

Home Computer Access and Internet Use

Headline

In 2003, more than three out of four children (76 percent) ages 3 to 17 had access to a computer at home, up from 15 percent in 1984. Forty-two percent used the internet at home, nearly double the percentage (22 percent) who had used it in 1997. ([See Figure 1](#))

Importance

Home access to computers and the internet has expanded dramatically over the last decade.¹ Common uses for the home computer by children and youth include educational programs, games, word processing, and access to the internet.² Activities common among teens also include reading or sending email, sending and receiving instant messages, shopping, getting news, and going to entertainment, music, or sports websites.³ In 2001, children ages 5 to 17 were most likely to use home computers to play games (59 percent of all children), but they also often used home computers for connecting to the internet (46 percent) and completing school assignments (44 percent). Among children who used the internet, the most common uses included school work (72 percent), email (65 percent), and playing games (62 percent).⁴

Research on the effects of home computer and internet use on children is limited and often does not control for other factors. Some research indicates that those with access to home computers perform somewhat better in mathematics and reading, though the benefit is larger for whites and those in higher socioeconomic groups.⁵ Similarly, another study of a computer-based after-school program found that program participants showed small improvements in mathematics and reading skills.⁶ However, there is widespread concern that children may be exposed to pornographic, violent, and other age inappropriate materials on the internet. Research, while inconclusive about the impact of nonviolent sexually explicit material, has consistently demonstrated that exposure to violent material (both sexual in nature and not) is associated with desensitization to violence, increased hostility and imitation of violent behaviors, and greater anxiety and fear among children and youth.⁷ Lastly, time in front of the computer may also take the place of time spent exercising or being active, and may put children at risk for obesity and eye, wrist, and back problems.⁸

Trends

Since 1984, the percentage of children with home access to computers has steadily increased from 15 percent to 76 percent in 2003. In addition, the percentage of children who use the internet at home rose from 22 percent in 1997, the first year for which such estimates are available, to 42 percent in 2003. ([See Figure 1](#))

Differences by Race and Ethnicity

Non-Hispanic white and Asian children are much more likely than black and Hispanic children to have access to a computer at home and about twice as likely to use the internet at home. ([See Figure 2](#))

Differences by Household Income Level

As household income rises, so does children's access to computers at home and home internet use. In 2003, 43 percent of children in households with an income of less than \$15,000 had access to a computer at home, compared with 96 percent of children in households with an income of over \$75,000. Children's internet use at home follows a similar pattern, ranging from 17 percent to 63 percent. ([See Figure 3](#))

Differences by Parental Education Level

As householder education increases, so does children's access to computers and use of the internet at home. For example, children in homes where the head of household does not have a high school education are much less likely to have access to computers or to use the internet in their home than children in homes where the householder graduated from college (47 percent versus 94 percent, respectively, for computer access and 20 percent compared with 57 percent, respectively, for home internet use in 2003). ([See Table 1](#))

Differences by Age

Home computer access is high at any age. In 2003, 70 percent of 3- to 5-year-olds had access, compared with 79 percent among 15- to 17 year-olds. Home internet use increases substantially with age. Fifteen percent of children ages three to five used the internet at home in 2003, compared with 65 percent of youth ages 15 to 17. ([See Table 1](#))

State and Local Estimates

2000 state estimates for children without a computer at home are available at http://www.aecf.org/kidscount/sld/compare_results.jsp?i=490

2000 state estimates for children without internet access at home are available at http://www.aecf.org/kidscount/sld/compare_results.jsp?i=500

International Estimates

None

National Goals

None

Definition

All persons who lived in a household where the respondent answered “yes” to the question “Is there a personal computer or laptop in this household?” are defined as having access to a computer in the home. Respondents are also asked who within the household uses the internet, and for what purposes.

Data Sources

Data for 1984: Kominski, Robert. “Computer Use in the United States: 1984.” Current Population Reports, Series P-23, No. 155, U.S. Department of Commerce Economics and Statistics Administration, U.S. Census Bureau, March 1998.

<http://www.census.gov/population/www/socdemo/computer/p23-155.html>

Data for 1989: Kominski, Robert. “Computer Use in the United States: 1989.” Current Population Reports, Series P-23, No. 171, U.S. Department of Commerce Economics and Statistics Administration, U.S. Census Bureau, October 1989.

<http://www.census.gov/population/socdemo/computer/p23-171/p23-171.pdf>

Data for 1993: “Computer Use in the United States: October 1993” U.S. Department of Commerce Economics and Statistics Administration, U.S. Census Bureau, October 1993.

<http://www.census.gov/population/www/socdemo/computer/computer93.html>

Data for 1997: Newburger, Eric C. “Computer Use in the United States: 1997, Population Characteristics” Current Population Reports, P20-522, U.S. Department of Commerce Economics and Statistics Administration, U.S. Census Bureau, October 1997.

<http://www.census.gov/prod/99pubs/p20-522.pdf>

Data for 2000: Newburger, Eric C. “Home Computers and Internet Use in the United States: Special Studies” Current Population Reports, P23-207, U.S. Department of Commerce Economics and Statistics Administration, U.S. Census Bureau, August 2000.

<http://www.census.gov/prod/2001pubs/p23-207.pdf>

Data for income 2001: “A Nation Online: How Americans are Expanding Their Use of the Internet.” U.S. Department of Commerce Economics and Statistics Administration, U.S. Census Bureau, February 2002. Table 5-11.

<http://www.ntia.doc.gov/ntiahome/dn/index.html>

Other computer use 2001 data: U.S. Census. “Computer and Internet Use in the United States: September 2001.” Table 2A.

<http://www.census.gov/population/www/socdemo/computer/ppl-175.html>

Other internet use 2001 data: Child Trends' calculations of U.S. Census. "Computer and Internet Use in the United States: September 2001." Tables 2A and 4A.

<http://www.census.gov/population/www/socdemo/computer/ppl-175.html>

Income data for 2003: Day, Jennifer Cheeseman, Janus, Alex, and Jessica Davis "Computer and Internet Use in the United States: 2003." U.S. Census Bureau, Current Population Reports, 2005. <http://www.census.gov/prod/2005pubs/p23-208.pdf>.

All other data for 2003: Child Trends calculations using data from U.S. Census. "Computer and Internet Use in the United States: October 2003." Tables 2A and 4A. <http://www.census.gov/population/www/socdemo/computer/2003.html>.

Raw Data Source

U.S. Census Bureau, Current Population Reports, Computer Ownership Supplement <http://www.bls.census.gov/cps/computer/computer.htm>

Approximate Date of Next Update

Fall 2006

¹ National Telecommunications and Information Administration. 2002. A Nation Online: How Americans are Expanding Their Use of the Internet. U.S. Department of Commerce, Economics and Statistics Administration, National Telecommunications and Information Administration.

http://www.ntia.doc.gov/ntiahome/dn/nationonline_020502.htm

² See page 5, Newburger, Eric C. "Computer Use in the United States: 1997, Population Characteristics" Current Population Reports, P20-522, U.S. Department of Commerce Economics and Statistics Administration, U.S. Census Bureau, October 1997.

<http://www.census.gov/prod/99pubs/p20-522.pdf>

³ Lenhart, Amanda, Madden, Mary, and Hitlin, Paul. (2005). "Teens and Technology: Youth are leading the transition to a fully wired and mobile nation." Pew Internet and American Life Project: Washington, DC. http://www.pewinternet.org/pdfs/PIP_Teens_Tech_July2005web.pdf

⁴ U.S. Department of Education, National Center for Education Statistics. *Computer and Internet Use by Children and Adolescents in 2001*, NCES 2004-014, by Matthew DeBell and Chris Chapman. Washington, DC: 2003. <http://nces.ed.gov/pubs2004/2004014.pdf>

⁵ Attewell, P., and Battle, J. (1999). Home Computers and School Performance. *The Information Society*. 15:1-10.

⁶ Shields, Margie K., and Behrman, Richard E. (Fall/Winter 2000). "Children and Computer Technology: Analysis and Recommendations." *Future of Children*, 10(2).

http://www.futureofchildren.org/usr_doc/vol10no2.pdf

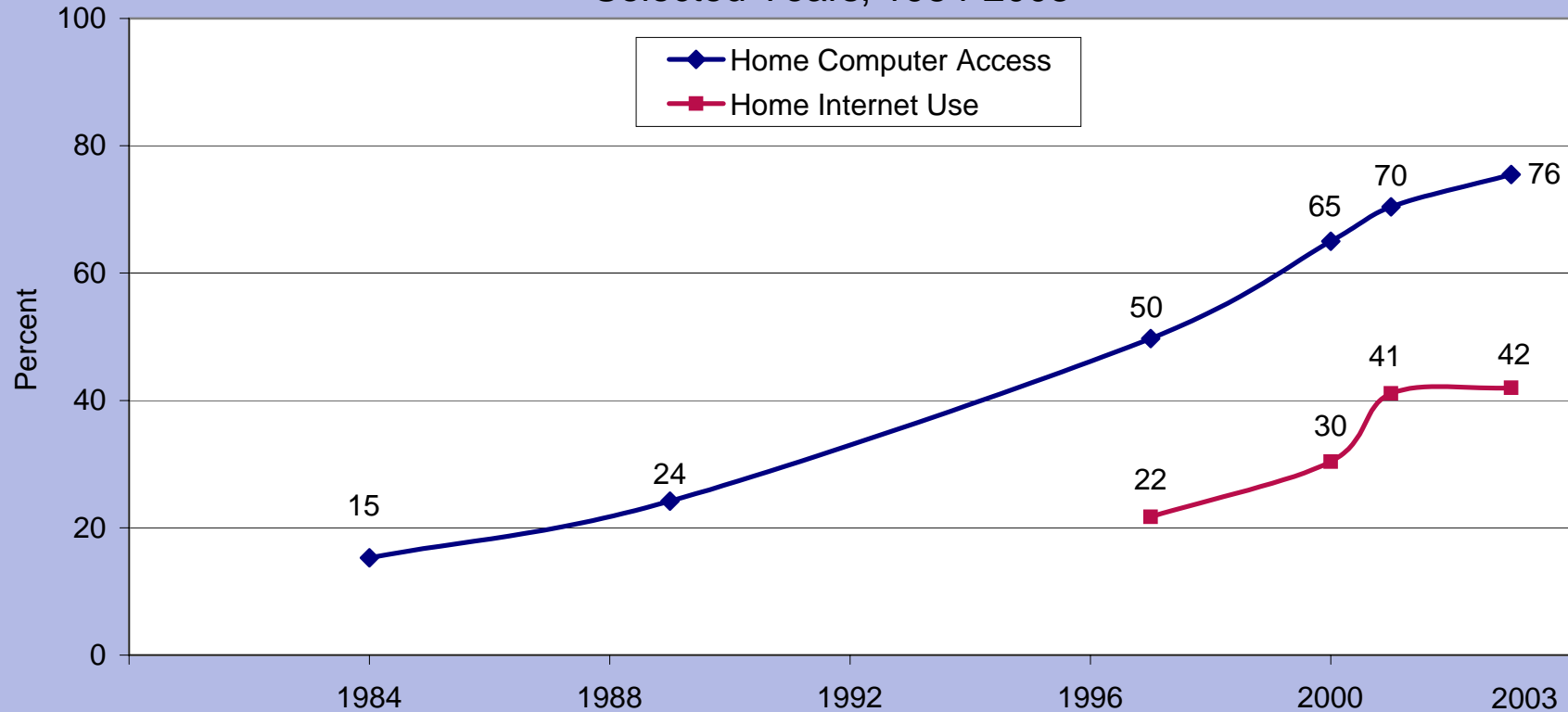
⁷ National Research Council and Institute of Medicine, 2001. *Non-technical Strategies to Reduce Children's Exposure to Inappropriate Material on the Internet: Summary of a Workshop*. Board on Children, Youth, and Families and Computer Science and Telecommunications Board. Joah G. Iannotta, ed. Washington, D.C.: National Academy Press.

<http://www.nap.edu/books/0309075912/html/>

⁸ Shields, Margie K., and Behrman, Richard E. (Fall/Winter 2000).

Figure 1

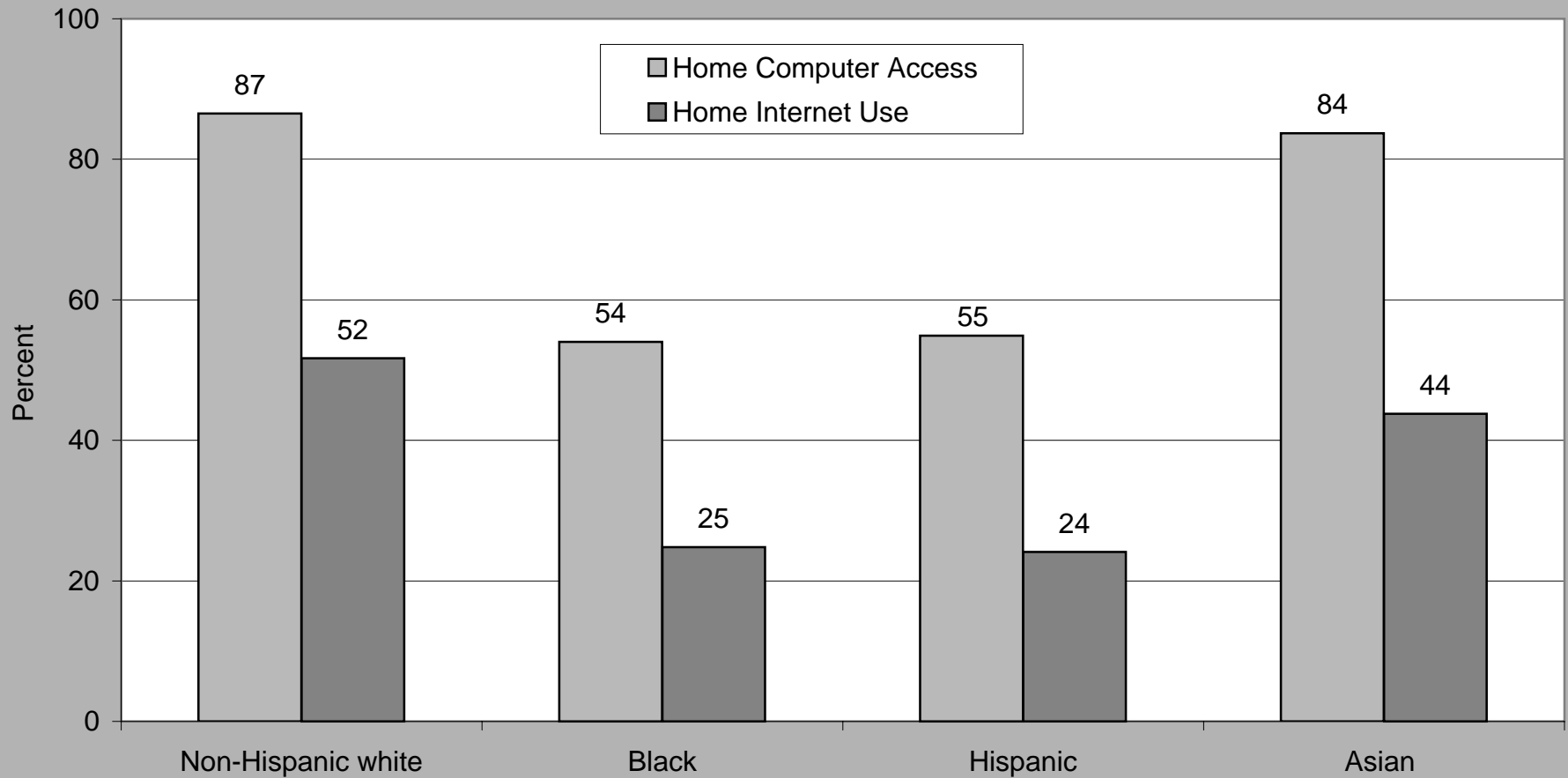
Percentage of Children Ages 3 to 17 Who Have Access to a Home Computer and Who Use the Internet at Home, Selected Years, 1984-2003



Source: Data for 1984: Kominski, Robert. "Computer Use in the United States:1984." Current Population Reports, Series P-23, No. 155, U.S. Department of Commerce Economics and Statistics Administration, U.S. Census Bureau, March 1998. Data for 1989: Kominski, Robert. "Computer Use in the United States:1989." Current Population Reports, Series P-23, No. 171, U.S. Department of Commerce Economics and Statistics Administration, U.S. Census Bureau, October 1989. Data for 1993: "Computer Use in the United States: October 1993" U.S. Department of Commerce Economics and Statistics Administration, U.S. Census Bureau, October 1993. Data for 1997: Newburger, Eric C. "Computer Use in the United States: 1997, Population Characteristics" Current Population Reports, P20-522, U.S. Department of Commerce Economics and Statistics Administration, U.S. Census Bureau, October 1997. Data for 2000: Newburger, Eric C. "Home Computers and Internet Use in the United States: Special Studies" Current Population Reports, P23-207, U.S. Department of Commerce Economics and Statistics Administration, U.S. Census Bureau, August 2000. Data for 2001: Child Trends calculations of data from U.S. Census. "Computer and Internet Use in the United States, 2001." Tables 2A and 4A. Data for 2003: Child Trends calculations using data from U.S. Census. "Computer and Internet Use in the United States: October 2003." Tables 2A and 4A. <http://www.census.gov/population/www/socdemo/computer/2003.html>.

Figure 2

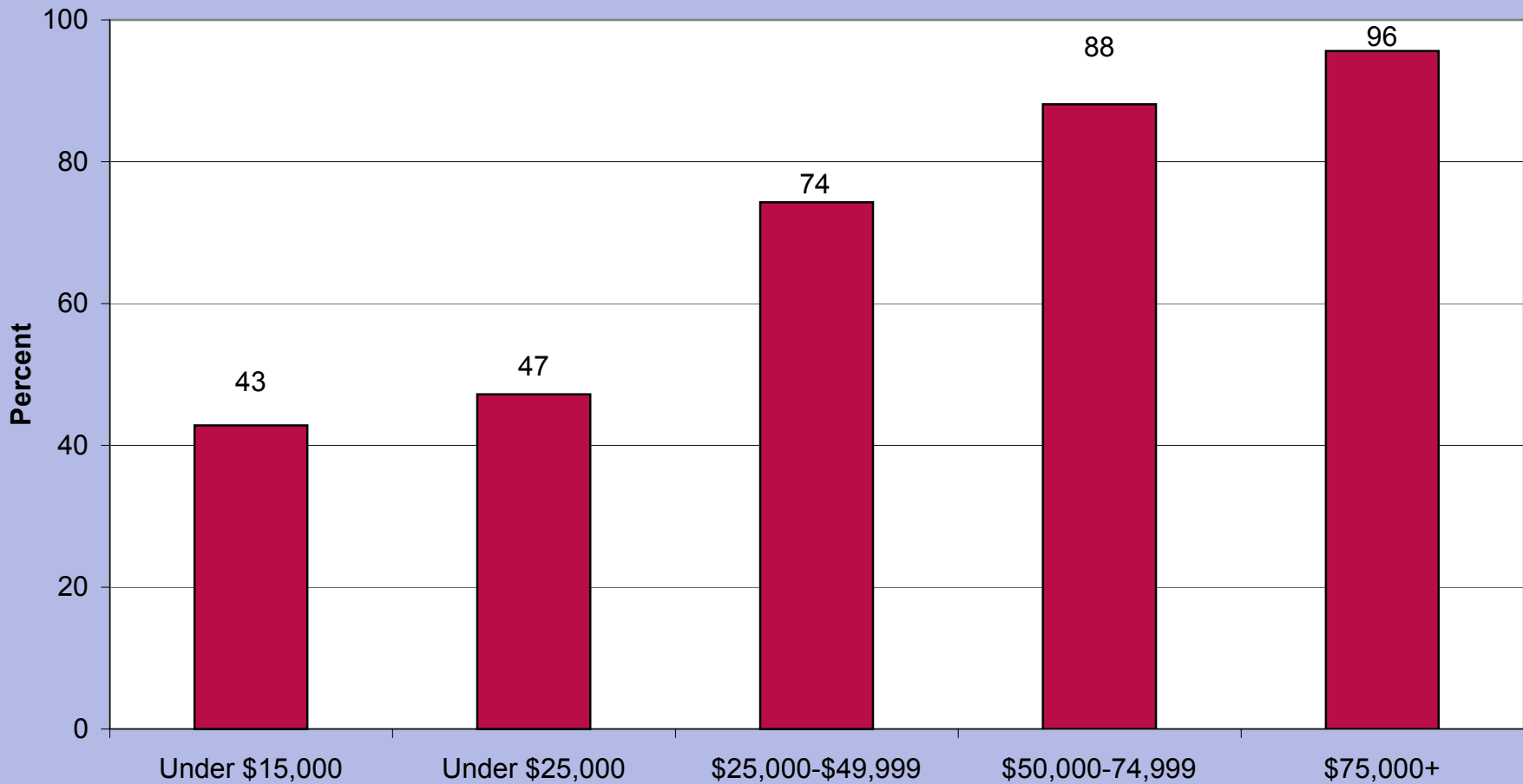
Percentage of Children Ages 3 to 17 Who Have Access to Computers at Home and Who Use the Internet at Home, by Race and Hispanic Origin, 2003



Source: Child Trends calculations using data from U.S. Census. "Computer and Internet Use in the United States: October 2003." Tables 2A and 4A. <http://www.census.gov/population/www/socdemo/computer/2003.html>.

Figure 3

Percentage of Children Ages 3 to 17 Who Have Access to Computers at Home, by Income Level, 2003



Source: Day, Jennifer Cheeseman, Janus, Alex, and Jessica Davis "Computer and Internet Use in the United States: 2003." U.S. Census Bureau, Current Population Reports, 2005. <http://www.census.gov/prod/2005pubs/p23-208.pdf> and Child Trends calculations using data from U.S. Census. Computer and Internet Use in the United States: October 2003: Tables 2A and 4A. <http://www.census.gov/population/www/socdemo/computer/2003.html>.



Table 1

The Percent of Children Ages 3 to 17 Who Have Access to Computers at Home and who Use the Internet at Home, Selected Years 1984-2003

Characteristic	1984	1989	1993	1997		2000		2001		2003	
	Home Computer Access	Home Computer Access	Home Computer Access	Home Computer Access	Home Internet Use	Home Computer Access	Home Internet Use	Home Computer Access	Home Internet Use	Home Computer Access	Home Internet Use
Total	15.3	24.2	-	49.7	21.7	65.0	30.4	70.4	41.1	75.5	42.0
Gender											
Male	-	-	31.5	50.1	22.4	65.3	30.2	70.0	41.0	75.2	41.1
Female	-	-	32.4	49.3	21.0	64.8	30.6	70.9	41.1	75.9	43.0
Age											
3 to 5 years	-	-	-	40.6	2.0	58.0	7.3	62.9	13.4	70.2	15.1
6 to 11 years	-	-	-	49.1	16.4	64.1	24.7	-	-	-	-
6 to 9 years	-	-	-	-	-	-	-	67.8	30.6	73.3	30.0
10 to 14 years	-	-	-	-	-	-	-	73.3	52.0	78.0	52.7
12 to 17 years	-	-	-	55.1	34.0	69.5	47.9	-	-	-	-
15 to 17 years	-	-	-	-	-	-	-	76.1	62.8	79.2	64.7
Race and Hispanic Origin											
White	-	-	35.8	-	-	69.7	33.6	75.3	44.2	79.6	45.7
White, non-Hispanic	-	-	-	61.5	23.2	77.3	38.4	82.8	50.5	86.5	51.7
Black	-	-	13.0	24.2 ¹	12.5 ¹	42.5	14.7	45.5	24.4	54.0	24.8
Hispanic	-	-	12.1	23.0	16.4	37.1	12.8	46.7	20.3	54.9	24.1
Asian and Pacific Islander	-	-	-	-	-	71.9	35.2	81.3	51.5	-	-
Asian ²	-	-	-	-	-	-	-	-	-	83.7	43.8
Householder's Educational Attainment											
Less than high school diploma	-	-	-	15.2	12.2	30.1	11.1	37.8	17.2	46.6	19.9
High school diploma/GED	-	-	20.7	40.1	15.2	55.8	24.3	64.2	35.3	68.4	35.6
Some college	-	-	37.4	57.1	20.1	74.8	34.9	77.2	45.5	81.9	46.3
Bachelor's degree or more	-	-	62.7	80.0	29.0	89.9	46.6	92.1	59.1	93.5	57.3
Family Structure											
Family household	-	-	-	-	-	65.2	30.5	70.6	41.2	75.7	42.1
Married-couple household	-	-	38.3	-	-	73.6	35.1	78.8	46.6	82.3	46.4
Male householder	-	-	23.2	-	-	48.8	23.9	57.4	33.4	64.2	35.1
Female householder	-	-	13.9	-	-	43.0	17.8	48.7	26.7	58.0	30.4
Nonfamily household	-	-	-	-	-	50.0	24.8	54.9	31.6	61.7	33.6
Household Income											
Under \$25,000	-	-	-	-	-	-	-	-	-	47.2	19.2
Under \$15,000	-	-	-	-	-	27.3	7.7	33.3	14.3	42.8	16.5
\$15,000-19,999	-	-	-	-	-	36.0	12.9	-	-	49.2	19.9
\$20,000-24,999	-	-	-	-	-	41.9	15.2	-	-	-	-
\$25,000-\$49,999	-	-	-	-	-	-	-	-	-	74.3	37.6
\$25,000-34,999	-	-	-	-	-	53.9	21.0	59.7	28.9	-	-
\$35,000-49,999	-	-	-	-	-	71.4	31.8	75.7	42.4	-	-
\$50,000-74,999	-	-	-	-	-	82.6	39.9	86.9	52.1	88.1	50.8
\$75,000+	-	-	-	-	-	93.2	51.7	94.9	63.4	95.6	63.4
Region											
Northeast	-	-	35.3	54.0	24.6	70.2	35.5	75.4	47.2	81.8	49.2
Midwest	-	-	32.5	53.7	19.2	68.6	32.1	74.3	43.5	77.6	44.8
South	-	-	26.9	43.6	21.1	60.9	27.6	65.4	38.7	71.4	38.7
West	-	-	36.1	51.2	22.8	63.6	29.0	70.1	37.5	75.5	38.9
Metropolitan Status											
Metropolitan	-	-	-	-	-	65.9	30.8	-	-	-	-
Inside central city	-	-	-	-	-	53.4	23.7	-	-	-	-
Outside central city	-	-	-	-	-	72.8	34.7	-	-	-	-
Nonmetropolitan	-	-	-	-	-	61.1	28.7	-	-	-	-

¹ Estimates for 1997 are for non-Hispanic blacks

Source: Data for 1984: Kominski, Robert. "Computer Use in the United States: 1984." *Current Population Reports*, Series P-23, No. 155, U.S. Department of Commerce Economics and Statistics Administration, U.S. Census Bureau, March 1998. Data for 1989: Kominski, Robert. "Computer Use in the United States: 1989." *Current Population Reports*, Series P-23, No. 171, U.S. Department of Commerce Economics and Statistics Administration, U.S. Census Bureau, October 1989. Data for 1993: "Computer Use in the United States: October 1993" U.S. Department of Commerce Economics and Statistics Administration, U.S. Census Bureau, October 1993. Data for 1997: Newburger, Eric C. "Computer Use in the United States: 1997, Population Characteristics" *Current Population Reports*, P20-522, U.S. Department of Commerce Economics and Statistics Administration, U.S. Census Bureau, October 1997. Data for 2000: Newburger, Eric C. "Home Computers and Internet Use in the United States: Special Studies" *Current Population Reports*, P23-207, U.S. Department of Commerce Economics and Statistics Administration, U.S. Census Bureau, August 2000. Income data for 2001: "A Nation Online: How Americans are Expanding Their Use of the Internet." U.S. Department of Commerce Economics and Statistics Administration, U.S. Census Bureau, February 2002. Table 5-11. All other data for 2001: Child Trends calculations using data from U.S. Census. Computer and Internet Use in the United States, 2001: Tables 2A and 4A. Income data for 2003: Day, Jennifer Cheeseman, Janus, Alex, and Jessica Davis "Computer and Internet Use in the United States: 2003." U.S. Census Bureau, Current Population Reports, 2005. <http://www.census.gov/prod/2005pubs/p23-208.pdf>. All other data for 2003: Child Trends calculations using data from U.S. Census. "Computer and Internet Use in the United States: October 2003." Tables 2A and 4A. <http://www.census.gov/population/www/socdemo/computer/2003.html>.