Digital Opportunity

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Each month, Special Report summarizes a recent research study (or several studies related to the same topic) containing findings of importance to Educational Leadership readers. The purpose of this column is not to endorse or refute the conclusions of the study or studies summarized, but rather to keep readers informed about timely research that may significantly influence education policy and practice.

How can technology help our children succeed? A recently released report from the Children’s Partnership—Measuring Digital Opportunity for America’s Children: Where We Stand and Where We Go From Here—provides some answers. On the basis of 40 indicators, the report’s Digital Opportunity Measuring Stick shows how U.S. children and young adults use information and communications technology in ways that relate to their achievement, health, economic opportunity, and civic participation. The findings are based on reviews of existing research, on analyses of survey data from the federal government and various nonprofit research organizations, and on data from the U.S. Census Bureau’s 2003 Current Population Survey.

U.S. children are benefiting from technology-enabled opportunities.

The report indicates that almost 20 percent of young adults ages 18–25 use the Internet to search for health-related information, especially on such sensitive issues as pregnancy, birth control, and AIDS. Parents and doctors are increasingly using e-mail and Web-based communication to exchange information about children’s health problems.

Students who develop digital skills will improve their job prospects, given the fact that a number of the fastest-growing occupations are becoming computer-intensive. According to the report, approximately 40 percent of children ages 7–17 are honing their skills by using word processing or desktop publishing programs at home.

Finally, students who use the Internet are increasingly connecting with their local community online, with approximately 40 percent visiting the Web sites of clubs, groups, and teams of which they are members.

The Upside

U.S. children are benefiting from technology-enabled opportunities. The potential of information and communications technology to improve student achievement is becoming more widespread, with more than half—57 percent—of schoolchildren ages 7–17 using a home computer to complete school assignments and more than half—53 percent—of teachers using technology in their classroom instruction. Virtually all schools are connected to the Internet, and most public schools (88 percent) maintain a Web site.

According to the authors,

We found some of the strongest evidence of positive impact as well as some of the most exciting, untapped potential of information and communication technologies in the area of improving the health of children.

The Downside

The picture looks different, however, for low-income and ethnic minority children. In terms of technology’s potential to improve academic achievement, although 77 percent of schoolchildren ages 7–17 from higher-income households (earning more than $75,000 annually) use a home computer to complete homework assignments, only 29 percent of children from households earning less than $15,000 annually do so. Parents in lower-income households use the Internet one-third as frequently as those from higher-income households, because they are concerned about their children’s homework or school-related concerns.

The disparity exists along ethnic lines as well. For example, 23 percent of Asian American young adults and 22 percent of white young adults use the Internet to search for health information. These usage figures are almost double those of Native Americans, African Americans, and Latinos.
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A gap also shows up in terms of economic opportunity. Only 17 percent of children ages 7–17 living in lower-income homes (earning $15,000 or less annually) use word processing or desktop publishing applications, compared with 57 percent of children in higher-income families. White and Asian American children ages 7–17 are twice as likely to use these applications as Latino, African American, or Native American children are.

The Good News
Measuring-stick indicators suggest that when low-income children have access to technology, they use it in ways that enhance their opportunities. For example, lower-income online youth are more likely than their higher-income peers to download study guides (43 percent compared with 36 percent). Also, young adults who identify themselves as “lower-class” are slightly more likely to seek medical care on the basis of their online research than are other groups (17 percent compared with 14 percent). Children living in lower-income households are more likely to post their opinions on different issues on various Web sites and online bulletin boards than are those in higher-income households (43 percent compared with 36 percent).

Anecdotal information also suggests that information and communications technology has great potential to help children with vision or hearing impairments and provides greater opportunities for people with disabilities to care for themselves at home.

Recommendations
As part of “a digital opportunity action agenda for youth,” the report makes the following recommendations for education policymakers:

- Identify and capitalize on technology advances with proven value.
- Invest in powerful ways in which
technology can meet national goals for children related to literacy, health, and entrepreneurship.

- Create benchmarks to hold society accountable for providing digital opportunity to all children.
- Ensure that every child has access to technology tools at home, at school, and in the community.
- Develop a long-range agenda for effectively deploying technology for children and young adults during the next decade.

Measuring Digital Opportunity for America’s Children: Where We Stand and Where We Go From Here was published by the Children’s Partnership, a national nonprofit, nonpartisan child advocacy organization. The report is available online at www.contentbank.org/DOMS.

More Reports on Technology

Internet: The Mainstreaming of Online Life
Find out who’s going online in the United States, how different groups use the Internet, how the Internet is affecting society, and how broadband use has increased.

Published by the Pew Internet & American Life Project. Available: www.pewinternet.org/pdfs/Internet_Status_2005.pdf

Children, the Digital Divide, and Federal Policy
This report considers the quantity and quality of digital access for children in the United States. Significant gaps exist in the location and speed of Internet access and in the skills students are learning for making the most of their online experience.

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Teachers Talk Tech 2005: Tools for Teachers vs. Tools for Teaching
This survey shows that teachers’ technology use is on the rise, that technology has changed how teachers teach, and that professional development in technology lags in most schools.

Some Caveats on Computer Use
Tech Tonic: Towards a New Literacy of Technology
This report cites the lack of evidence that computers improve student achievement and points to the health hazards for children of an increasingly sedentary and screen-centered lifestyle.

Generation M: Media in the Lives of 8-18-Year-Olds
Children and teenagers are spending a daily average of six and one-half hours using the Internet, playing video games, and watching TV.

Computers and Student Learning
This study found that computers in the classroom have no discernible positive effect on children's education performance, whereas computers at home could actually be detrimental.
Published by the Ifo Institute for Economic Research, University of Munich. Available: www.res.org.uk/econometrics/504.pdf

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