

Chapter 16

Information Technologies for Adolescents

Lesley Farmer

California State University – Long Beach, USA

ABSTRACT

Adolescents live in a technology-enhanced world. However, significant subpopulations lack physical and intellectual access to digital technologies. Content and communications providers format and disseminate information in a variety of ways. In response, teens who use technology tend to employ a variety of platforms, choosing the tool to match the content and purpose. Social media has been the technology of choice for teenagers, leveraging their social and creative needs. Educators of teens need to incorporate technology into their practices, providing access and opportunities for teens to optimize their technology use. Today's adolescents, ages 12 to 18, are often characterized as digital natives because many of them have grown up in a digital world. Most of them have some kind of access to technology, although the digital divide still exists. The technologies teens access and use are described in this chapter.

WHY SHOULD TEENS CARE ABOUT TECHNOLOGY?

Sometimes teens don't realize the extent of technology. If technology is associated with video games, drill-and-kill, or testing, then technology may seem childish or stressful, it doesn't seem like a desirable thing to pursue. Public services and private enterprises rely on technology for information and its processing. Employers expect technological competence of new hires. Politics and social movements are using the Internet to make a difference. Technology has facilitated globalization, which impacts the U. S. economy daily. The world really is wired. So the message

needs to be: "Technology is all around you, so deal with it and turn it to your advantage."

Online information and instruction enables teens to learn what they want and need to learn outside of school strictures and social prejudice. Both television and the Internet provide anonymity and autonomy. The Internet has the added advantage of being interactive so teens can control how they retrieve information, they can connect with experts in the field, and they can get appropriate feedback that helps them learn more effectively and efficiently. Web-based learning can also help teens connect with a new set of peers, thus extending their social network.

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Learning how to use technology opens economic doors for teenagers now and in their futures. They can apply for jobs online, and research companies that fit their own qualifications. They can find free Web tutorials to learn technology skills. They can present their ideas with a professional look by learning how to do desktop publishing. Through using technology, teens can create a new social identity, which can open new networking doors.

Technology provides multiple benefits particularly for teens on the fringes of society: physically, educationally, economically, and politically. Technology offers much expanded access to information, which can help teens learn more and gain more tools for problem solving. Because of transportation limitations or other demands for their time, disenfranchised teens might not have adequate access to social services as they have to deal with survival issues of health and safety; technology such as the Internet can provide alternative routes to needed information. . Parenting and personal advice is available free online, and can help avoid life crises. With translation programs and information in non-English languages, literate immigrants can find out about available social programs. Many special interest groups, ranging from disabilities to transgender advocates, can help individual teens who might otherwise feel reluctant to ask for help.

In sum, technology impacts adolescents in their daily and future lives, even if they are not fully aware of technology's reach.

TEEN ACCESS TO TECHNOLOGIES

Technology is a way of life for most of today's adolescents. They usually have access to technology at school, and most have access at home or within the neighborhood. At this point, the group who has the least access to technology, particularly Internet connectivity, is the rural population because of geographically constrained cable

connections. The 2012 Federal Communications Commission reported that almost a quarter of rural populations do not have broadband Internet access. Nevertheless, satellite telecommunications and governmental initiatives are making technology access more feasible. The following statistics give a clearer picture of teen access and use of technology (Lenhart, 2012; Madden et al., 2013).

- 95% of teens use the Internet.
- 93% of teens have a computer or access to one at home.
- Almost three-quarters of teens access the Internet via mobile devices.
- Over a third of teens have smart phones, and a quarter primarily access the Internet via smart phone especially those with low income or low education.
- Over a third use video chats.
- Over a quarter record and upload videos to the Internet.
- 94% of teens use Facebook.
- About a quarter of online teen users use Twitter, and the number of teens is rising rapidly.

Despite these high numbers, a sizeable proportion of adolescents remain on the fringes of digital technology. A third of Black teens and a quarter of urban teens do not have computers. Parental status also impacts computer ownership; in households where parents without a high school or makes less than \$30,000 a year, a quarter of their teen children do not own computers. Furthermore, a quarter of teens do not have mobile devices, with rural teens being the least likely group (Madden et al., 2013). Teens with disabilities are the least likely to have technology: only a quarter own a computer, and only a tenth use the Internet (Center for an Accessible Society, 2013).

Generally, teens on the technology fringes are also on the educational and societal fringes. Many have a difficulty from the start: because of health risk factors dating pre-birth, because of economic

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