comprehensively examine the effect of this communication technology over the course of many years – ideally an entire generation. The research team will maintain a core sample of respondents with as little replacement as possible to track short- and long-term changes in behavior, lifestyle, and Internet use.

- **A worldwide effort**

The UCLA Center for Communication Policy created and organizes the World Internet Project, which includes the UCLA Internet Project and similar studies in countries worldwide. Through this working team of international partners, the World Internet Project will be able to study and compare changes associated with the Internet in different countries and regions. The results will represent an international picture of change related to the Internet.

The first year of the World Internet Project will focus on the United States, Hong Kong, Italy, Japan, Singapore, Sweden, and Taiwan. Beginning in 2001, the project will expand to an additional 15 countries, including China, Australia, Germany, France, Great Britain, Hungary, Finland, Russia, India, and Brazil.

- **One of the principal goals of the UCLA Internet Report is to engage government and private industry decision-makers who can create policy based on our findings**

Throughout the planning of the project, our goal was to enlist the support of public and private organizations that are committed to using our results. We organized an unprecedented alliance of corporations – several of which are direct competitors – and foundations, including the National Science Foundation, America Online, Microsoft, Disney, Sony, Verizon, Pacific Bell, DirecTV, Merrill Lynch, Andersen Consulting, and the National Cable Television Association.

We hope you will be enlightened by the findings in “Surveying the Digital Future” and the studies to follow, as we work to understand how the Internet is transforming our world.

Jeffrey I. Cole, Ph.D.
Director, UCLA Center for Communication Policy
Founder and Organizer, World Internet Project

THE INTERNET: THE DEFINING TECHNOLOGY OF A GENERATION

In 1969, it would have been nearly impossible to imagine that a fledgling experiment in computer interface that began at UCLA and other research institutions could one day emerge as the defining technology of a generation. Yet in the 31 years since the events that led to the creation of the Internet, this technology has become the fastest growing electronic communication tool as we begin a new millennium. The Internet has the potential to provide more communication power, purchasing capability, and knowledge gathering outreach than print and electronic media combined.

Even more astonishing is that most of the Internet's growth has occurred in less than seven years. In January 1994, when the UCLA Center for Communication Policy, the Academy of Television Arts and Sciences, and Vice President Al Gore hosted the first "Information Superhighway" conference, the Internet had little immediate relevance in the daily lives of Americans. In spite of bold statements at the conference about the future of the Internet, to many computer users, online technology seemed only a modest and relatively unimportant service with little to supplement the basic usefulness of a PC. The prediction that the Internet would become a powerful, interactive tool for commerce, education, cultural enlightenment, and personal relationships was only a modestly interesting subject of discussion for most Americans – if it was of interest at all.

Yet by 1997, some 19 million Americans were using the Internet. That number *tripled* in one year, and then passed 100 million in 1999.

Even after five years of explosive growth, Internet new enrollment remains high. In the first quarter of 2000, more than five million Americans joined the online world – roughly 55,000 new users each day, 2,289 new users each hour, or 38 new users each minute.

Equally swift has been the increased media coverage of the Internet – exposure that has accelerated public acceptance and understanding of online technology. The word "Internet" was essentially unknown in the news before the mid-1980s, and appeared in *all* major American media only 346 times in 1990. By 1995, the number of references to the Internet in all major media had increased to only 70,944. References increased to 219,866 in 1997, then to 529,343 by 1999, and passed 700,000 in the first three quarters of 2000.

The technology that supports the Internet is expanding with virus-like speed. The Internet's capacity to carry information doubles every 100 days. Earlier this year, the number of online, indexable documents passed the one billion mark. Every 24 hours, the content of the Worldwide

Web increases by more than 3.2 million new pages and more than 715,000 images. Late last year, the total number of hits on U.S. web pages passed the one billion per day mark.

E-mail, perhaps the most basic of online services, continues to grow beyond all expectations, and with its expansion come intriguing new questions about how interpersonal communication and commerce are changing. The number of electronic mailboxes worldwide jumped 84 percent to almost 570 million in 1999. While in 1998 the U.S. Postal Service delivered 101 billion pieces of paper mail, estimates of the number of e-mail messages transmitted that year range as high as four trillion.

The Internet has become the fastest growing electronic technology in world history. In the United States, for example, after electricity became publicly available, 46 years passed before 30 percent of American homes were wired; 38 years passed before the telephone reached 30 percent of U.S. households, and 17 years for television. *The Internet required only seven years to reach 30 percent of American households.*

The rapid evolution of any technology naturally raises questions about both its potential benefits and possible negative consequences. This is especially true of the Internet; its breakneck growth and powerful interactive capabilities have inspired a national dialogue in the media, among legislators, and among public interest groups. Issues in this broad discussion of the Internet include questions about children and access to online material, potential online threats to personal privacy, the "digital divide," the effects of the Internet on family involvement and social organizations, gender differences in use and access, credit card security, and the effects of online sales on traditional retailing.

Looking beyond the rhetoric, we have categorized the findings for the 2000 report into five broad areas:

1. Internet use and non-use: who is online, who is not, what are users doing online?
2. Media use and trust
3. Consumer behavior
4. Communication patterns
5. Social and psychological effects

We focus on these broad issues in the first UCLA Internet Report, as we begin our year-to-year study of what may be the defining technology of our generation.

EXECUTIVE SUMMARY

The UCLA Internet Project created a baseline profile of behavior and attitudes about Internet use and non-use. The initial UCLA Internet Report paints a portrait of a society that uses online technology extensively without sacrificing their personal and social lives, yet deeply rooted problems still exist that have long-range implications for this powerful technology.

Highlights of the UCLA Internet Report include:

INTERNET ACCESS

- More than two-thirds of Americans have some type of access to the Internet. (Page 10.)

MOST POPULAR INTERNET ACTIVITIES

- The most popular Internet activities are Web surfing, e-mail, finding hobby information, reading news, and finding entertainment information. (Page 10.)

BUYING ONLINE

- More than half (50.7 percent) of Internet users have purchased online. (Page 10.)

E-MAIL: HOW OFTEN DO YOU USE IT?

- In less than a decade, e-mail has become a fundamental communication tool in America.
- 42 percent of Americans use e-mail every day. (Page 25.)

HAS COMMUNICATION TECHNOLOGY MADE THE WORLD A BETTER PLACE?

- Nearly two-thirds of users and nearly half of non-users believe that new communication technologies including the Internet have made the world a better place. (Page 19.)

ARE USERS SATISFIED OR DISSATISFIED WITH THE INTERNET?

- Users of the Internet are generally satisfied with the technology, with the Internet overall achieving a rating of 4.0 on a scale of 1 to 5. (Page 20.)

INFORMATION ON THE INTERNET: IS IT RELIABLE AND ACCURATE?

- Only about half (54.7 percent) of Internet users and one-third of non-users believe that most or all online information is reliable and accurate. (Page 22.)

PRIVACY

- Privacy has emerged as the subject in the UCLA Internet Report that raises the greatest concern about the Internet among both users and non-users. In several questions, respondents express considerable concern that using the Internet creates risks to individual privacy.
- When asked if “people who go online put their privacy at risk,” almost two-thirds (63.6 percent) of Internet users and more than three-quarters (76.1 percent) of non-users either agree or strongly agree. (Page 32.)

WILL NON-USERS BECOME USERS?

- 41.4 percent of non-users say they are likely to access the Internet in the next year. The older the non-users, the less likely they are to say they will access the Internet. (Page 15.)
- When asked why they are not online, one-third of non-users are “not interested.” (Page 22.)

COMPUTER COST: A MAJOR ISSUE FOR NON-USERS?

- 16.8 percent of Internet non-users say they would not purchase a computer at any price.
- Many non-users would be in the market for a first computer – if the price is right. Only 9.1 percent of non-users say they don’t use the Internet because it is “too expensive.” (Page 23.)

CHILDREN AND THE INTERNET

- Adults say that children spend about the right amount of time online, that grades are not affected, and that Internet use does not cause social isolation from friends. (Page 26.)
- Both users and non-users agree at nearly identical levels that children can gain access to “a lot of inappropriate material” on the Internet. (Page 24.)

ADULT SUPERVISION OF CHILDREN ON THE INTERNET

- Adults report that they keep a close eye on children’s Internet use, or that they acquire software to help them manage the children’s access to information. (Page 28.)

THE INTERNET AND THE HOUSEHOLD

- In its first five years of broad public use, the Internet has become a shared household activity. Nearly half (47.1 percent) of users report spending at least some time each week using the Internet with other household members. (Page 29.)
- Concerns that the Internet reduces household time together appear nearly groundless. Nearly all users (91.8 percent) say that since being connected to the Internet at home, members of the household spend about the same amount of time together or more time together. (Page 30.)

MEDIA USE: TELEVISION VS. THE INTERNET

- Internet users watch significantly less television than non-users. Users and non-users spend about the same amount of time talking on the telephone, and reading books and newspapers, but users watch 28 percent (4.6 hours per week) less television than non-users. (Page 18.)

SOURCES OF INFORMATION AND ENTERTAINMENT

- After little more than five years as a widespread communication tool, the Internet is viewed as an important source of information by users.
- More than two-thirds of Internet users (67.3 percent) consider the technology to be an “important” or “extremely important” source of information for them, while 53.1 percent of those surveyed rank television and 46.8 percent rank radio at the same level. (Page 33.)

ONLINE FRIENDS

- Some users have friends known only online, while others have created in-person friendships that began on the Internet, thus making the Internet a new source of social contact. (Page 34.)

POLITICAL POWER AND INFLUENCE

- Respondents say the Internet can be an important resource for gathering information about political issues, but is still emerging as a tool that can create more political power, or influence political decisions and government officials. (Page 31.)

VIEWS ABOUT ONLINE CONTACTS AND FRIENDSHIPS

- The Internet is a catalyst for creating and maintaining friendships. Respondents say the Internet has had a modestly positive impact on both increasing contact with others and communicating more with family. (Page 34.)

THE INTERNET AT WORK: EMPLOYER MONITORING OF E-MAIL AND INTERNET USE

- 48.6 percent of users say that their use of e-mail is monitored by employers, and 54.1 percent say that their use of the Web is monitored. (Page 38.)

SHOPPING ON THE INTERNET

- More than half of all Internet users (50.7 percent) have purchased online.
- 8.9 percent of purchasers buy online weekly; 28.5 percent of purchasers shop monthly.
- A very small group of users is responsible for a large proportion of purchasing; 4.5 percent of all Internet users are responsible for 31.4 percent of all online purchases. (Page 41.)

WHY SHOP ON THE INTERNET?

- Respondents say that what they like most about online shopping is convenience; next is “saving time,” followed by “availability of information about goods and services.”
- Purchasers cite increasingly positive views as their purchasing frequency increases, and as they spend more online. (Page 42.)

WHY NOT SHOP ONLINE?

- Internet purchasers do have concerns that may discourage them from shopping online, and privacy is at the top of the list. (Page 43.)

THE INTERNET: LOWER PRICES?

- While many e-commerce sites claim they offer a price advantage over traditional retail stores, a large majority of Internet users don't think so, whether they purchase online or not. (Page 47.)

ONLINE PURCHASING: DOES IT AFFECT RETAIL BUYING?

- Nearly two-thirds of Internet purchasers (65.1 percent) say that online purchasing has at least somewhat reduced their purchases from retail stores.
- The more frequently users buy online, the more they shift away from stores. (Page 47.)

CREDIT CARD SECURITY ON THE INTERNET

- Nearly all Internet users (91.2 percent) are concerned about credit card security.
- Concern about credit card security drops substantially as online purchases increase, and as both Internet use and experience increase. (Page 44.)

THE UCLA INTERNET REPORT:

Surveying the Digital Future

INTERNET ACCESS AND USE

Who is using the Internet? Where do users access it? Which services do they use?

The first step in this project was to create a baseline portrait of Internet use and non-use. The UCLA Internet Project found that more than two-thirds of Americans have access to the Internet:

INTERNET ACCESS (FINDINGS BASED ON 2,096 RESPONDENTS)

■ Americans who use the Internet	66.9%
■ Students who use the Internet at school	55.3%
■ Users of the Internet at home	46.9%
■ Employed who use the Internet at work outside the home	42.3%
■ Use the Internet at a friend or relative's home	19.8%
■ Use the Internet at public libraries	9.6%
■ Use the Internet elsewhere	2.4%

THE TOP TEN MOST POPULAR INTERNET ACTIVITIES (PERCENT OF INTERNET USERS):

1. Web surfing or browsing	81.7%
2. E-mail	81.6%
3. Finding hobby information	57.2%
4. Reading news	56.6%
5. Finding entertainment information	54.3%
6. Buying online	50.7%
7. Finding travel information	45.8%
8. Using instant messaging	39.6%
9. Finding medical information	36.6%
10. Playing games	33.0%

HOW LONG AS INTERNET USERS?

■ Less than 1 year	21.4%
■ 1-2 years	39.4%
■ 2-4 years	23.4%
■ 4+ years	15.8%

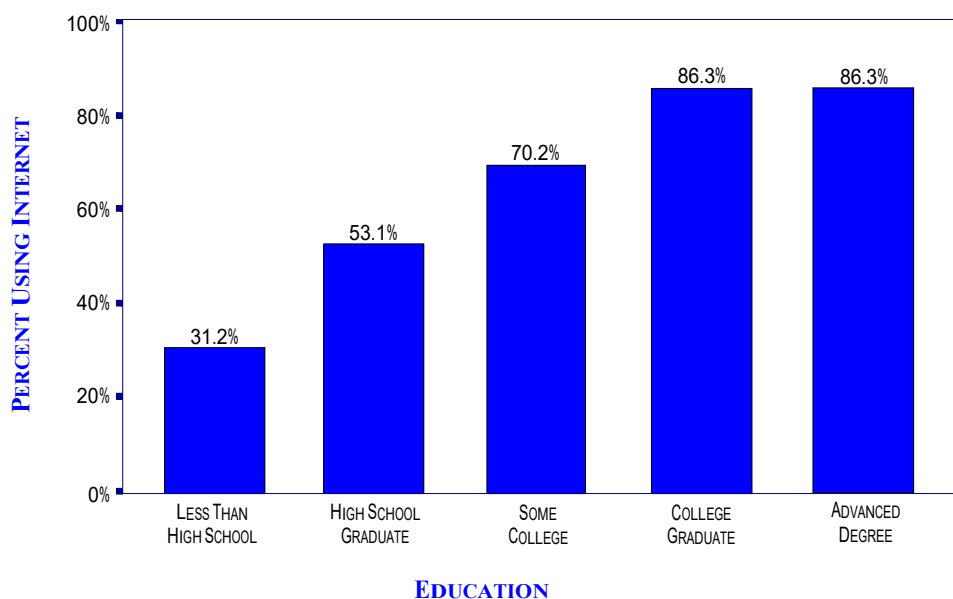
ONLINE SPENDING PER MONTH (PERCENTAGE OF PURCHASERS ONLY)

■ \$0-\$15	21.5%
■ \$15-\$175	59.8%
■ \$175+	18.7%

Who Is Using The Internet?

EDUCATION, INCOME, AND INTERNET ACCESS

In general, the higher the education level achieved by respondents, the more likely they are to use the Internet. The very highly educated have correspondingly high levels of use: 86.3 percent of those with either an undergraduate college degree or an advanced degree use the Internet.

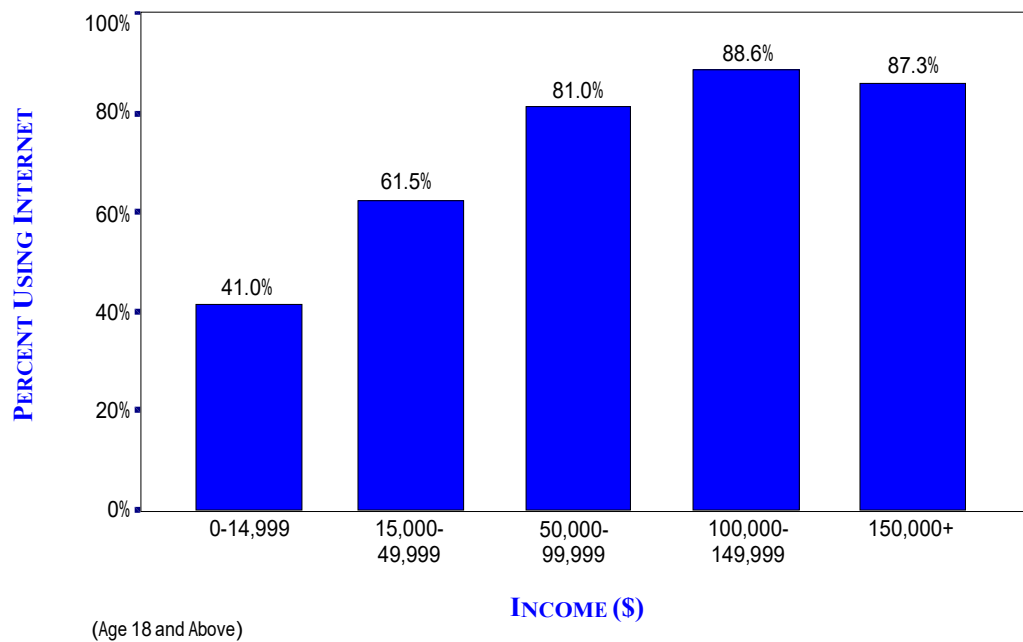


(Age 18 and Above)

Similarly, the higher the income level, the higher the proportion of those who use the Internet. More than 80 percent of respondents with \$50,000-plus incomes use the Internet.

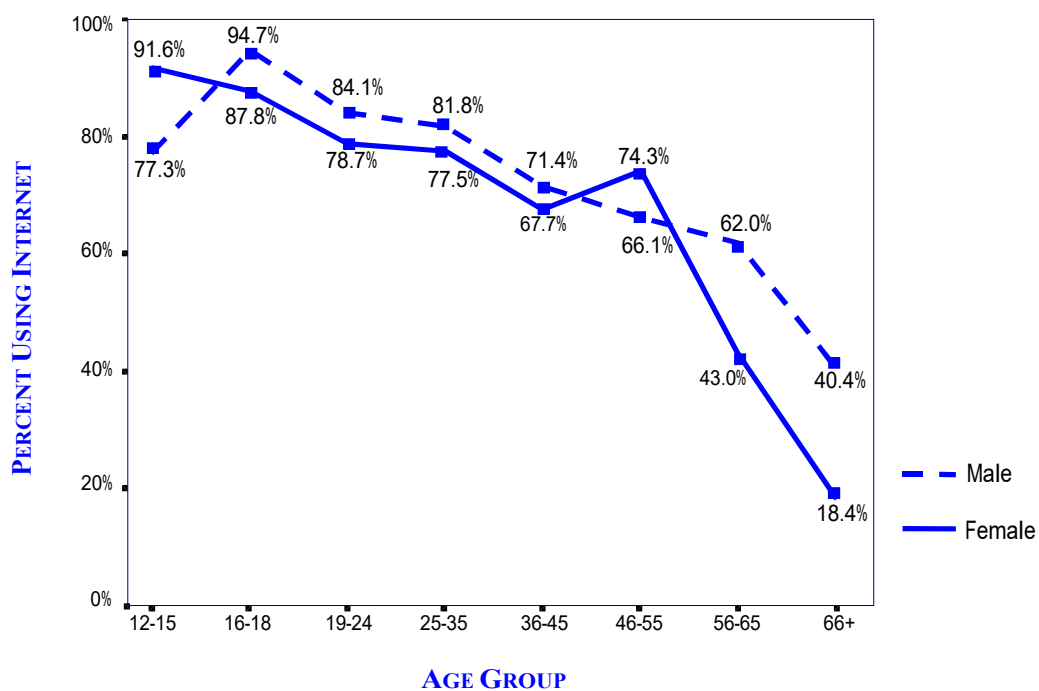
However, the Internet is far from being a bastion of highly educated, well-paid users. While the vast majority of high education/high income respondents use the Internet, those with less education and lower incomes log on in impressive numbers. More than half (53.1 percent) of

those with only a high school education are users. Some 60 percent of adults with incomes of \$15-49,000 use the Internet, and 41 percent of adults with incomes under \$15,000 are users.



BOYS AND GIRLS, MEN AND WOMEN

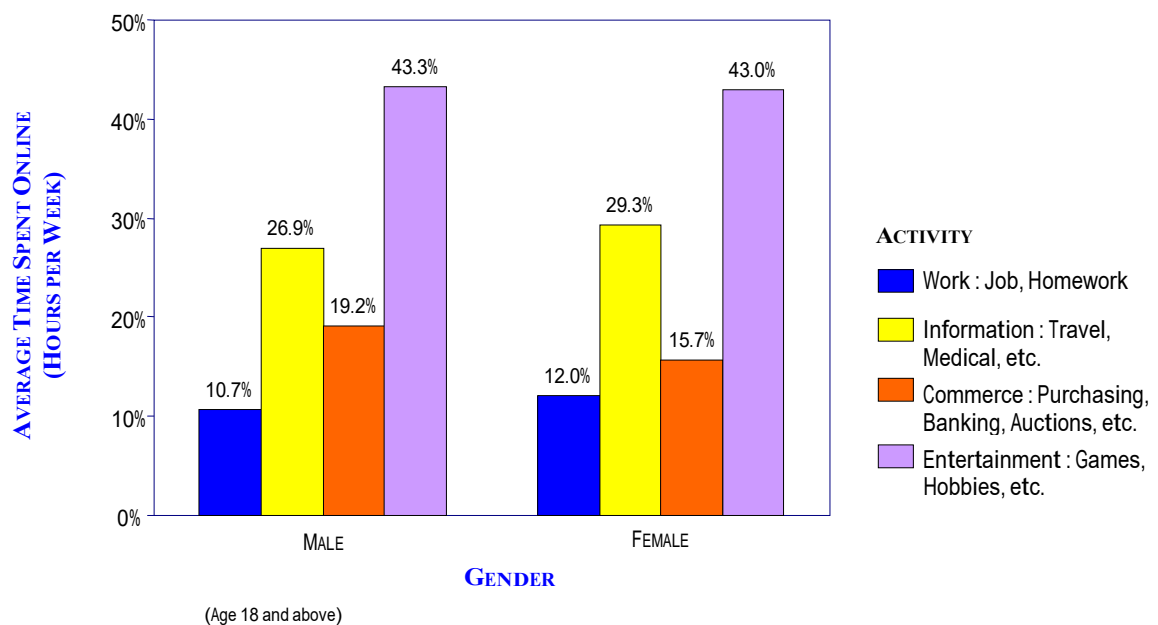
While overall, men have more access and spend more time online than women do, in some age ranges, a higher percentage of women than men use the Internet.



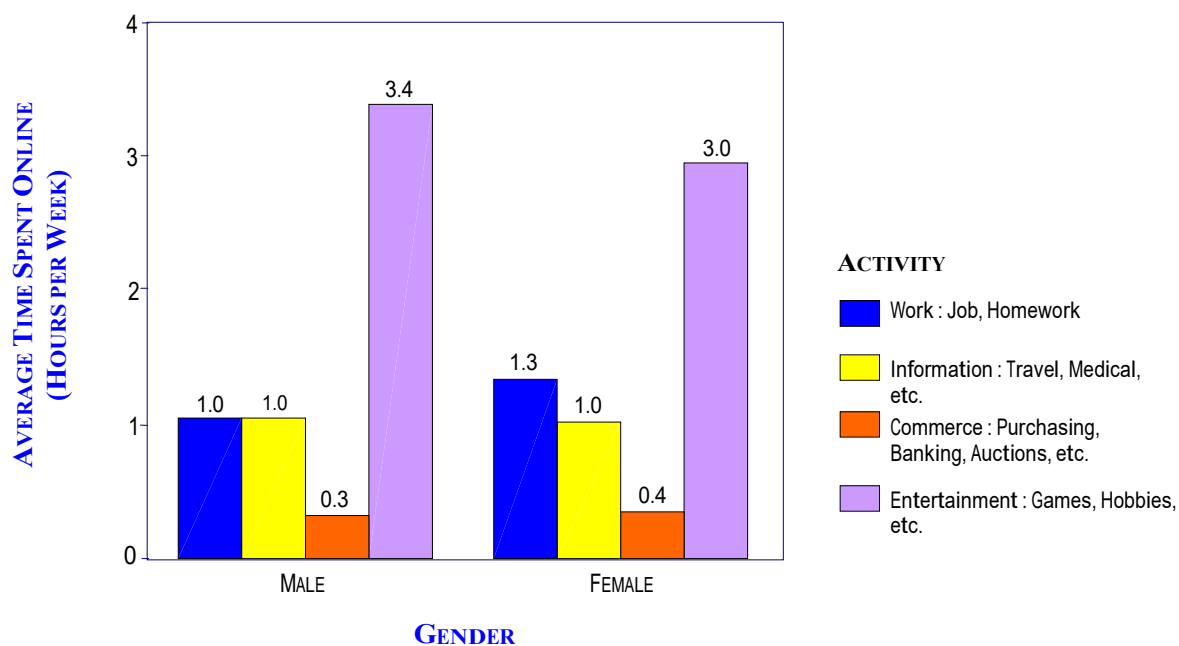
Girls ages 12-15 are somewhat more likely to have access to the Internet than boys in the same age group. By the later teen years, boys are slightly more likely than girls to have access. The male edge is maintained until ages 45-55 when women are more likely to have access. Above this range, men are again more likely to have access than women.

The presence of children in the household is associated with higher levels of access for women, but not men. Women in households with children have more access to the Internet than women in households without children: 70.2 percent of women in homes with children have Internet access, while only 56.6 percent of women in households without children have Internet access. (The presence of children in the home has little or no influence on the likelihood that men will have access.)

Gender also plays a role in how the Internet is used. While the percentage of time that men and women spend on entertainment is nearly equal, women spend a slightly higher percentage of their time online for school homework or their jobs, while men spend a higher percentage of their time on commerce (purchasing, banking, auctions).



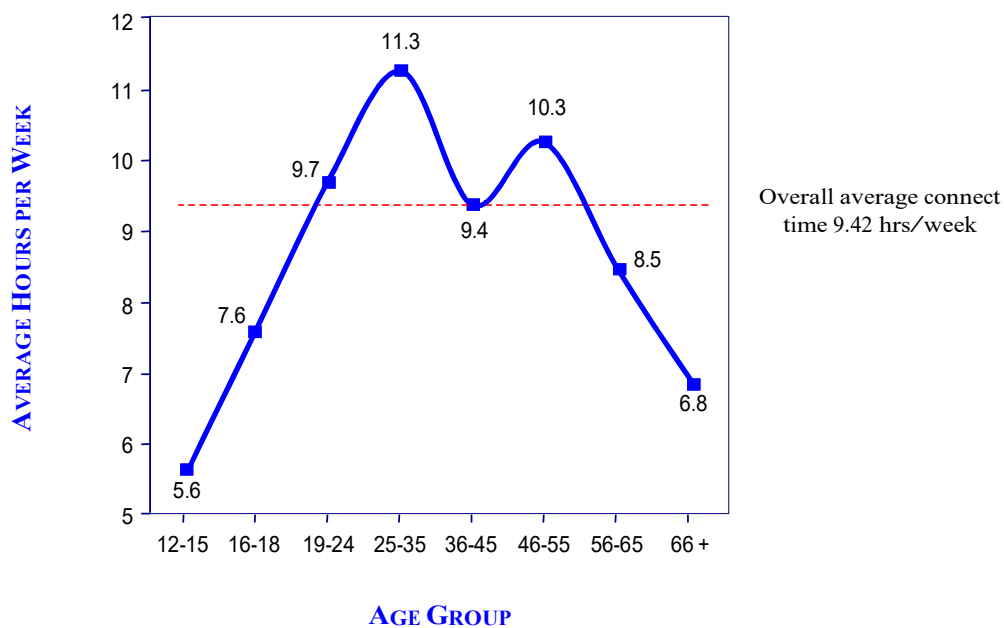
Boys ages 12-17 spend more time online playing games, while girls in the same age group spend more time on schoolwork.



(Age 12 - 17 years)

AGE

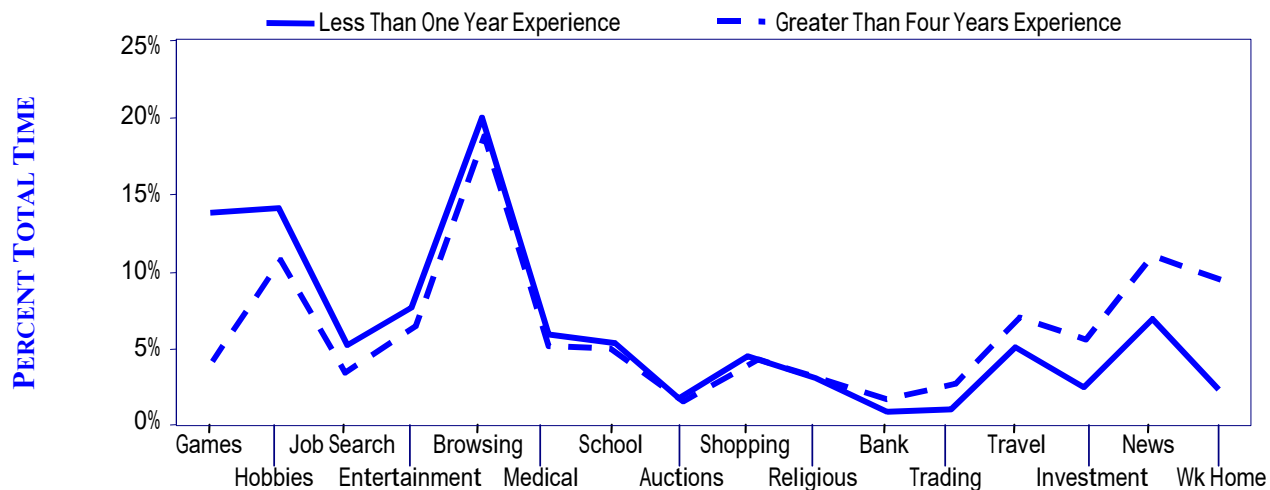
Contrary to conventional wisdom, Internet use is not dominated by young people. Between the ages of 12 and 35, the average weekly Internet connect time increases with age. This steady increase can be largely attributed to use of the Internet at work.



INTERNET USE AND EXPERIENCE

How people use the Internet varies, in part, with the amount of experience online.

The most experienced Internet users in the project (more than four years of access) spend a larger amount of time online working at home, looking for news, trading stocks, and making investments. Less experienced Internet users (less than one year of access) spend more time playing games and pursuing hobbies.



<1 Yr Experience	13.8	14.2	5.3	8.1	20.1	5.9	5.4	1.8	4.5	3.0	0.8	1.0	5.0	2.3	6.9	2.1
>4 Yrs Experience	4.1	10.7	3.5	6.4	19.1	5.3	4.9	1.5	4.3	3.2	1.5	2.6	7.1	5.4	10.8	9.5

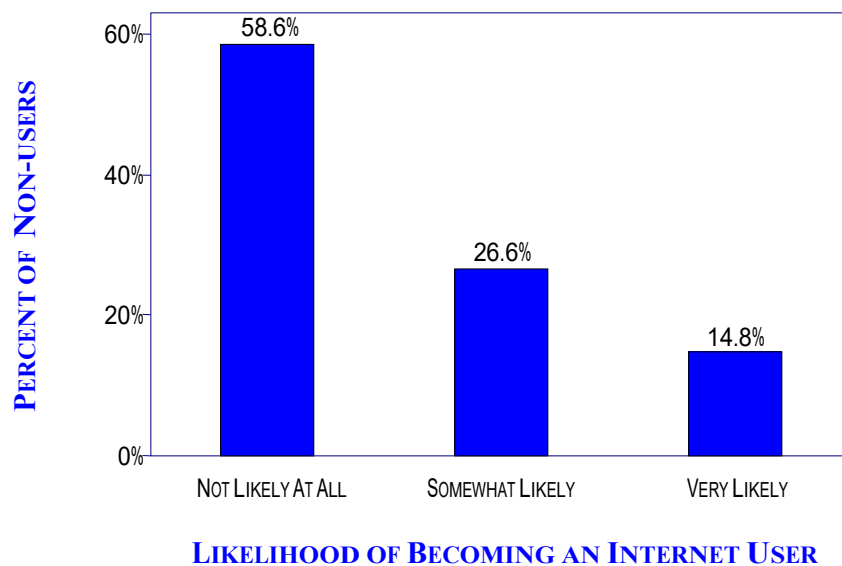
ELECTRONIC DROPOUTS

A noteworthy percentage of Internet non-users (10.3 percent) are dropouts – once online users at least once a month, but no longer.

INTERNET ACCESS: WILL NON-USERS LOG ON SOON?

Will Internet use continue to grow? Of the nearly one-third (32.1 percent) of respondents who do not currently have Internet access, 41.4 percent say they are somewhat likely or very likely to have access within the next year.

However, well over half (58.6 percent) of non-users say they are not likely to access the Internet in the next year.



The older the non-users, the less likely they are to say they will access the Internet. About 45 percent (44.3) of those stating they are not likely to access the Internet in the next year are greater than 56 years old, followed by those 36-55 (33.7 percent), and those 12-35 (22 percent).

For reasons why non-users do not use the Internet, see page 24.

WHERE DO YOU CONNECT TO THE INTERNET?

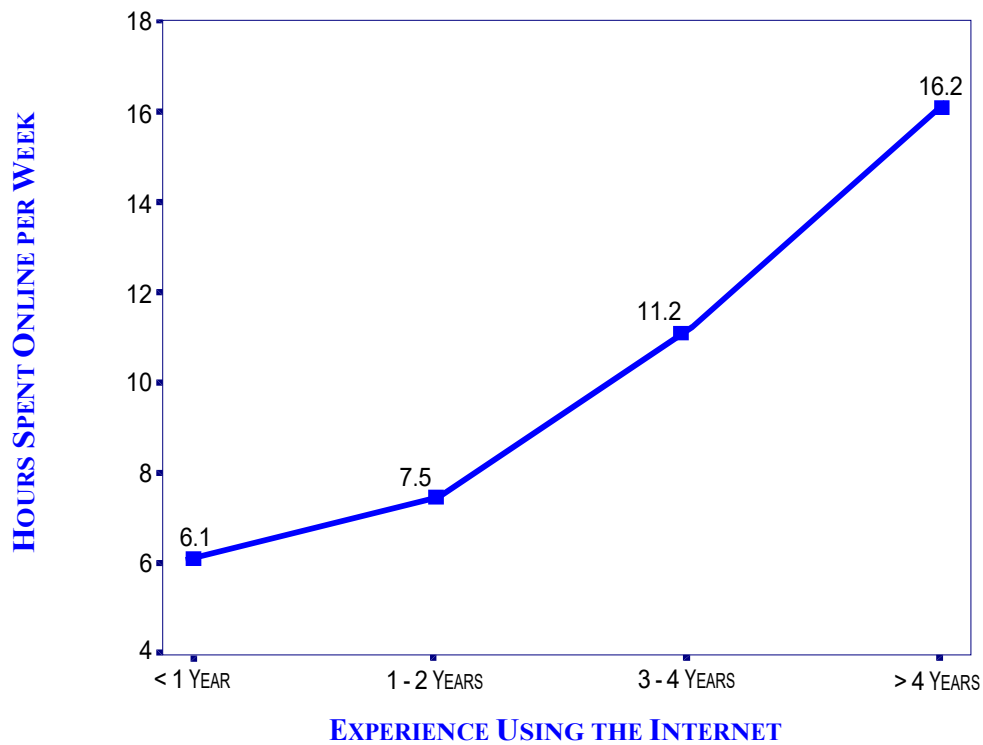
The project asked where Internet access occurs. The study found that 46.9 percent of Americans had Internet access in their homes in the first half of 2000.

The project also determined where primary access – defined as 75 percent or more of total access time – occurs. The most common location for users' primary access to the Internet is at home (43 percent of users). The workplace ranks second as the primary access location for 18 percent of users.

For users under 18, the home provides the highest level of primary Internet access (38 percent), followed by school (19.1 percent), and a friend or relative's home (18.3 percent).

USERS: TIME ON THE INTERNET

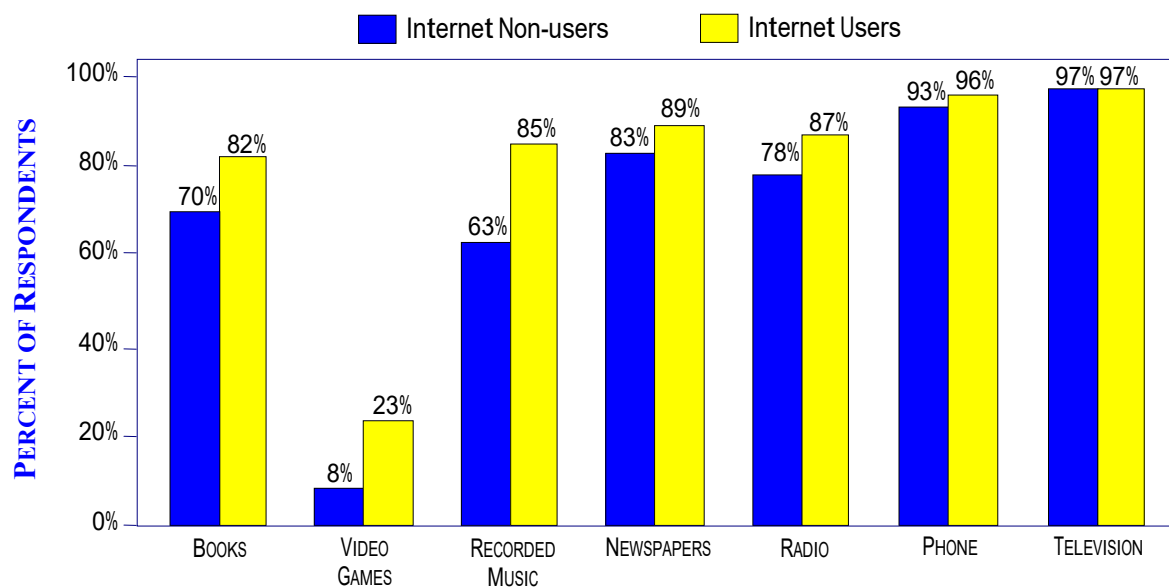
Not surprisingly, the more experience users have with the Internet, the more time they spend online. The differences are large; those with more than four years of Internet experience use the Internet more than 2.5 times as much (16.2 hours a week) as those with less than one year of experience (6.1 hours a week).



MEDIA USE

Is Internet use replacing the use of other media? As a starting point, the project found that Internet users employ substantially more media in general than non-users.

This chart shows the percentage of respondents who use various media:



Although Internet users and non-users have access to television in equal numbers (97 percent), the number of hours spent watching each week varies considerably between users and non-users.

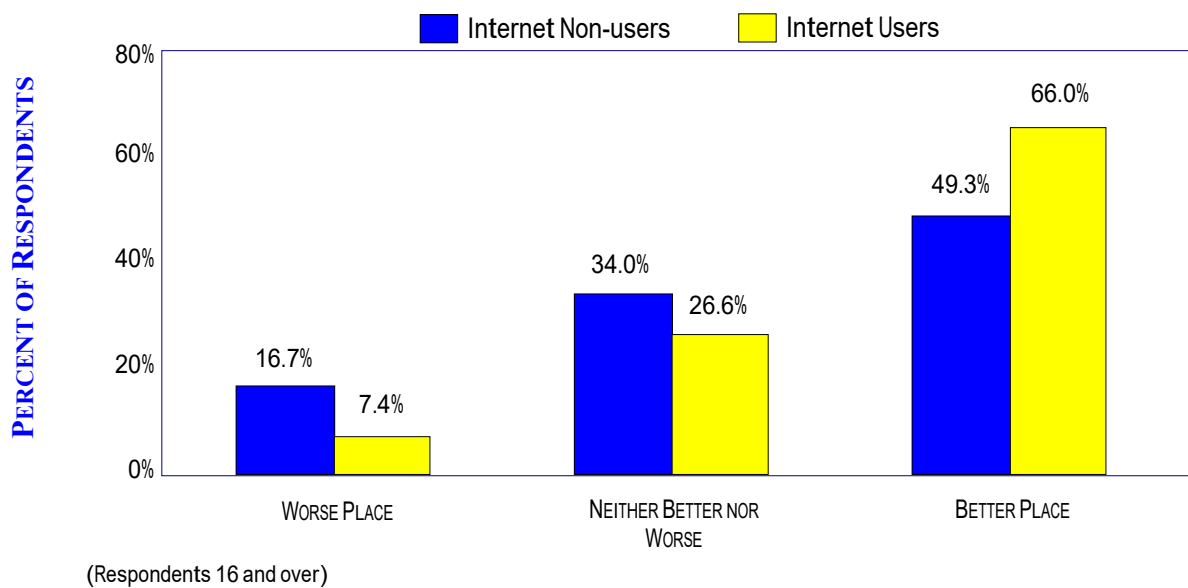
Internet users watch significantly less television than non-users. Users and non-users spend roughly the same amount of time reading books and newspapers, and talking on the telephone; however, users watch 28 percent (4.6 hours per week) less television than non-users.

VIEWS ABOUT THE INTERNET

The UCLA Internet Project identified and analyzed a broad range of views associated with Internet use and non-use.

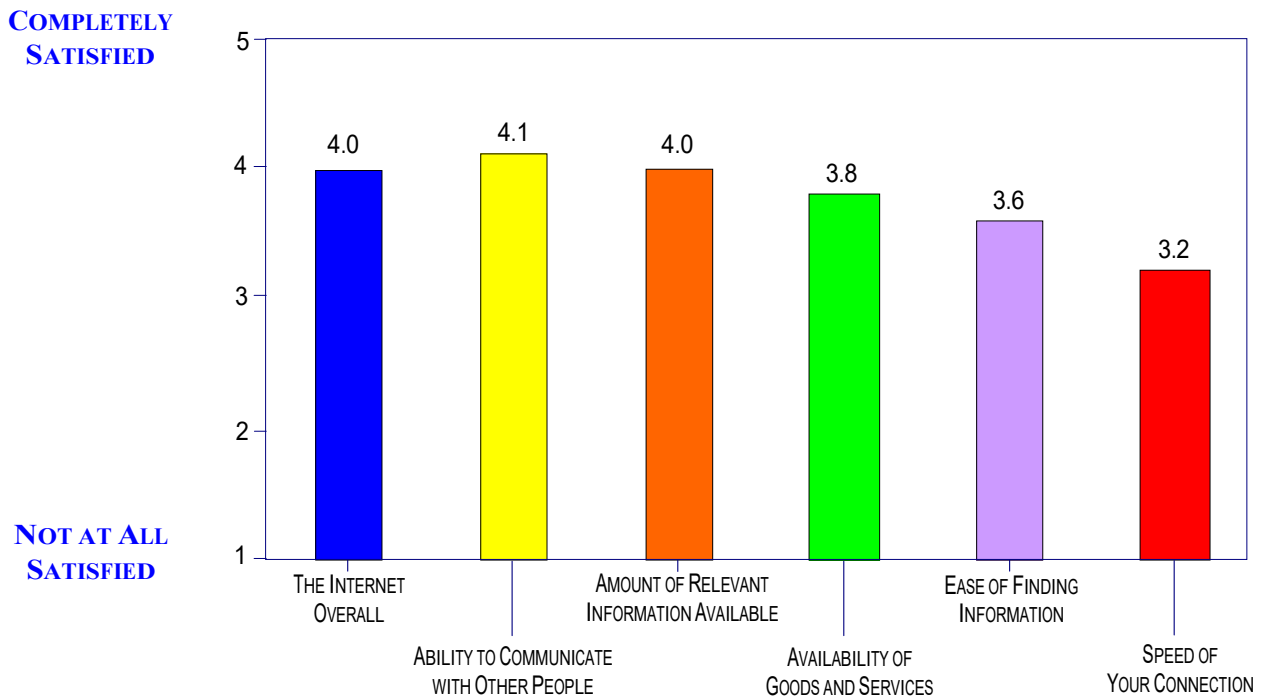
HAS COMMUNICATION TECHNOLOGY MADE THE WORLD A BETTER PLACE?

Nearly two-thirds (66.0 percent) of users and nearly half (49.3 percent) of non-users believe that new communication technologies including the Internet have made the world a better place.



ARE USERS SATISFIED OR DISSATISFIED WITH THE INTERNET?

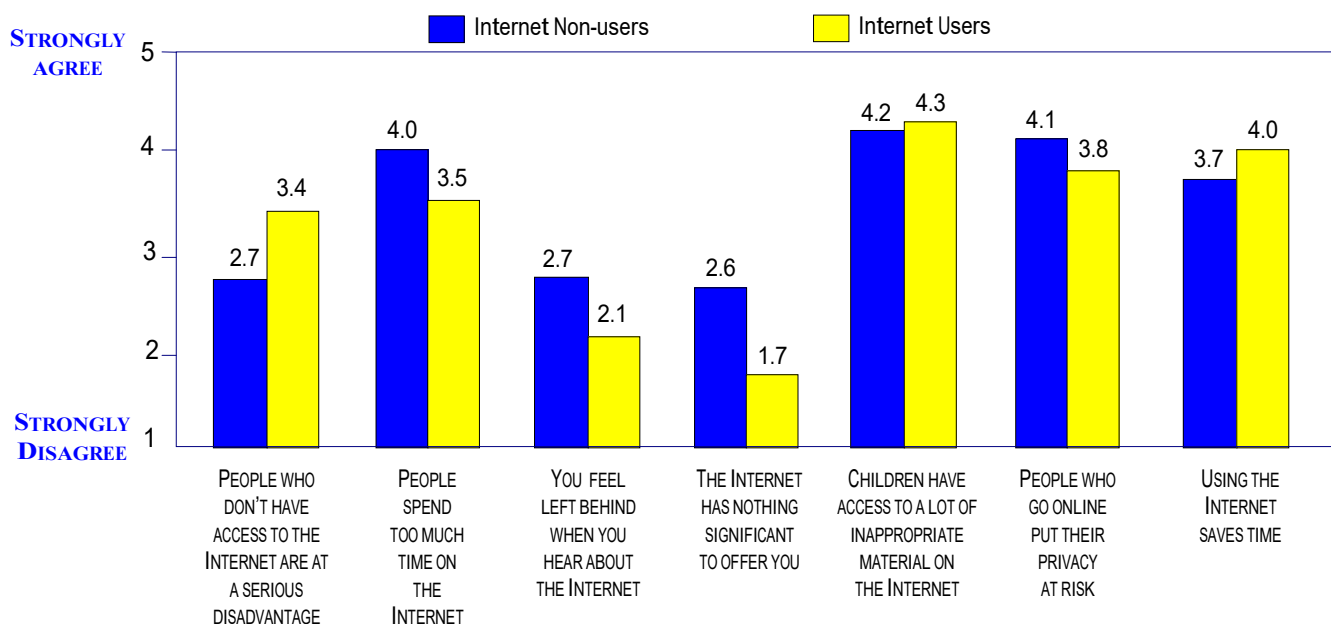
Overall, users of the Internet are satisfied with the technology, with the Internet overall achieving a rating of 4.0 on a scale of 1 (not satisfied at all) to 5 (completely satisfied). Users are most satisfied with the Internet as a communication tool. They are also satisfied with the amount of relevant information available online, the availability of goods and services, and the ease of search methods.



BELIEFS ABOUT THE INTERNET

The survey asked seven questions that explore personal views and attitudes about the Internet. Among the most noteworthy findings:

- Both users and non-users agree at nearly identical levels that children can gain access to “a lot of inappropriate material” on the Internet. On a scale of one (strongly disagree) to 5 (strongly agree) Internet users’ average response was 4.3 and non-users’ average response was 4.2. This is the highest level of agreement in this series of seven questions.
- Non-users and users (to a lesser degree) agree that “people who go online put their privacy at risk.” (For more a more detailed look at the question of privacy, see page 32.)
- Both users and non-users agree that using the Internet saves time, but also agree that people spend too much time on the Internet.
- Both users and non-users disagree that “the Internet has nothing significant to offer you.” Users, not surprisingly, especially disagree with this statement.

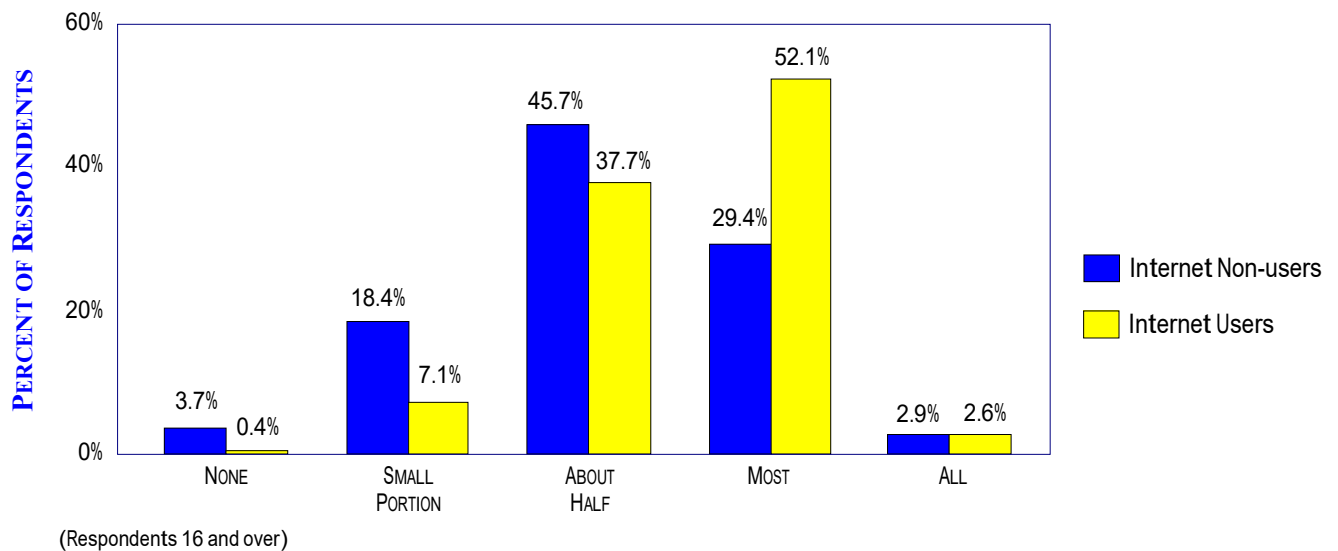


INFORMATION ON THE INTERNET: IS IT RELIABLE AND ACCURATE?

Users and non-users report some disagreement about the reliability and accuracy of information on the Internet. Internet non-users are less likely than users to believe that the information on the Internet is reliable and accurate. *But even among users, only a little more than half (54.7 percent) believe that most or all online information is reliable and accurate. And, only one-third of non-users share that opinion.*

At the negative extreme, 22.1 percent of non-users believe that “none” or a “small portion” of information on the Internet is reliable and accurate, compared to 7.5 percent of users. And, substantial numbers of users (35.7 percent) as well as non-users (45.7 percent) say that only “about half” of information on the Internet is reliable.

This chart shows how much of the information on the Internet users and non-users believe is reliable and accurate:

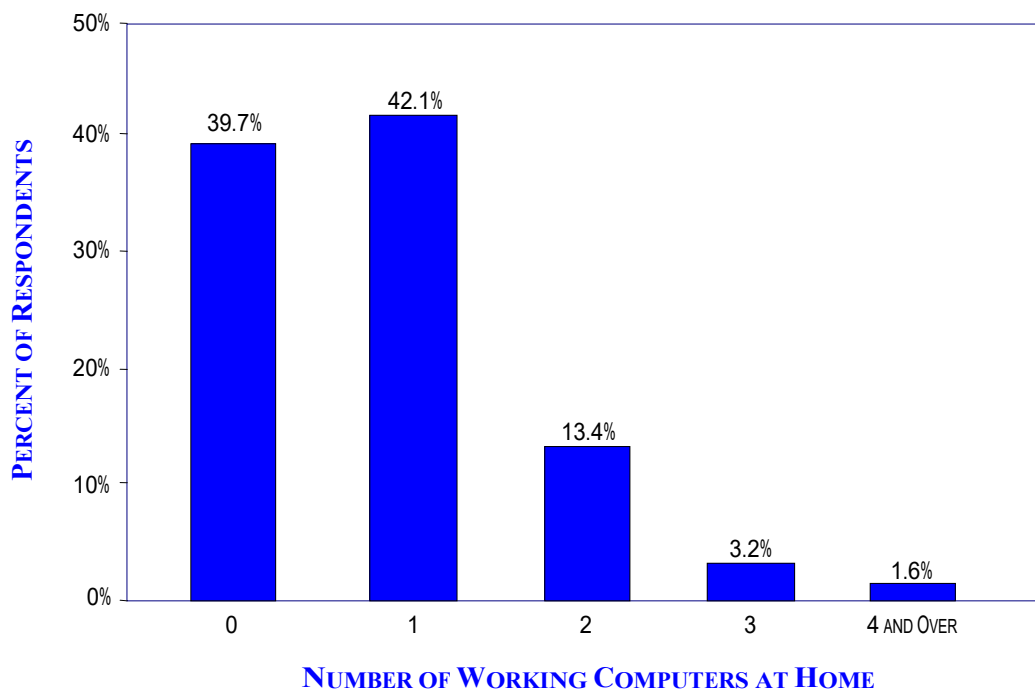


If the Internet is to become the defining technology of a generation, the public perception of information delivered through this medium must improve considerably.

BARRIERS TO USING THE INTERNET

NON-USERS: WHY NOT ONLINE?

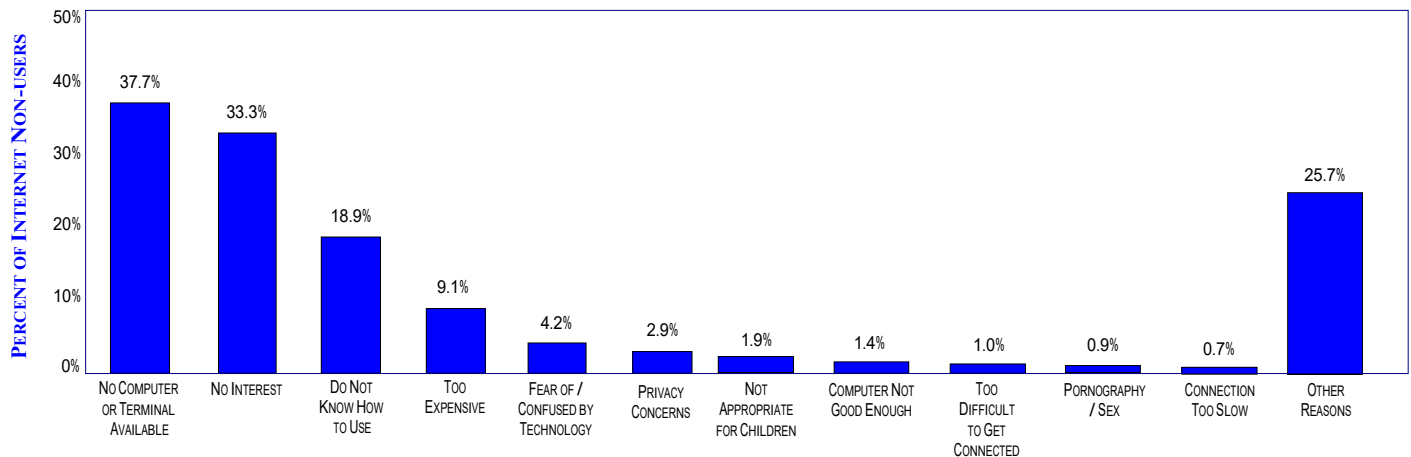
A primary issue for non-users is access. Many people still don't have a computer at home – nearly 40 percent (39.7) of respondents.



(In contrast, some of those with computers own them in quantity; 18 percent of respondents say they own more than one computer, and 4.8 percent own three or more working computers – and that does *not* include PDAs, video game systems, or Web TV.)

The most frequently cited reason why non-users say they are not online is “no computer or terminal available.” The second most frequent reason: *one-third of non-users say they are “not interested.”*

Two other frequent responses are “I don’t know how to use it,” and the Internet is “too expensive.” Smaller numbers of non-users also cite such concerns as: fear or confused by the technology, privacy, inappropriate for children, pornography, and slow connection speed. Among the many “Other Reasons” are “I’m too old to use the Internet” and “I don’t have time.”

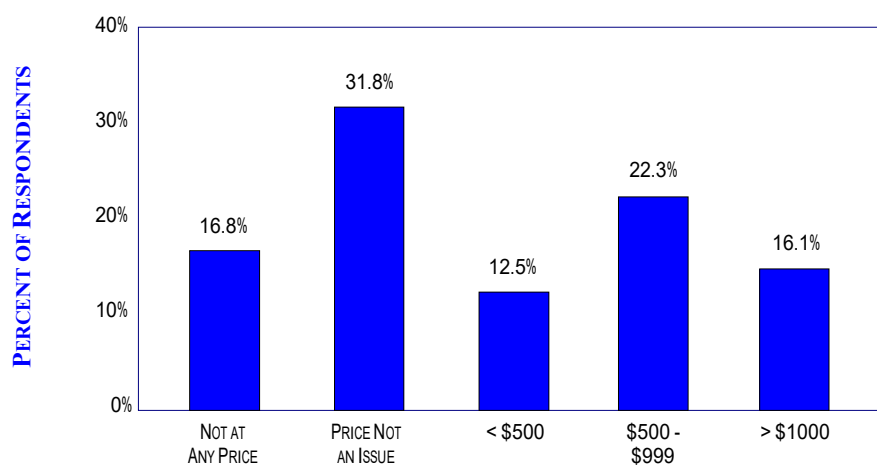


IS THE COST OF A COMPUTER A MAJOR ISSUE FOR NON-USERS?

The expense of computer ownership is often cited as a barrier to Internet use by media, market analysts, and legislators who are interested in closing “the digital divide.” While some non-users do say that cost is a factor, a majority cite reasons other than cost for not buying a computer.

When asked how much computer prices would have to drop before they would seriously consider a purchase, 16.8 percent say they “would not purchase at any price.”

Many of the remaining non-users could be in the market for a first computer – if the price is right. About 16 percent (16.1) of non-users say they would seriously consider purchasing a computer at a price of \$1000 or more, 22.3 percent would require a computer to be within the \$500 to \$999 price range, and 12.5 percent would require a price under \$500. Only 9.1 percent of non-users say their reason for not using the Internet is that it is “too expensive.”



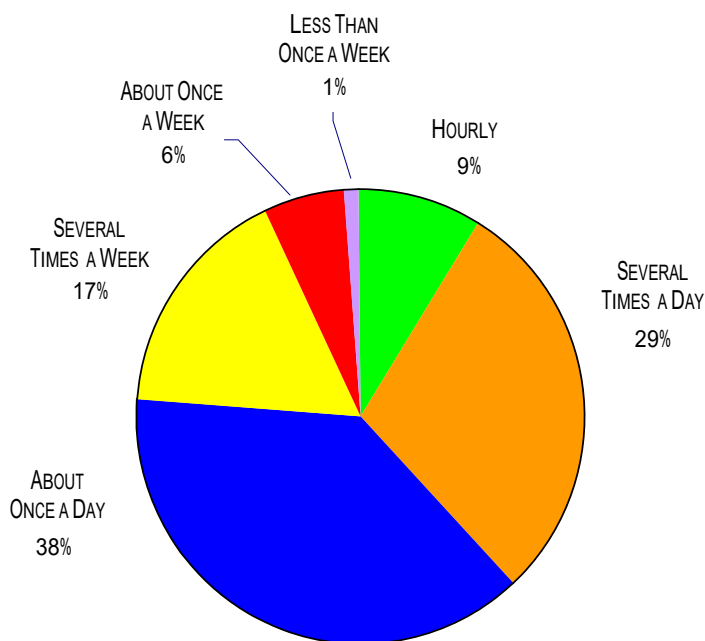
E-MAIL

One of the most noteworthy findings of the UCLA Internet Project involves how often users read e-mail. In less than a decade, e-mail has become a fundamental communication tool in America.

HOW OFTEN DO YOU CHECK YOUR E-MAIL?

The project found that 76 percent of e-mail users check their e-mail at least once each day, and many check e-mail several times each day.

Given that two-thirds of Americans use the Internet, and 82 percent of all Internet users have e-mail, 42 percent of Americans check their e-mail as a daily habit.



The fact that e-mail – a generally unknown communication tool only a decade ago – is now used daily by almost half of all Americans raises significant questions about how we communicate, how we disseminate information, and how we maintain relationships. We are only beginning to explore, let alone understand, the social significance and communication power of e-mail.

For responses to other questions concerning e-mail, see page 38.

SOCIAL AND PSYCHOLOGICAL IMPACT

The UCLA Internet Study explored a broad range of questions about the social and psychological impact of the Internet.

CHILDREN AND THE INTERNET

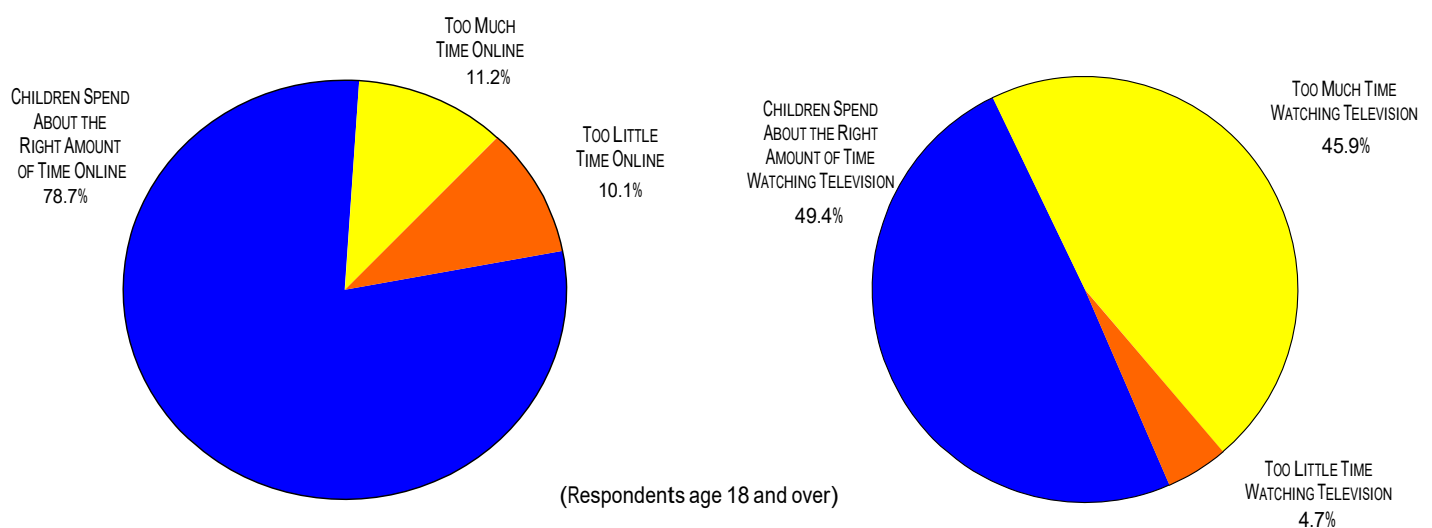
Do children spend too much time online? Does Internet use negatively affect grades? Do children become isolated because they remain online too long?

The answer to these questions, say adults in households with children, is a resounding “no.”

CHILDREN ONLINE

When asked about the time children spend using the Internet, 88.8 percent of adults say children in their households spend “about the right amount of time” or “too little time” online. In comparison, when asked about children and television viewing, 54.1 percent of adults say children in their households spend about the right amount of time or too little time watching television.

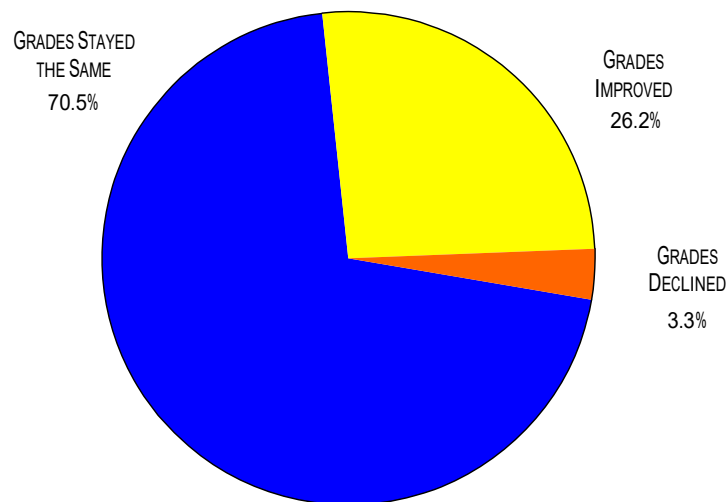
About eleven percent of adults say the children in their households spend too much time online, compared to 49.4 percent who say children spend too much time watching television.



SCHOOL GRADES AND INTERNET USE

Does the Internet affect grades? Adults believe in large numbers that since their household acquired the Internet, the grades of children in their households have stayed the same (70.5 percent), while more than one-fourth (26.2 percent) say grades have improved, and 3.3 percent say grades have declined.

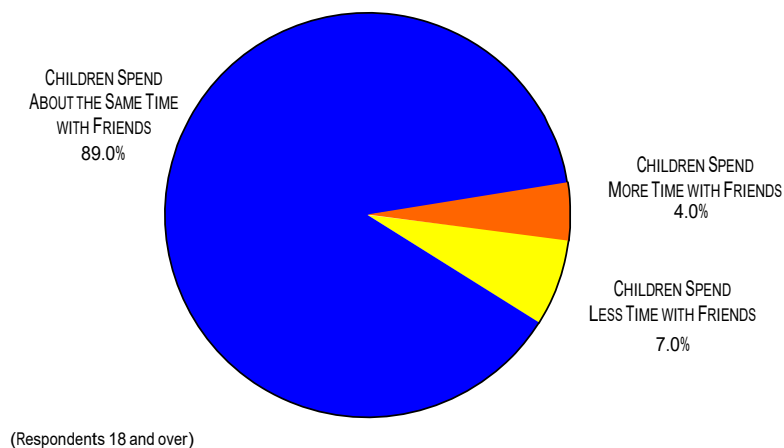
Some could say that a substantial majority vote stating that grades stay the same is, in fact, a criticism of the Internet, because online technology is viewed by many as an important educational aid. However, of those who do see a change in grades, 88.8 percent of adults note an improvement.



(Only asked of respondents age 18 and over who live in household with children age 5 or over)

CHILDREN, THE INTERNET, AND INTERACTION WITH FRIENDS

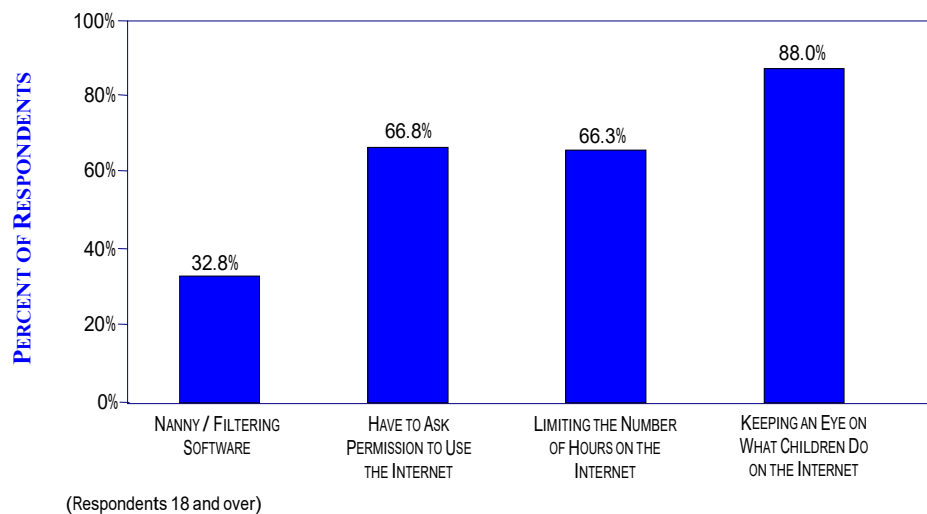
Respondents say that the Internet has little effect on children and their interaction with friends. Ninety-three percent of adults in households with children say that since they acquired the Internet, the children in their households spend about the same amount of time or more time with friends. Only seven percent say the children in their households spend less time with friends since they acquired the Internet.



ADULT SUPERVISION OF THE INTERNET

While adults say that youngsters in their households spend an appropriate amount of time online, they also report that they keep a close eye on children's Internet use, or that they use software to help them manage the children's access to information.

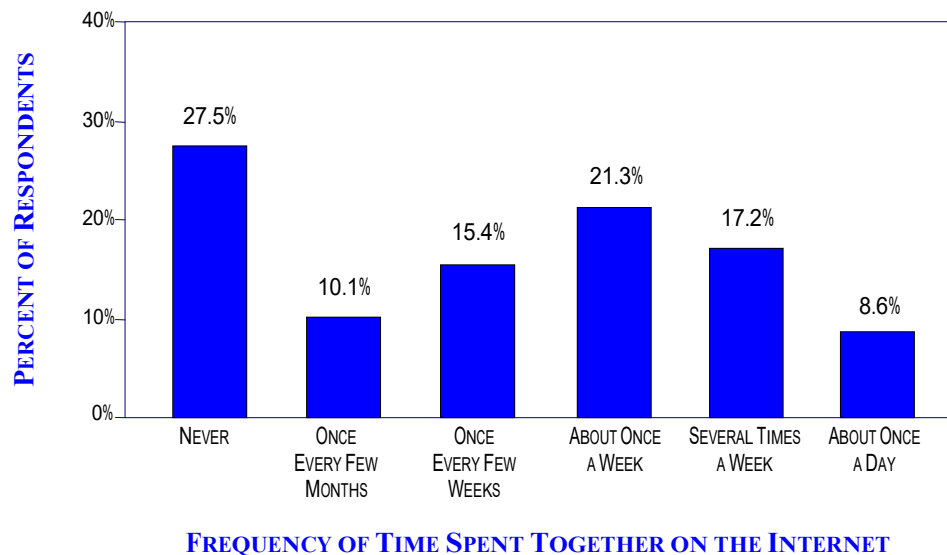
More than 30 percent (32.8) of adults say they use nanny or filtering software to protect children in their households from inappropriate material. About two-thirds (66.8 percent) of adults require the children in their households to ask permission before they can log on. Almost as many adults (66.3 percent) limit the number of hours the children can use the Internet. In addition to these measures, 88.0 percent of adults "keep an eye" on how the children use the Internet.



THE INTERNET AND THE HOUSEHOLD

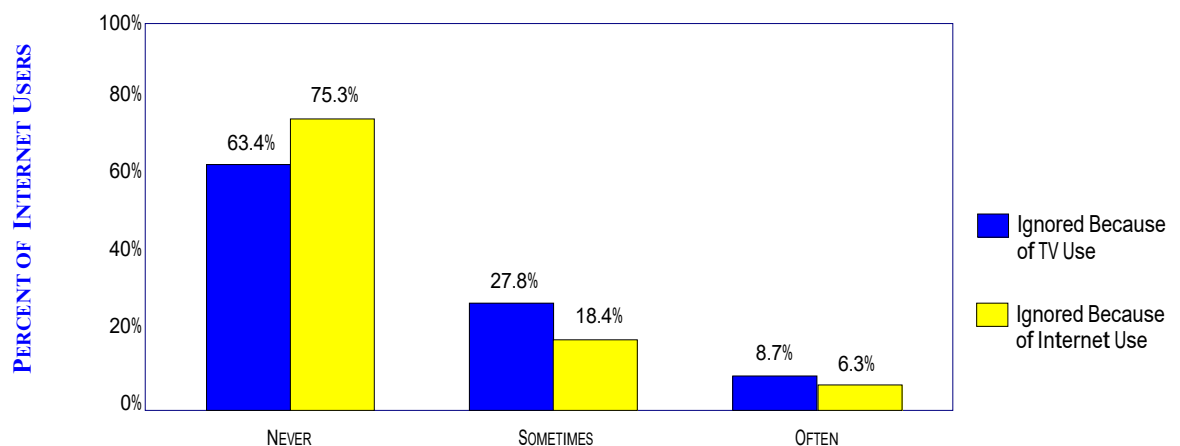
In its first five years of broad public use, the Internet has become a shared household activity.

Nearly half (47.1 percent) of users report spending at least some time each week using the Internet with other household members. Only 27.5 percent of adults say they never spend time together with other members of their households using the Internet.



DO YOU FEEL IGNORED BECAUSE OF INTERNET USE IN THE HOUSEHOLD?

When asked if they feel ignored because a household member spends too much time on the Internet or watching television, more than three-quarters (75.3 percent) of users say they do not feel ignored by another household member spending too much time online. This compares to 63.4 percent who say that they never feel ignored because another household member spends too much time watching television.



HOUSEHOLD TIME TOGETHER

Concerns that the Internet reduces household time together appear to be nearly groundless.

Almost all users (91.8 percent) say that since being connected to the Internet at home, members of the household spend about the same amount of time together or more time together.

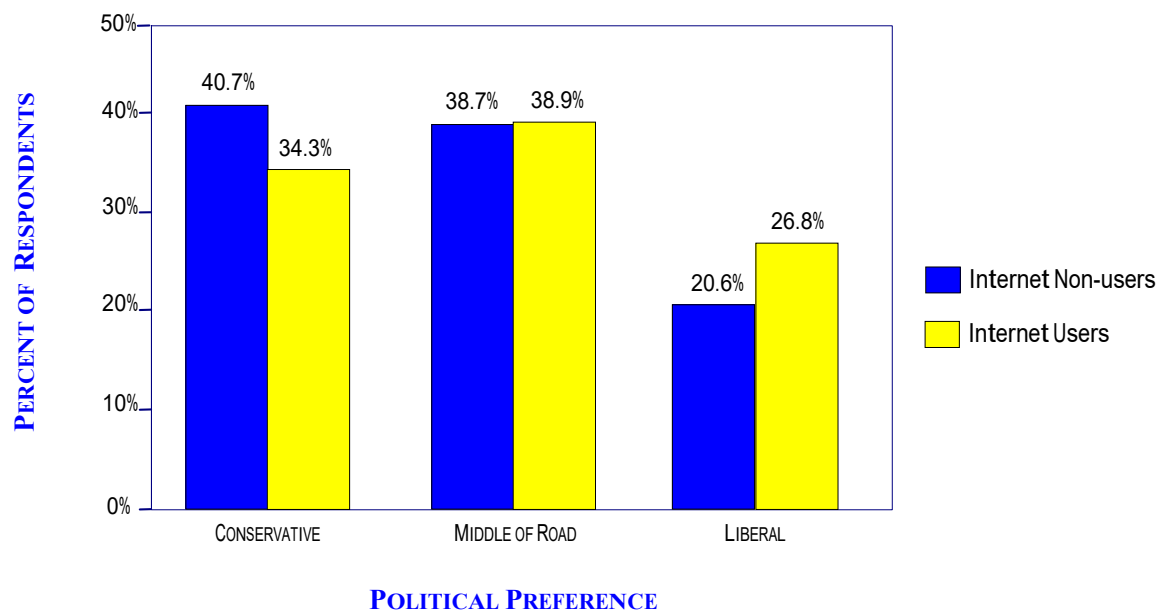
PUNISHMENT

The Internet is valued by children to such a degree that some adults now use denial of online access as a punishment tool – although not to the extent they use denial of television privileges.

Nearly half (48.7 percent) of adults say that the children in their households are punished by being denied access to television, while 30.6 percent say they deny access to the Internet as a punishment.

POLITICAL IDENTIFICATION

There is little difference in the political affiliation of Internet users and non-users; a higher proportion of users identify themselves as liberal; more non-users identify themselves as conservative.



POLITICAL POWER AND INFLUENCE

Respondents say the Internet can be an important resource for gathering information about political issues, but is still emerging as a tool that can create more political power, or influence political decisions and government officials.

When asked if “by using the Internet people like you can better understand politics,” 45.6 percent of users and 28.1 percent of non-users agree, compared to 21.2 percent of users and 33.9 percent of non-users who disagree.

However, when asked about the Internet’s actual influence on politics and government, the percentage of those who agree declines considerably.

When asked if “by using the Internet people like you can have more political power,” only 29.3 percent of users and 16.8 percent of non-users agree, while 37.3 percent of users and 48.9 percent of non-users disagree.

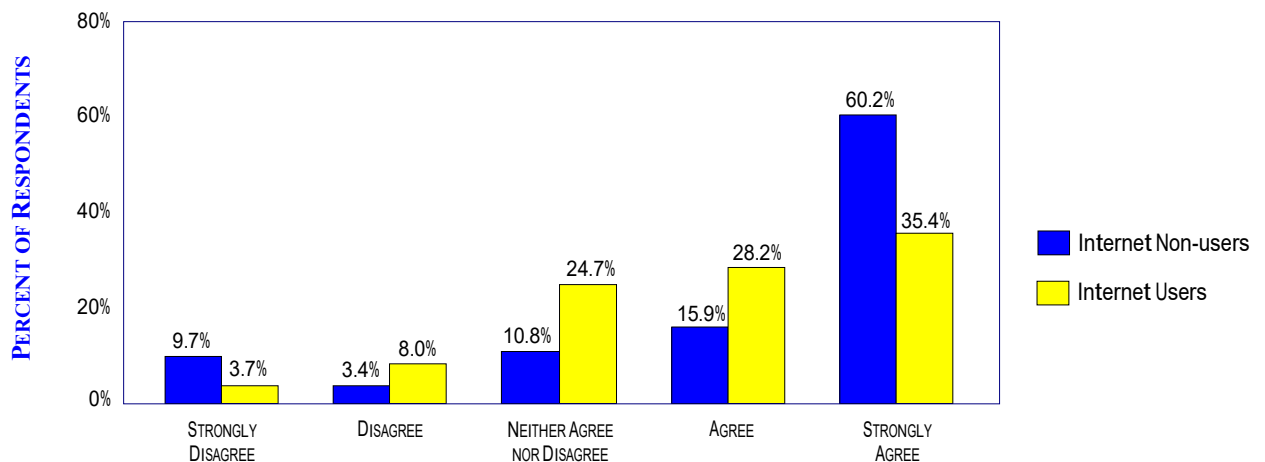
Responding to the question, “by using the Internet people like you have more say about what the government does,” 23.9 percent of users and 16.8 percent of non-users agree, while 42 percent of users and 50.4 percent of non-users disagree.

Finally, when asked if “by using the Internet, public officials will care more about what people like you think,” 27.8 percent of users and 20.9 percent of non-users agree, while 36.4 percent of users and 44.3 percent of non-users disagree.

PRIVACY

Of all the issues explored in this report, privacy has emerged as the subject that raises the greatest concern about the Internet among both users and non-users. In several questions, respondents express considerable concern that using the Internet creates risks to individual privacy.

When asked if “people who go online put their privacy at risk,” almost two-thirds (63.6 percent) of Internet users and more than three-quarters (76.1 percent) of non-users either agree or strongly agree. Only 11.7 percent of Internet users and 13.1 percent of non-users disagree or strongly disagree that people put their privacy at risk on the Internet.



(Respondents 16 and over)

More specifically, the project found that concerns about the privacy of personal data creates barriers to online sales – especially among infrequent purchasers; 41 percent report extreme concern about personal privacy online. These concerns remain a barrier to growth of online sales (see page 43). And 2.9 percent of non-users cite “privacy concerns” as a reason why they won’t use the Internet at all – let alone for purchases or other activities that would require some personal information (see page 24). In a related issue about online purchasing, more than nine out of ten Internet users are somewhat or very concerned about credit card security (see page 44).

As this project evolves, we will work to pinpoint specific causes of concern about privacy, and determine if privacy concerns grow or decline as use of the Internet increases.

SOURCES OF INFORMATION AND ENTERTAINMENT

After little more than five years as a widespread communication tool, the Internet is viewed as an important source of information by the vast majority of people who use the online technology.

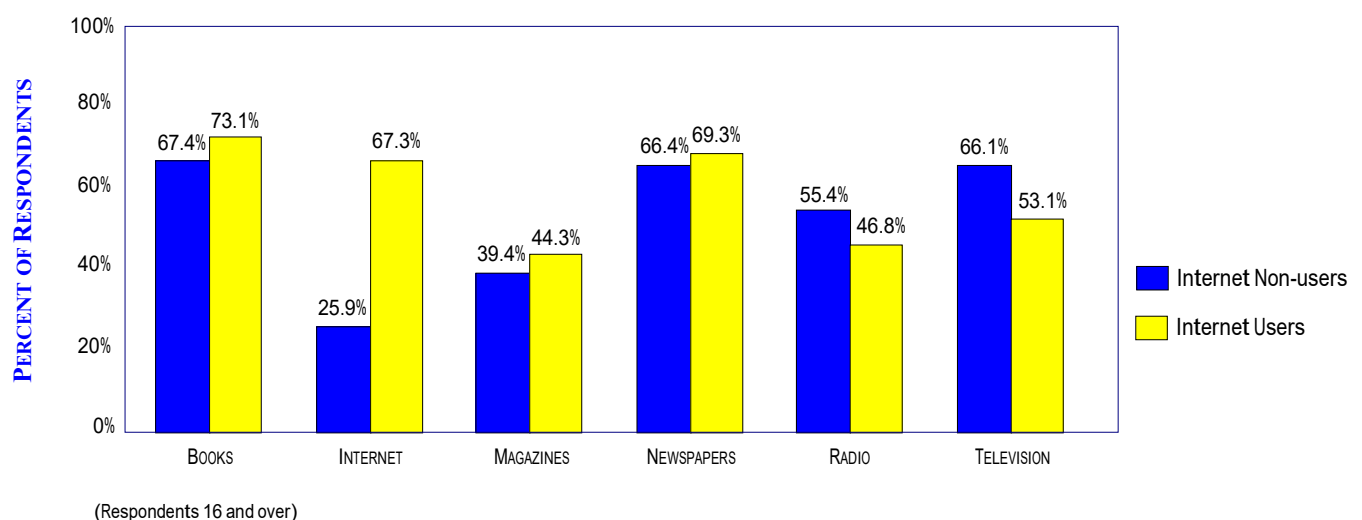
More than two-thirds of Internet users (67.3 percent) consider the technology to be an “important” or “extremely important” source of information for them, while 53.1 percent of those surveyed rank television and 46.8 percent rank radio at the same level.

Yet when judging the importance of information sources, both Internet users and non-users say that some printed sources rank higher than electronic sources in importance.

The survey found that among all mass media sources of information, both electronic and print, books were ranked most often as an important source of information by Internet users, with 73.1 percent ranking books as important or extremely important information sources. Newspapers rank second (69.3 percent), followed by the Internet (67.3 percent), television (53.1 percent), radio (46.8 percent), and magazines (44.3 percent).

Among users, only 8.3 percent ranked the Internet as “not important at all” or “not particularly important.”

Not surprisingly, among non-users, the Internet is the least important information source. Fewer ranked the Internet as an important or extremely important source of information than any other mass media source. Topping the list of important information sources for non-users were books (ranked important or extremely important by 67.4 percent), followed by newspapers (66.4 percent), television (66.1 percent), radio (55.4 percent), magazines (39.4 percent), and the Internet (25.9 percent).



VIEWS ABOUT ONLINE CONTACTS AND FRIENDSHIPS

The Internet can be a catalyst for creating and maintaining friendships.

- Respondents say the Internet has had a modestly positive impact on both increasing contact with others, and communicating more with family. When asked if “the Internet has increased the number of people with whom you regularly stay in contact,” on a scale of 1 (greatly decreased) to 3 (stayed the same) to 5 (greatly increased), responses averaged 3.3. When asked if “since you started using the Internet, you are communicating more with your family and friends,” responses again averaged 3.3.
- When asked “has the Internet increased or decreased your contact with the following groups,” on a scale of 1 (greatly decreased) to 3 (remained the same) to 5 (greatly increased), respondents say that contact with some groups has increased, while contact with others has stayed about the same or decreased slightly. These groups include:
 - (3.7) Family and friends
 - (3.4) Professional colleagues
 - (3.1) People sharing their hobbies or recreational activities
 - (2.8) People sharing their religion
 - (2.7) People sharing their political beliefs
- When asked if “it is easier to meet people online than in person,” on a scale of 1 (strongly disagree) to 5 (strongly agree), responses averaged 2.5.
- When asked if “you share intimate details of your life on the Internet that you would generally not reveal in person,” on a scale of 1 (strongly disagree) to 5 (strongly agree), responses averaged 1.6.

ONLINE FRIENDS

Some users have friends who they know only online, while others have created in-person friendships that began on the Internet, thus making the Internet a new source of social contact.

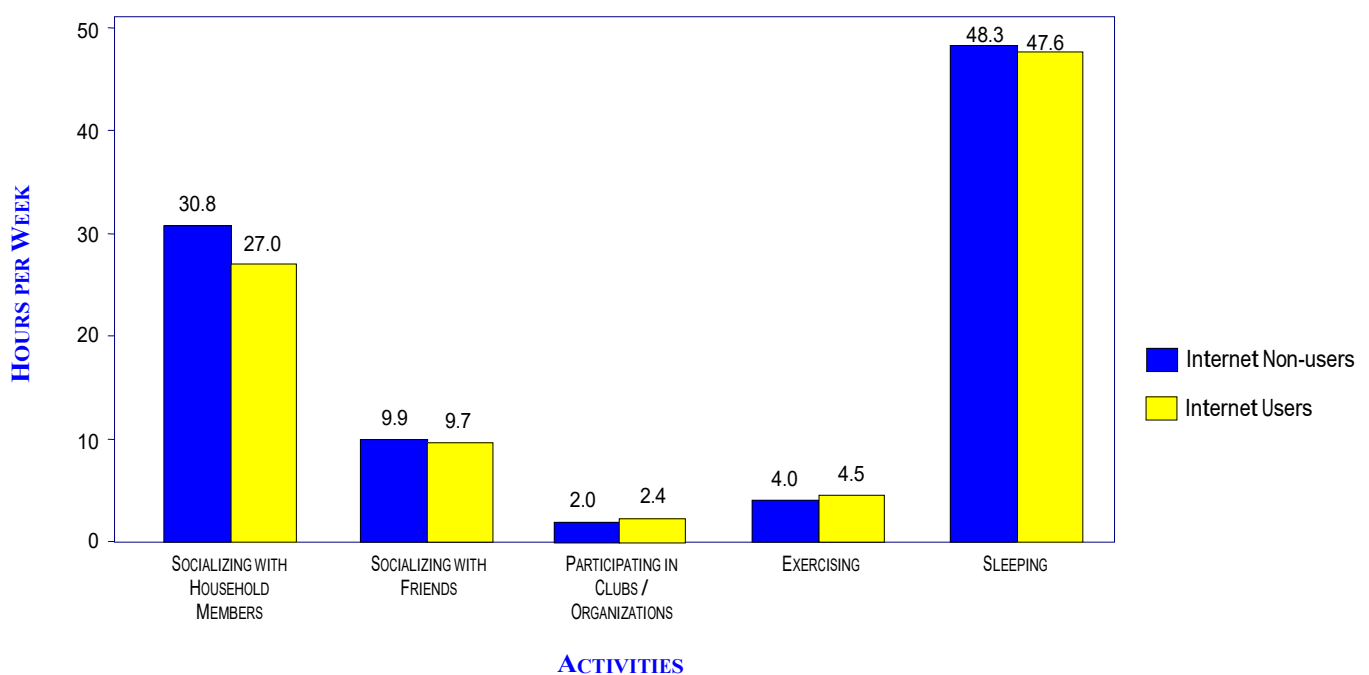
More than one-quarter (26.2 percent) of users say they have online friends whom they have never met in person. These users have an average of more than a dozen online friends (12.9).

Of users, 12.4 percent say they met someone online whom they have since met in person – and these users average 5.6 new in-person friendships that originated on the Internet.

SOCIAL CONNECTION, EXERCISE, AND SLEEP

Does the Internet change social and personal patterns of behavior? In several major areas, the answer is no. In the areas described below, there are only minor differences in the behavior between Internet users and non-users.

Internet users, compared to non-users, socialize slightly less with the members of their household, but spend slightly more time with clubs and volunteer organizations. Users also exercise slightly more. These differences are small. There is almost no difference between Internet users and non-users in hours spent sleeping or socializing with friends.

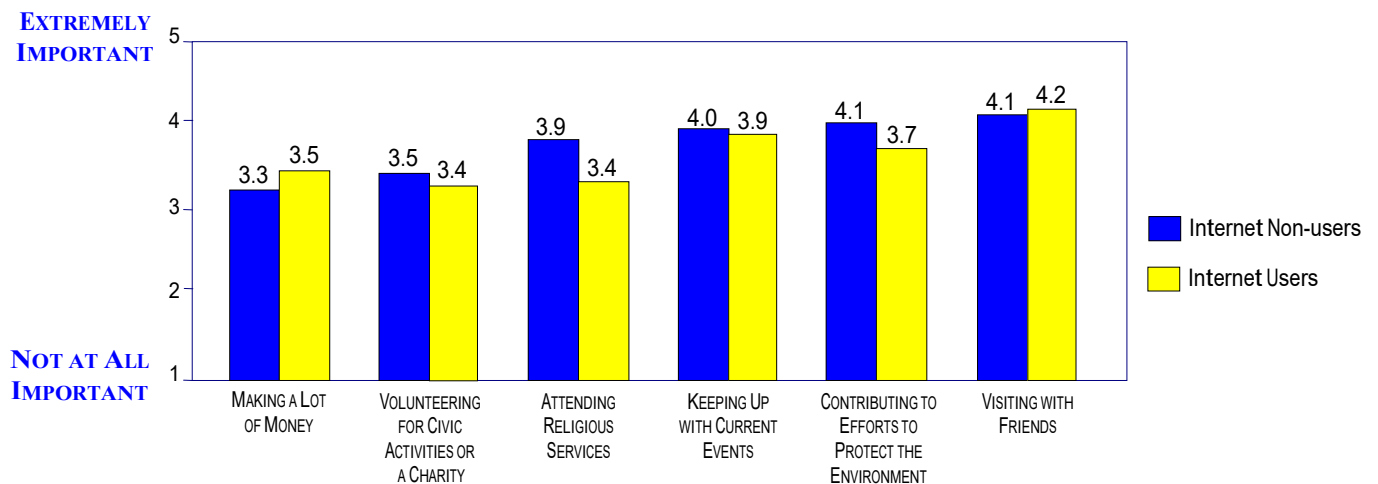


Internet users and non-users have about the same number of friends outside their households – on average, 11.6 friends for non-users and 11.8 for users. Non-users report knowing a few more of their neighbors by name – 10.0 for non-users compared to 8.9 for users. (The fact that non-users know more neighbors by name can largely be attributed to age: on average, non-users are older than users, and older people are more likely to know neighbors by name.)

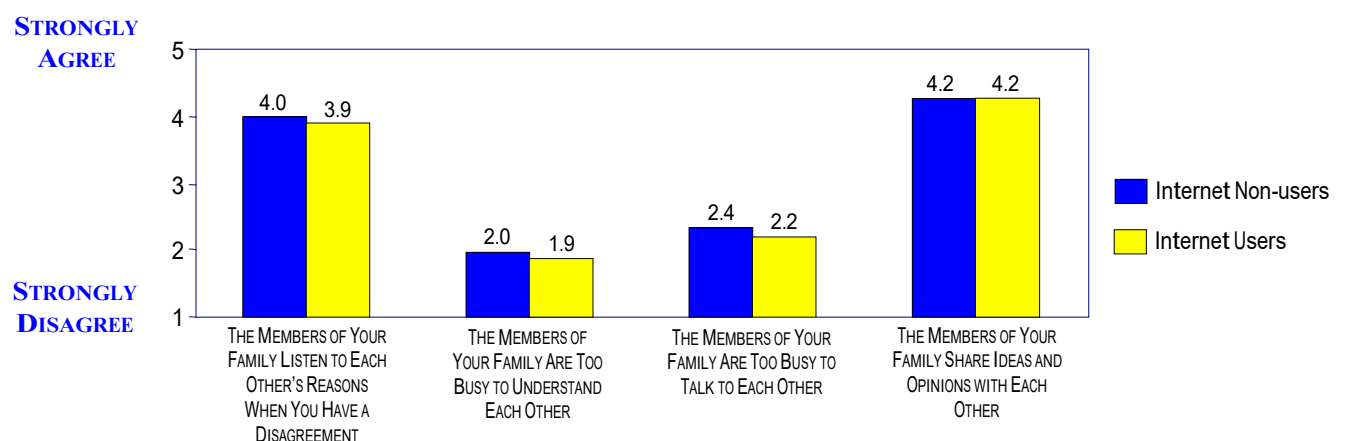
FAMILY RELATIONSHIPS, VALUES, TRUST IN INSTITUTIONS

The UCLA Internet Project asked questions about the family, relationships, social institutions, and personal beliefs. These questions measure a range of attitudes and values among Internet users and non-users.

For example, when asked about the importance of selected personal values:

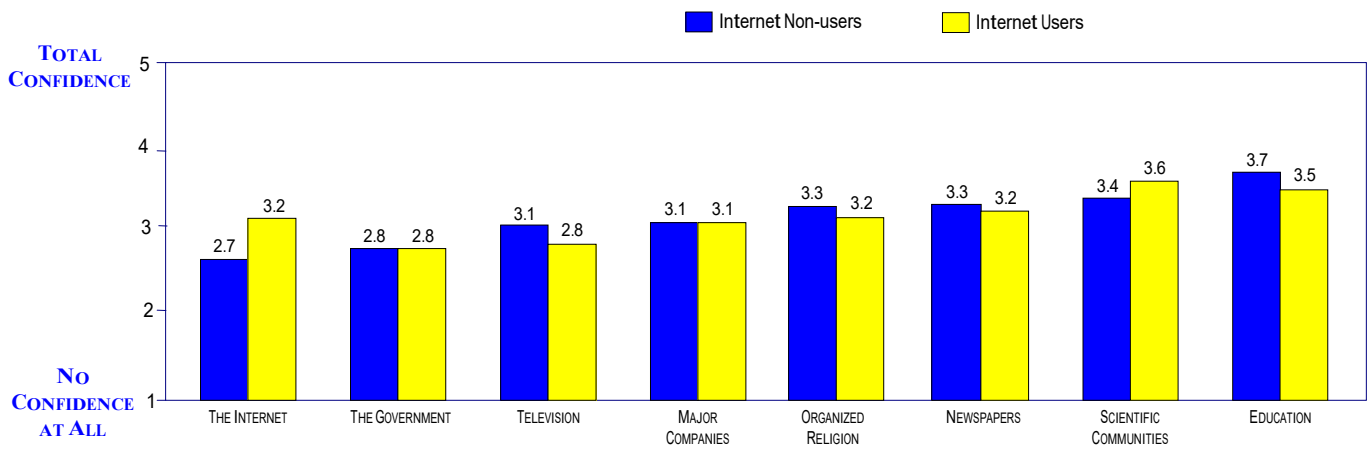


When asked about family sharing and involvement:



(Respondents 16 years and over)

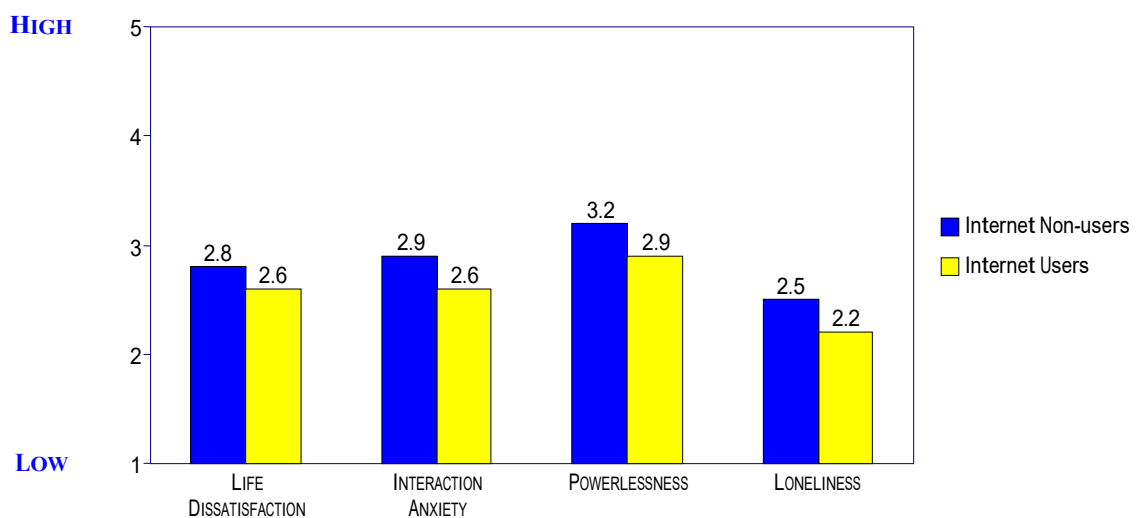
When asked about their confidence in selected institutions:



(Respondents 16 years and over)

LIFE DISSATISFACTION, INTERACTION ANXIETY, POWERLESSNESS, AND LONELINESS

Compared to Internet users, non-users report slightly higher levels of life dissatisfaction, interaction anxiety, powerlessness, and loneliness.



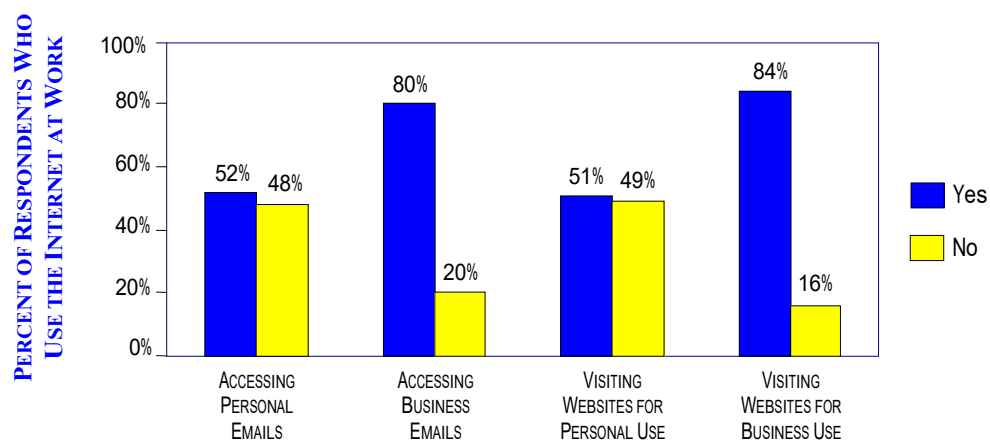
THE INTERNET AT WORK

THE INTERNET, E-MAIL, AND PRODUCTIVITY

Online technology in the workplace can be a powerful tool – and a potential problem. While organizations readily acknowledge the importance of the Internet and e-mail for information-gathering and marketing, the technology also raises questions about workplace productivity and potential abuse. Clearly, monitoring e-mail and Internet use is a management issue for American employers – and a subject on the minds of their employees.

EMPLOYEE USE OF THE INTERNET

How are employees using the Internet at work? Most use it to access business e-mail (80 percent) or visit Web sites for business use (84 percent). More than half of employees use the Internet to access personal e-mail (52 percent) and visit Web sites for personal use (51 percent).

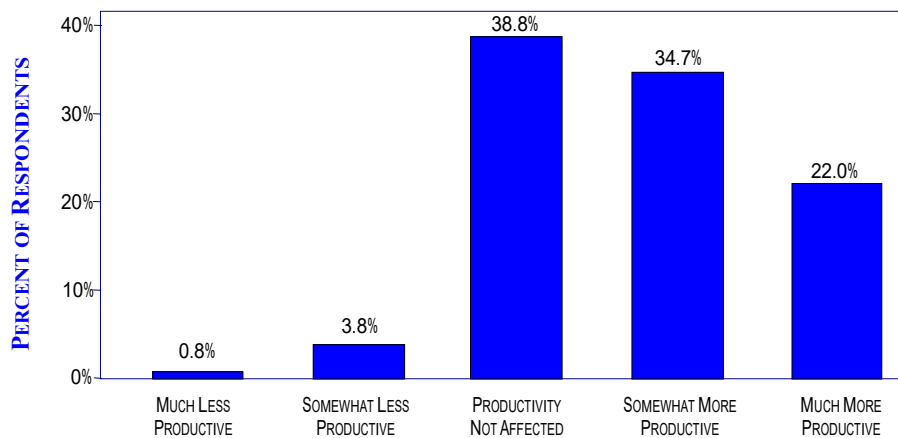


EMPLOYER MONITORING OF E-MAIL AND INTERNET USE

Do employees think the Internet affects their own productivity? The majority of individuals who use the Internet at work feel it has a positive or neutral influence on their work productivity.

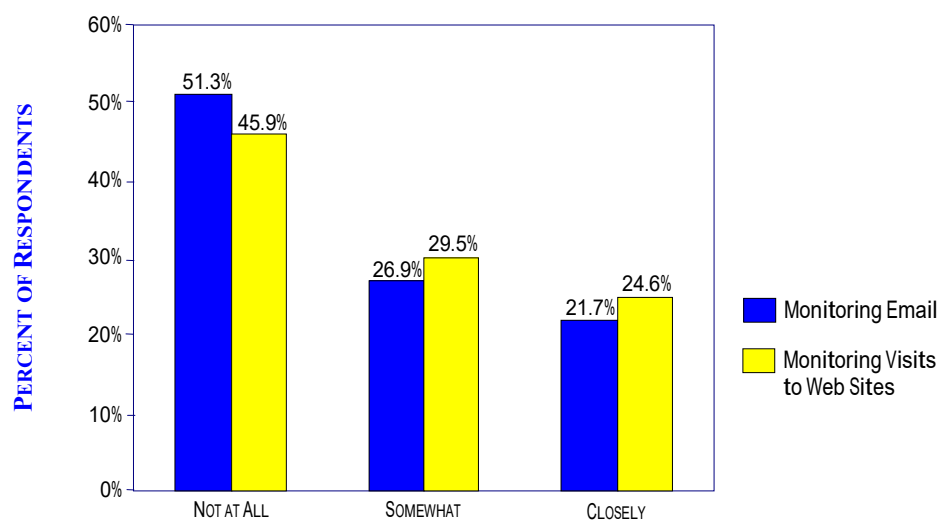
More than half of users (56.7 percent) say their use of the Internet makes them more productive, and another 38.8 percent say their use of the Internet has no effect on their productivity. Less

than five percent (4.6) of respondents say their work productivity has declined because of the Internet at work.



At the same time, substantial numbers of employees report that their e-mail and Internet use is monitored.

Nearly half (48.6 percent) of users say that their use of e-mail is monitored by their employers; 21.7 percent of e-mail users say it is closely monitored. More than half (54.1 percent) say that their visiting of Web sites is monitored; 24.6 percent say it is closely monitored.



USING THE INTERNET AT HOME FOR WORK

Users rely on the Internet to do work at home for their jobs. Those who classify themselves as “heavy” users (7 to 14 hours per week) average 1.8 hours per week of Internet access from home for work, while “very heavy” Internet users (more than 14 hours per week) average 3.4 hours per week of Internet access from home for work.

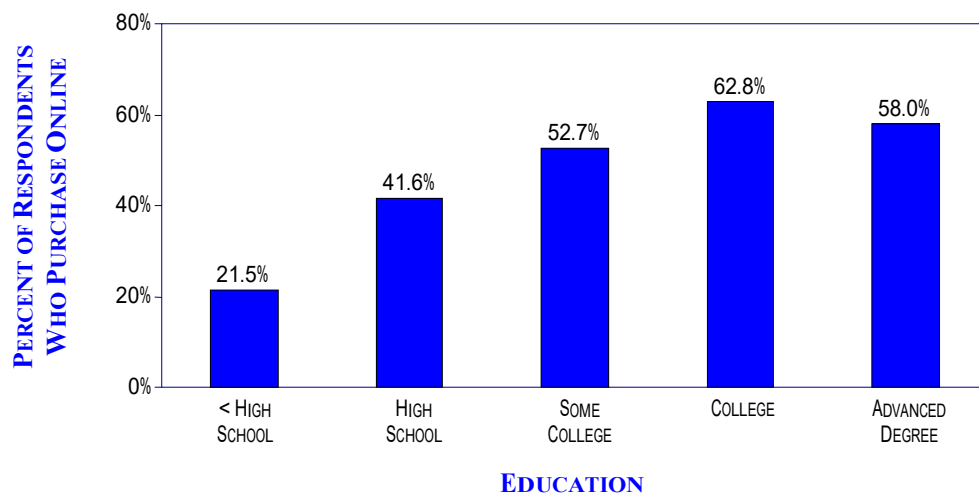
SHOPPING ON THE INTERNET

E-COMMERCE

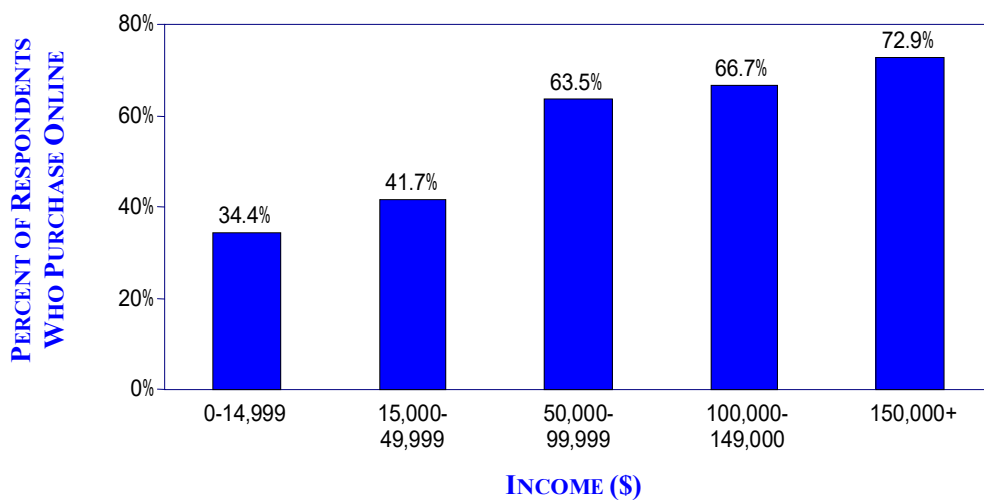
Who is purchasing online, and why? Consider that:

- 57.1 percent of male Internet users buy online, and 45.1 percent of female Internet users buy online.
- Education, income, and experience online all affect whether or not users purchase online.

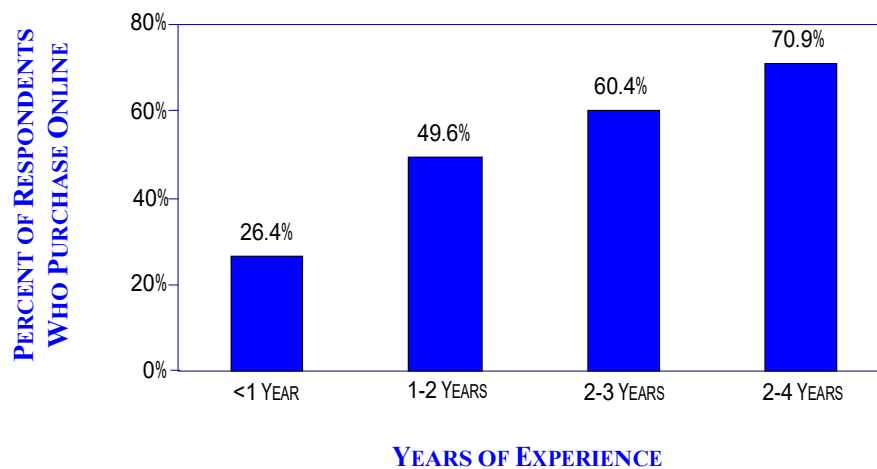
Users with more education are more likely to purchase online:



Users with higher incomes are more likely to purchase online:



The greater the experience using the Internet, the more likely a user will purchase:

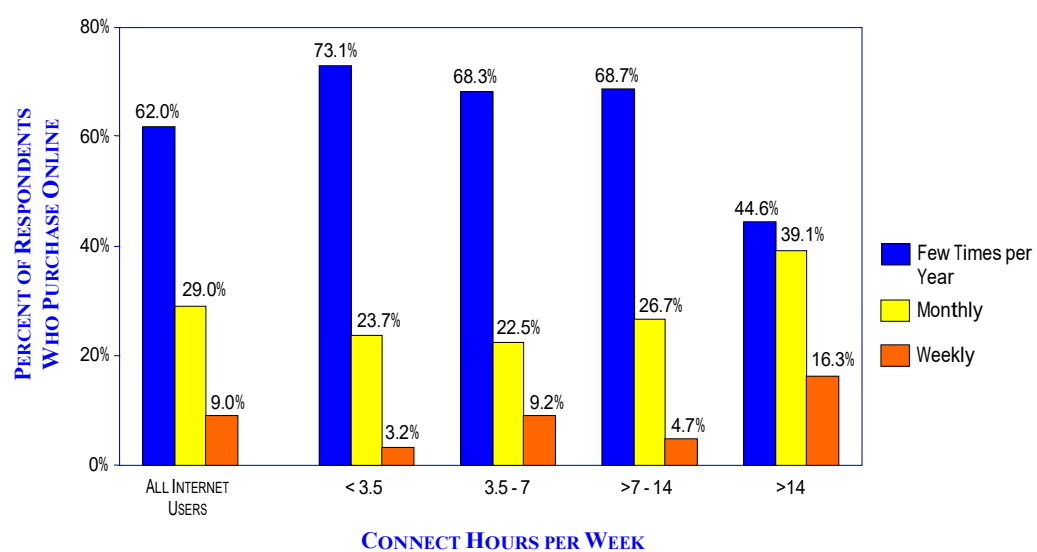


What do Internet users say about their online buying habits? Here are some highlights:

- More than half of all Internet users (50.7 percent) have purchased online.
- 8.9 percent of purchasers say they buy online weekly.
- 28.5 percent of purchasers report shopping monthly.
- The average amount spent online per month by Internet purchasers is \$113.
- 3.5 percent of users spend more than \$500 per month online.

However, while demographics predict whether or not users buy online at all, *none* of the principal demographic factors – age, gender, income, education, race, and years of Internet experience – significantly affect the frequency of online purchasing among those who do purchase.

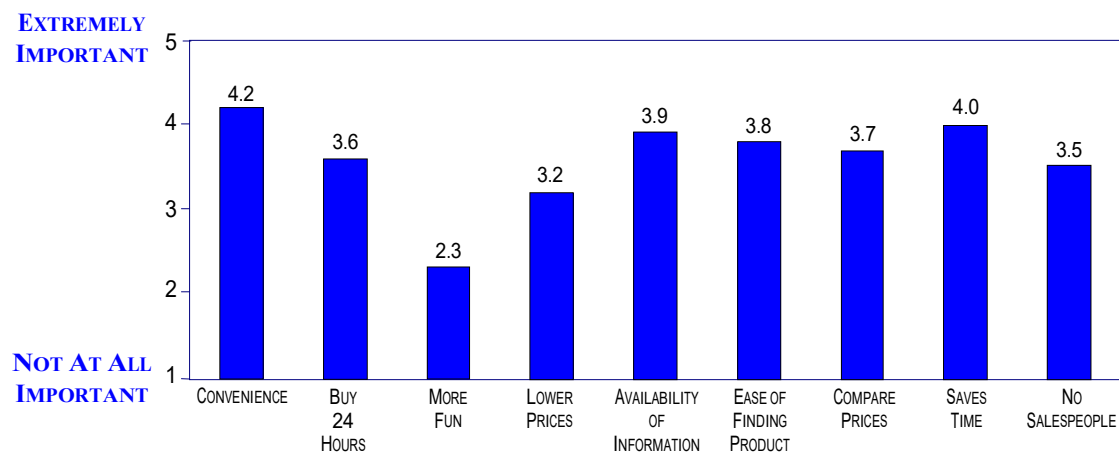
A key factor that does affect online purchase frequency is the amount of hours users are online.



WHY DO PEOPLE SHOP ON THE INTERNET?

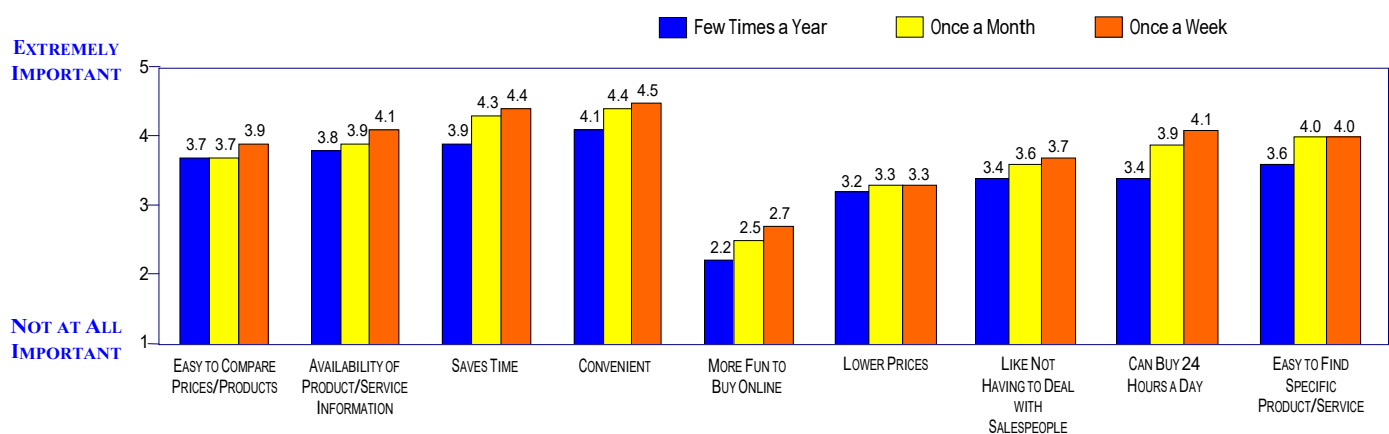
Respondents say that what they like most about online shopping is convenience; next is “saving time,” followed by “availability of information about goods and services.”

Interestingly, the issue of “no sales people” was considered as both an advantage by online purchasers (see chart below) as well as a reason for some to not shop online (see “lack of face-to-face contact” in “Why Not Shop Online” on page 43).



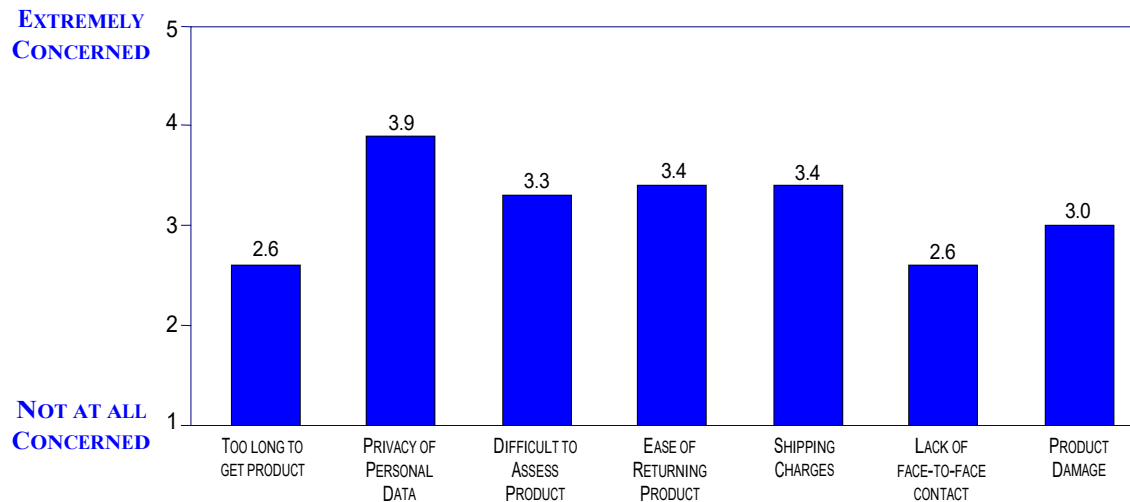
Attitudes about online shopping are linked to the number of purchases and dollars spent. For example, purchasers cite increasingly positive views as their purchasing frequency increases. (Purchasers also express increasingly positive views as they spend more online.)

These graphs show views about online shopping, as measured by purchase frequency:



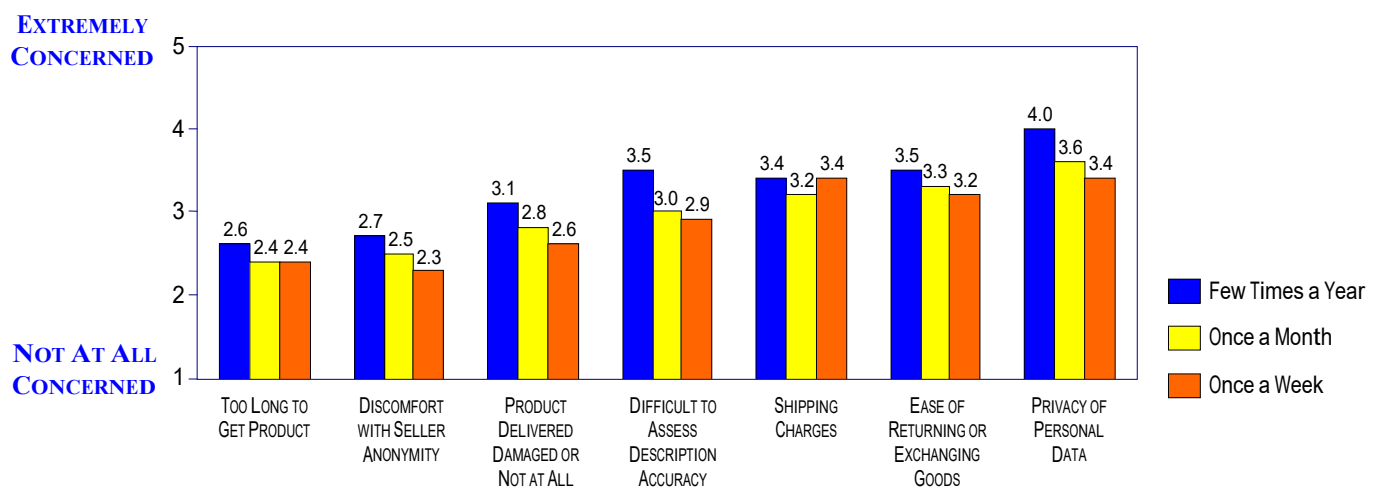
WHY NOT SHOP ONLINE?

Internet purchasers do have concerns that may discourage them from shopping online, with privacy of personal data topping the list.



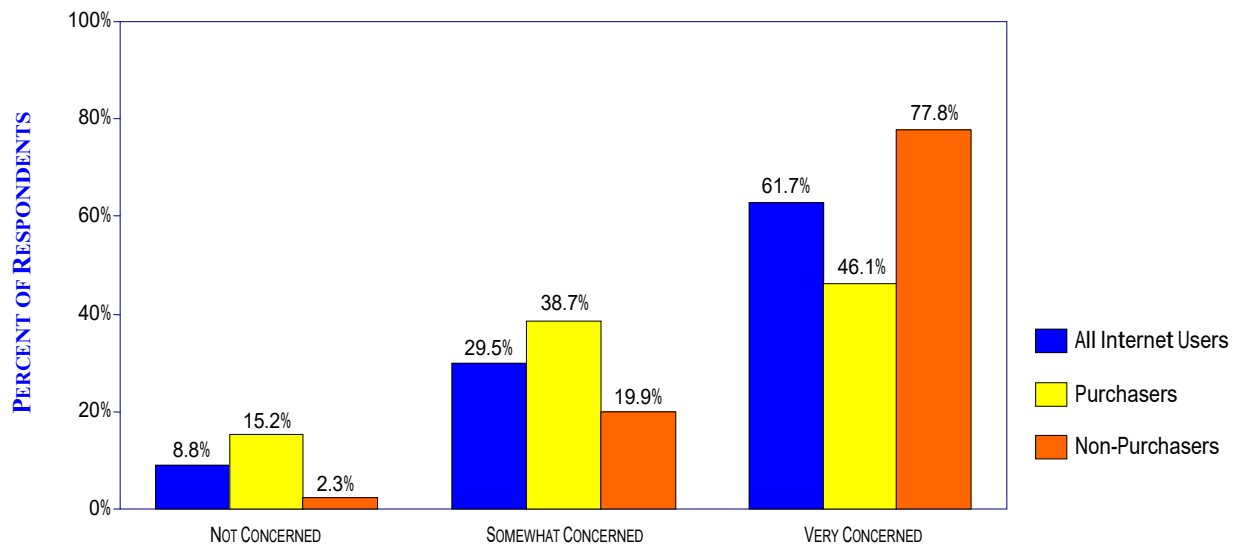
As in the “why shop online” questions on page 42, attitudes about shopping are linked to purchase frequency and the amount spent. For example, in every category except “shipping charges,” concerns decrease as purchase frequency increases.

This graph shows concerns about online shopping, based on purchase frequency:



CREDIT CARD SECURITY ON THE INTERNET

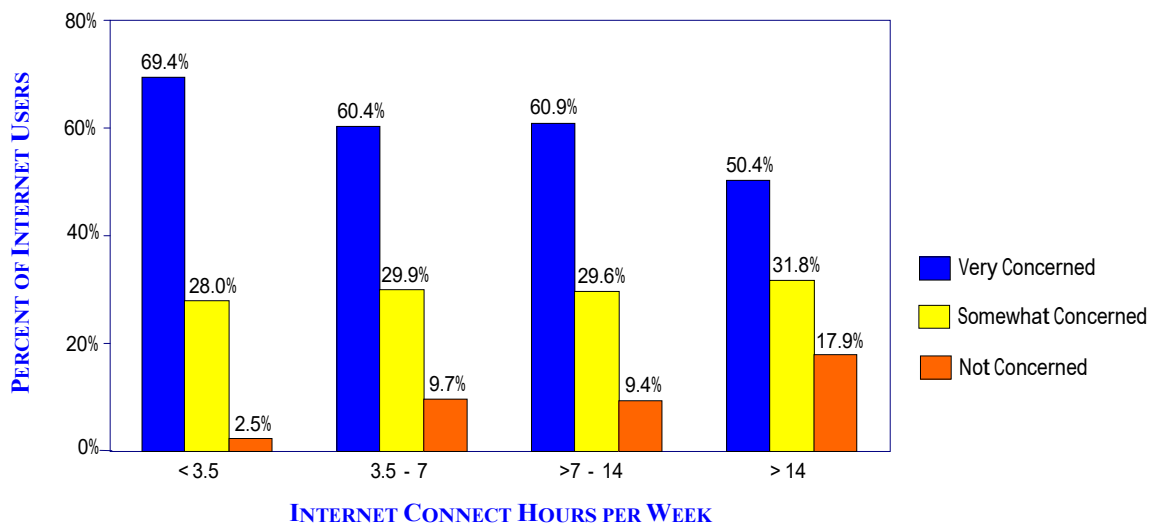
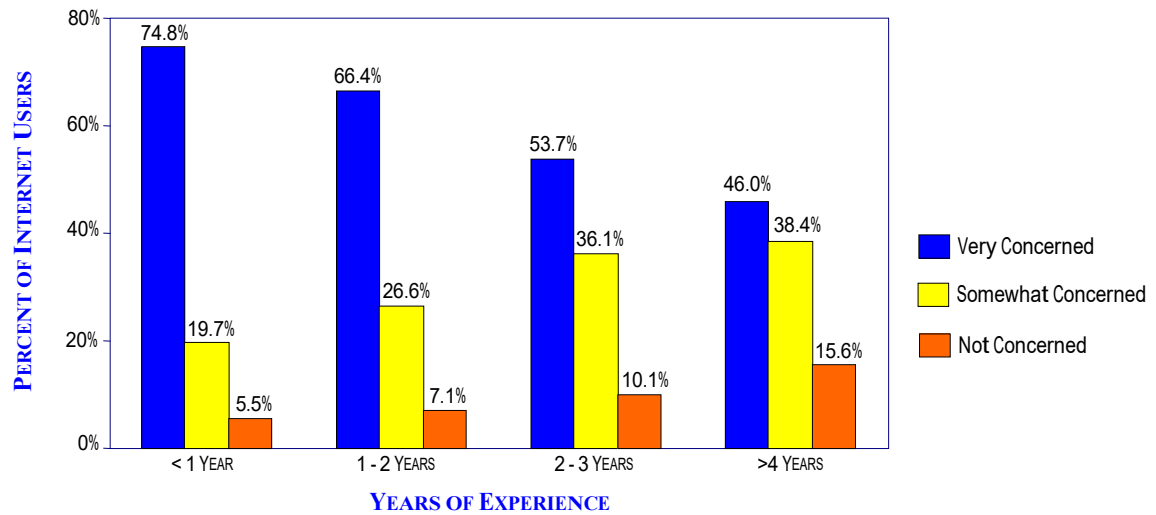
Closely related to the general issue of privacy is the specific question of credit card security in online purchasing. Nearly all Internet users (91.2 percent) are somewhat concerned or very concerned about credit card security.



Concern about credit card security drops substantially as online purchases increase. Online purchasers are significantly less concerned about credit card security than Internet users who do not purchase online.

Concerns about credit card security also decline as both Internet use and experience increase. While 74.8 percent of Internet users with less than one year of online experience are “very concerned” about credit card security, that percentage decreases steadily to 46.0 after four years of Internet experience. And 69.4 percent of “light” Internet users (less than 3.5 hours per week) are very concerned about credit card security, compared to 50.4 percent of “very heavy” Internet users (more than 14 hours per week).

These graphs show concerns about credit card security on the Internet, based on years of experience or Internet use:



INTERNET PURCHASERS: VIEWS ABOUT ONLINE SHOPPING HABITS

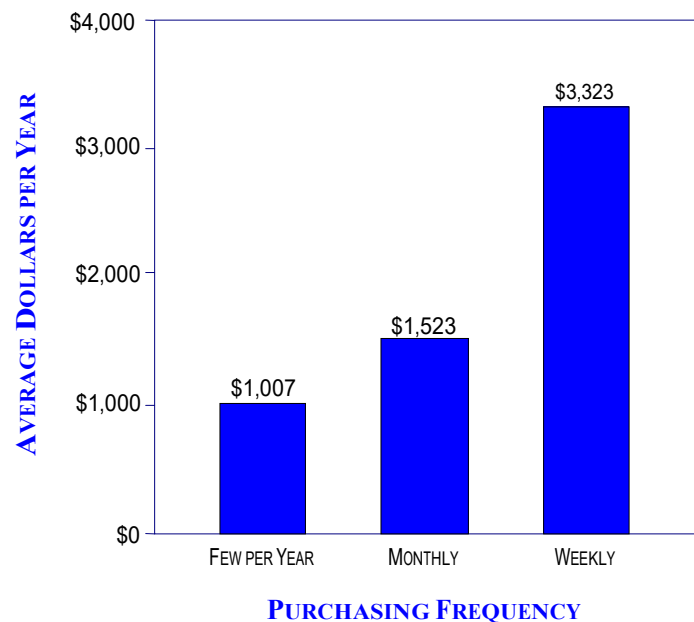
When asked for their views about shopping on the Internet:

- More than half of Internet purchasers (54 percent) agree that eventually they “will probably make many purchases online.” (17 percent disagree; 29 percent neutral)
- Most Internet purchasers (59 percent) do not think they spend more money online than they intended. (19 percent agree; 22 percent neutral)
- The vast majority of Internet purchasers (80 percent) are satisfied with the quality of products they buy online. (3 percent disagree; 17 percent neutral)
- Some 41 percent agree that they are “more likely to buy brand name products when they shop online.” (33 percent disagree; 26 percent neutral)

SMALL GROUP, BIG SPENDING

As noted on page 41, 50.7 percent of Internet users have purchased online, and 8.9 percent of purchasers buy weekly. A very small group of users is responsible for a large proportion of purchasing; 4.5 percent of all Internet users are responsible for 31.4 percent of all online purchases.

Users who make online purchases weekly spend twice as much money as users who make online purchases monthly.



The 18.9 percent of Internet users who report purchasing weekly or monthly account for more than three fourths (77.6 percent) of Internet purchase revenue.

THE INTERNET: LOWER PRICES?

Is the Internet a source for bargains? While many e-commerce sites claim they offer a price advantage over traditional retail stores, a large majority of Internet users don't think so, whether they purchase online or not.

- 58.4 percent of Internet users who purchase online say that online prices are about the same, somewhat higher, or much higher than in retail stores.
- Of Internet users who do not purchase online, 75.4 percent say that online prices are about the same, somewhat higher, or much higher than in retail stores.
- 50.8 percent of users who purchase and 58.3 percent of users who do not purchase see no difference between prices online and prices in retail stores.

ONLINE PURCHASING: DOES IT AFFECT RETAIL BUYING?

Does buying through the Internet represent new purchases or a shift from traditional retail? Nearly two-thirds of Internet purchasers (65.1 percent) say that online purchasing of goods and services has at least somewhat reduced their purchases from brick and mortar retail stores.

The more frequently users buy online, the more they shift away from traditional retail. The number of users who report that online purchasing has affected their traditional retail buying “a lot” almost doubles (from 14.3 percent to 27.8 percent) when online purchasing shifts from monthly to weekly.

In contrast, for many the Internet also serves as an online browsing catalog that complements traditional retail shopping. Three-fourths of Internet purchasers report shopping for products and services online, but ultimately buying them in retail stores.

Conversely, about half (48.7 percent) of Internet users with less than one year of experience online report shopping for products and services at retail outlets, but purchasing those products online. That proportion rises to 56.9 percent after four or more years of Internet experience.

BUYING AND SELLING STOCKS

One of the most heavily advertised products of 1999 and 2000 has been online brokerage services. Findings about online brokerages include:

- About three-fourths of the population that buys and sells securities has some form of Internet access.
- Individuals with Internet access make more trades per year than individuals who don't have Internet access – whether or not they make them online.
- On average, Internet users execute 2.4 times as many securities transactions as non-users.
- Internet users already make 13.3 percent of their trades online.

SUPPLEMENT 1

RESEARCH METHODS

In creating “Surveying the Digital Future,” the primary goal of the UCLA Center for Communication Policy was to create a representative sample of users and non-users. Here is the methodology that was used to conduct the project:

- Interviews were conducted with 2,096 households throughout the 50 states and the District of Columbia.
- The research team used a national Random Digit Dial (RDD) telephone sample that employed an Equal Probability Selection Method (EPSEM) sample. This sampling methodology gives every telephone number in the 50 states and the District of Columbia an equal chance of being selected.
- Once the EPSEM random sample of telephone numbers was generated, those households that had listed residential telephone numbers were sent an advance letter informing them of their household’s selection for the project.
- An interviewer spoke to a person in the household 18 years or older to obtain a roster of all household members. Then, a computer system (CFMC Survent CATI) randomly selected one individual from among those age 12 and over in the household to be the interviewee from that household.
- If the randomly selected individual was between 12 and 17 years of age, the interviewer asked a parent or guardian for permission to interview the child.
- Once the selection of a household member was made, only that individual was eligible to complete the interview.

- Eight call attempts were made to complete an interview.
- If a household refused twice, it was not contacted again.
- Interviews were conducted in English and Spanish.
- Interviewing took place in mid- to late-spring 2000.
- The collected responses were compared to census data to ensure that the sample was representative of the U.S. population in terms of geographical distribution, race, ethnicity, age, sex, education, and household income.
- The sample was very close on all demographic categories except for education, with the lower educated being somewhat under-sampled.
- To correct for this undersampling, the data was weighted by education.

SUPPLEMENT 2

REFERENCES

References for data cited in the introduction, pages four and five:

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