

# LEARNING UNPLUGGED: The Internet Divide in American Schools

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**ABSTRACT:** A number of technical, social, and cultural factors influence young Americans' use of computers and the Internet, yet schools remain an essential access point for a significant population of our youth. Few schools provide students with open access to the Internet. Schools must account for inequities in access to 21st-century technologies or risk propagating existing divides into a new generation.

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## Introduction

At the turn of the century, Americans turned a corner. For the first time, the majority of Americans described themselves as computer- and Internet-users. In fact, two-thirds of Americans use computers and 54% use the Internet (Kleiner and Lewis, 2004). The trend toward computer and Internet use is even stronger among young Americans -- that is, those between the ages of 5 and 17 -- of which 90% are using computers and nearly six out of ten are on the Internet (Kleiner and Lewis, 2004). Myriad technical, social, and cultural factors converge to influence young Americans' use of computers and the Internet; yet at the confluence remains one constant -- schools.

In an age when many adults have ubiquitous access to computers and the Internet, it is sometimes easy to assume that such is the case for all. In fact, most young Americans have limited access, some from one location only. Schools serve an essential role for those young Americans who access the Internet from only one location. Unfortunately, school policies do not always impact in positive ways how the young use computers and the Internet. Although nearly all schools and classrooms have computers and are connected to the

Internet (Kleiner and Lewis, 2004), most provide severely restricted access to the students and teachers within.

Recently, the National Center for Educational Statistics released a report describing the use of computers and the Internet by children and adolescents in the United States (DeBell and Chapman, 2003). The report draws from the 2001 Current Population Survey section on computer and Internet usage. Approximately 26,000 5-17 year-olds -- both enrolled and not enrolled in schools -- were surveyed about their computer and Internet use at home as well as at school. The results of this survey offer a telling snapshot of a new, mediated generation. They also suggest an important role of schools as a significant point of access to the Internet for those members of this generation who may not have access otherwise. It is important to understand what these young people are telling us about the role of the Internet in their lives. It is important, too, to reflect on the impact of the disconnects their responses reveal -- and what schools can do to help bridge them.

### **Our Connected Youth**

Young Americans are connecting to the Internet at an increasingly younger age. Nearly all of America's youth describe themselves as computer users, and six out of ten, overall, use the Internet. More than half of all elementary- and middle school-aged children are Internet users. Approximately one in four is online by the time each enters Kindergarten; one in two by age 9. Three out of four high school-aged youth (between 15 and 17) are online.

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Table 1. Internet Use Among Young Americans

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Age	Percent Who Use the Internet
By Age 5	25
By Age 9	50
Between Ages 15-17	75

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For most young Americans, the Internet is an essential part of their naturally occurring world. It is a transparent component of their daily activities. They use the Internet in critical realms of their lives. Overall, young Americans use the computer at home to play games, connect to the Internet, and to complete school assignments.

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Table 2. Tasks For Which Young Americans Use the Internet

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Use	Percent of Internet Users	Percent of All Young Americans
Schoolwork	72	42
Communication	65	38
Gaming	62	36

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Schools are an essential access point for a significant population of youth. Overall, young Americans are far more likely to use computers at school (81%) than at home (65%). However, overall, they are more likely to use the Internet at home than at school. Multiple cultural and economic factors seemingly influence young people's access to both computers and the Internet. For instance, controlling for affluence, the gap between computer/Internet use at home versus at school is greater than 30 percentage points for those who:

- Are Black or Hispanic;
- Live with parents who did not complete high school;
- Live with a single mother; or
- Live in a household where adults speak Spanish only.

Nearly 4 in 10 young Americans access the Internet from one location only. Of those, approximately two-thirds access from home. Realistically, that leaves nearly 4 million young people completely reliant upon schools as their sole gateway to the Internet.

### **An Internet Divide**

Although, as a whole, young Americans are more likely to use computers at school than at home, some demographic groups are far more likely to use computers at schools, including Blacks, Hispanics, those living in poverty, and those from single mother households, households with parents lacking high school credentials, and Spanish monolingual households. Similar trends are evident regarding Internet access. Seemingly intractable divides regarding computer and Internet use among the youth -- along all-too-predictable lines -- are evident throughout. Statistically significant divides exist along racial, economic, and educational lines. Similar divides exist when considering parental income and educational attainment factors.

Those living in poverty are twice as likely to access the Internet from school only. The majority of those whose parents are not high school graduates access the Internet only from school. Nearly 60 percent of young people who live in Spanish-speaking households and access the Internet from one location only do so from school. The gap between White and Black young Americans' use of computers is eight percentage points. But that gap nearly triples -- to 21 percentage points -- when considering Internet use. Those gaps widen to 15 and 30 percentage points, respectively, when comparing White and Hispanic children and adolescents. Young Americans from households where at least one parent attended graduate school are nearly two-and-a-half times more likely to be Internet users than those where neither parent graduated from high school.

Although differences no longer exist in access to and overall use of the Internet along gender lines, they do exist in relation to what young people do while connected to the Internet. Female Internet users are more likely to use email,

whereas males are more likely to play games and find information. These data mirror those found in similar studies of adults (e.g., Weiser, 2000; Odell, Korgen, Schumacher, & Delucchi, 2000; Singh, 2002). Interestingly, although there is virtually no difference among boys and girls in computer and Internet use, those raised by single moms are less likely to use computers and/or the Internet compared to those raised by single dads.

Home computer use along racial lines divides into two camps: Whites/Asians and Blacks/Hispanics/Native Americans. Whites/Asians are twice as likely to word process, connect to the Internet, email, and complete school assignments. Young Americans in affluent homes are approximately four times as likely to email or word process from home than those living in poverty, and about three times as likely to complete schoolwork on home computers. Overall, girls are somewhat more likely than boys to word process, email, and complete school assignments on home computers.

There is a 21 percentage point gap in overall computer use between households where no parent has completed high school compared to those where at least one parent has some graduate school experience. The gap nearly doubles when considering word processing and more than doubles for completing school assignments. But, again, the real gap exists in connecting to the Internet. Consider this: only 15% of those living in the least-educated households connect to the Internet, compared to 68% living in the most-educated.

## **A Role for Schools**

Even though going to school dramatically increases the opportunity for young Americans to access computers, it does not necessarily increase the opportunity to use the Internet. Few schools are allowing students to apply computers -- and, particularly, the Internet -- toward meaningful, engaging learning activities. As a result, an increasing number of students are finding school to be an irrelevant place -- where they are locked out of the basic resources they feel are necessary to communicate, to learn, and to develop. The Internet is the most significant instructional delivery medium since the schoolhouse, yet young Americans are far more likely to access it from home (78%) than from school (68%) -- unless they are poor or have less-educated parents. A stratification of access along social and economic lines is emerging, as schools struggle to control access to the most important medium since the printing press. By restricting access to the Internet, schools risk exacerbating potentially devastating divides.

Nearly every classroom in America is connected to the Internet. The same is not true for every household. Children and adolescents from poor households and those whose parents did not complete high school are more likely to rely solely on schools for Internet access. The same barriers that educators have struggled for decades to scale in traditional schooling -- in many cases, with great success

-- are the same ones preventing equitable, effective learning for young people in the 21<sup>st</sup> century both in and out of schools. Similar success is possible when it comes to the Internet in schools, as well. For instance, one place where schools seem to be having a particularly positive effect is with students with disabilities. Adults with disabilities are half as likely to use the Internet as their non-disabled peers. That gap shrinks to approximately 10 percent among children and adolescents.

Access to important technologically-enabled learning activities (e.g., communication, resources-sharing, and information-seeking) at home is driven still by social factors beyond the control of young people -- namely, race, economics, and family arrangements. In schools, those barriers are diminished, but they are not gone. Educators have a moral obligation to work diligently toward open, equitable access to the Internet for all students in all schools -- regardless of race, economics, language, or family arrangement. Educators cannot put a computer in every student's home, but they can provide access to Internet-enabled learning in every classroom. This, more than anything, will close the myriad, needless divides that anchor those without and better reflect the democratic ideals upon which our public schools were founded.

## References

DeBell, M. & Chapman, C. (2003). Computer and internet use by children and adolescents in 2001 (NCES 2004-014). Washington, DC: U.S. Department of Education, National Center for Educational Statistics.

Kleiner, A. & Lewis, L. (2004). Internet access in U.S. public schools and classrooms: 1994-2002 (NCES 2004-011). Washington, DC: U.S. Department of Education, National Center for Educational Statistics.

Odell, P., Korgen, K., Schumacher, P. & Delucchi, M. (2000). Internet use among female and male college students. *CyberPsychology and Behavior*, 3(5), 855-862.

Singh, S. (2002). Gender and the use of the internet at home. *New Media & Society*, 3(4), 395-415.

Weiser, E. (2000). Gender differences in internet use patterns and internet application preferences: A two-sample comparison. *CyberPsychology and Behavior*, 3(2), 167-178.

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