INTERACTIVE SESSION   TECHNOLOGY

Do Smartphones Harm Children? Maybe, Maybe Not

For many of us, smartphones have become indispensable, but they have also come under fire for their impact on the way we think and behave, especially among children. There is a growing wariness among parents, educators, psychologists, and even Silicon Valley luminaries that the benefits of screens are overblown, even as learning tools, and the risks for addiction and stunting development seem high.

The average American teenager who uses a smartphone receives his or her first phone at age 10 and spends over 4.5 hours a day on it (excluding texting and talking). Seventy-eight percent of teens check their phones at least hourly, and 50 percent report feeling "addicted" to their phones. There have been a number of studies on the negative effects of heavy smartphone and social media use on the mental and physical health of children whose brains are still developing. These range from distractions in the classroom to a higher risk of suicide and depression.

A recent survey of over 2,300 teachers by the Center on Media and Child Health and the University of Alberta found that 67 percent of the teachers reported that the number of students who are negatively distracted by digital technologies in the classroom is growing. Seventy-five percent of these teachers think students' ability to focus on educational tasks has decreased. Research by psychology professor Jean Twenge of San Diego State University found that U.S. teenagers who spend 3 hours a day or more on electronic devices are 35 percent more likely, and those who spend 5 hours or more are 71 percent more likely, to have a risk factor for suicide than those who spend less than 1 hour. This research also showed that eighth-graders who are heavy users of social media have a 27 percent higher risk of depression. Those who spend more than the average time playing sports, hanging out with friends in person, or doing homework have a significantly lower risk. Additionally, teens who spend 5 or more hours a day on electronic devices are 51 percent more likely to get less than 7 hours of sleep per night (versus the recommended 9).

These findings are now being challenged by other academic researchers. A paper published in the *Journal of Child Psychology and Psychiatry* by psychology professors Candice L. Odgers of the University of California, Irvine, and Madeleine R. Jensen of the University of North Carolina at Greensboro evaluated about 40 studies that examined the link between social media use and adolescent depression and anxiety. They found that link to be small and inconsistent. An analysis by Amy Orben at the University of Cambridge and similar work by Jeff Hancock, founder of the Stanford Social Media Lab, reached similar conclusions. Hancock's analysis of 226 studies on the well-being of phone users concluded that if you compare the effects of your phone to sleeping, smoking, or eating properly, the net effect is essentially zero.

Twenge's critics point out that although her work found a correlation between the appearance of smartphones and a rise in reports of mental health issues, it did not prove that phones were the cause. Are teens who are more depressed spending more time on their phones? Or are teens becoming depressed because they spend more time on their phones? It could be that the rise in depression led teenagers to excessive phone use, and that there were other potential explanations for depression and anxiety. Additionally, anxiety and suicide rates appear not to have risen in large parts of Europe where smartphones are more prevalent. The studies of smartphone use that exist do not show causal data, so there is no definitive proof that digital technology alters minds for the worse.

These researchers are not arguing that intensive use of smartphones doesn't matter. Children who use their phones too much can miss out on other valuable activities, such as exercise. And research does show that excessive phone use can exacerbate the problems of certain vulnerable groups, such as children with mental health issues. But they do not believe that screens are responsible for broad social problems, such as teenagers' rising anxiety rates and sleep deprivation problems. In most cases, the phone is a mirror revealing problems a child would have even without the phone.

Sources: Nathaniel Popper, "Panicking About Your Kids' Phones? New Research Says Don't," *New York Times*, January 17, 2020; Brian Resnick, "Have Smartphones Really Destroyed a Generation? We Don't Know," *Vox*, May 16, 2019; Jack Nicas, "Apple Cracks Down on Apps That Fight iPhone Addiction," *New York Times*, April 27, 2019; Nellie Bowles, "Human Contact Is Now a Luxury Good," *New York Times*, March 23, 2019 and "A Dark Consensus Emerges About Screens and Kids Begins to Emerge in Silicon Valley," *New York Times*, October 26, 2018.

CASE STUDY QUESTIONS

1. Identify the problem described in this case study. In what sense is it an ethical dilemma?

2. Compare the research findings approving or disapproving of smartphone use among children and teenagers.

3. Should restrictions be placed on children's and teenagers' smartphone use? Why or why not?

RSI is avoidable. Designing workstations for a neutral wrist position (using a wrist rest to support the wrist), proper monitor stands, and footrests all contribute to proper posture and reduced RSI. Ergonomically correct keyboards are also an option. These measures should be supported by frequent rest breaks and rotation of employees to different jobs.

RSI is not the only occupational illness computers cause. Back and neck pain, leg stress, and foot pain also result from poor ergonomic designs of workstations. **Computer vision syndrome (CVS)** refers to any eyestrain condition related to display screen use in desktop computers, laptops, e-readers, smartphones, and handheld video games. CVS affects about 90 percent of people who spend three hours or more per day at a computer. Its symptoms, which are usually temporary, include headaches, blurred vision, and dry and irritated eyes.

In addition to these maladies, computer technology may be harming our cognitive functions or at least changing how we think and solve problems. Although the Internet has made it much easier for people to access, create, and use information, some experts believe that it is also preventing people from focusing and thinking clearly on their own. They argue that excessive use of computers (and smartphones—see the Interactive Session on Technology) reduces intelligence. One MIT scholar believes exposure to computers encourages looking up answers rather than engaging in real problem solving. Students, in this view, don't learn much surfing the web or answering email when compared to listening, drawing, arguing, looking, and exploring (Henry, 2011).

The computer has become part of our lives—personally as well as socially, culturally, and politically. It is unlikely that the issues and our choices will become easier as information technology continues to transform our world. The growth of the Internet and the information economy suggests that all the ethical and social issues we have described will be heightened further as we move further into the first digital century.

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