Responsi 4 : Ethical and Social Issues in Information Systems

MATERI

- Presentasi studi kasus : 2 kelompok @ 20 menit = 40 menit
- Quiz 10 menit
- Pembahasan dari asprak

TUJUAN PRAKTIKUM

- Mahasiswa mampu mempresentasikan studi kasus mengenai “Ethical and Social Issues in Information Systems

VIDEO PENUNJANG RESPONSI

- What Net Neutrality Means for You : What Net Neutrality Means for You
- Facebook and Google Privacy: What Privacy? : Apple vs Facebook: The Privacy Battle
- United States v. Terrorism: Data Mining for Terrorists and Innocents : Safe and Sorry – Terrorism & Mass Surveillance
- Instructional Video: Viktor Mayer-Schönberger on the Right to Be Forgotten : Viktor Mayer-Schönberger on the Right to Be Forgotten

Case Study 1

Note: Dikerjakan oleh **kelompok ganjil.**

How Harmful Are Smartphones?

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. Two of the largest investors in Apple Inc. are urging the iPhone maker to take action against smartphone addiction among children over growing concerns about the negative effects of technology.

An open letter to Apple on January 6, 2018 from New York-based JANA Partners and the California State Teachers’ Retirement System (CalSTRS) stated that the firm must do more to help children fight smartphone addiction. These two shareholders together control about $2 billion in Apple stock.

The investors’ letter urged Apple to offer tools to prevent smartphone addiction and to provide more parental options for monitoring children’s smartphone usage. The iOS operating system for Apple smartphones and tablets already has limited parental controls for restricting apps, features such as location sharing, and access to certain types of content. The investors felt Apple needs to do more—for example, enable parents to specify the age of the user of the phone during setup, establish limits on screen time, select hours of the day the phone can be used, and block social media services.

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. The investors’ letter cited 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).

Nicholas Carr, who has studied the impact of technology on business and culture, shares these concerns. He has been highly critical of the Internet’s effect on cognition, and these cognitive effects extend to smartphone use. Carr worries that excessive use of mobile devices diminishes the capacity for concentration and contemplation.

Carr recognizes that smartphones provide many useful functions in a very handy form. However, this extraordinary usefulness gives them too much influence on our attention, thinking, and behavior. Smartphones shape our thoughts in deep and complicated ways, and their effects persist even when we aren’t using the devices. Research suggests that the intellect weakens as the brain grows dependent on the technology.

Carr points to the work of Adrian Ward, a cognitive psychologist and marketing professor at the University of Texas at Austin, who for a decade has been studying how smartphones and the Internet affect people’s thoughts and judgment. Ward has observed that using a smartphone, or even hearing one ring or vibrate, produces distractions that make it harder to concentrate on a difficult problem or job. Divided attention impedes reasoning and performance.

A study published in Applied Cognitive Psychology in April 2017 examined how smartphones affected learning in a lecture class with 160 students at the University of Arkansas at Monticello. It found that students who didn’t bring their phones to the classroom scored a full letter-grade higher on a test of the material presented than those who brought their phones. It didn’t matter whether students who brought their phones used them or not. A study of 91 U.K. secondary schools, published in 2016 in the journal Labour Economics, found that when schools ban smartphones, students’ examination scores go up substantially, and the weakest students benefit the most.

Carr also observes that using smartphones extensively can be detrimental to social skills and relationships. Connecting with “friends” electronically via smartphones is not a substitute for genuine person-to-person relationships and face-to-face conversations.

Case Study Questions

1. Identify the problem described in this case study. In what sense is it an ethical dilemma?
2. Should restrictions be placed on children’s and teenagers’ smartphone use? Why or why not?

3. Can the problem of smartphones reducing cognitive skills be solved? Why or why not? Explain your answer.

Case Study 2

Note: Dikerjakan oleh **kelompok genap.**

Will Automation Kill Jobs?

Dennis Kriebal of Youngstown, Ohio, had been a supervisor at an aluminum extrusion factory, where he punched out parts for cars and tractors. Six years ago, he lost his job to a robot, and since then has been doing odd jobs to keep afloat. Sherry Johnson used to work for the local newspaper in Marietta, Georgia, feeding paper into printing machines and laying out pages. She lost this job as well as others making medical equipment and working in inventory and filing to automation.

These situations illustrate the negative impact of computer technology on jobs. Far more U.S. jobs have been lost to robots and automation than to trade with China, Mexico, or any other country. According to a study by the Center for Business and Economic Research at Ball State University, about 87 percent of manufacturing job losses between 2000 and 2010 stemmed from factories becoming more efficient through automation and better technology. Only 13 percent of job losses were due to trade. For example, the U.S. steel industry lost 400,000 jobs between 1962 and 2005. A study by the American Economic Review found that steel shipments did not decline, but fewer people were needed to do the same amount of work as before, with major productivity gains from using mini mills (small plants that make specialty steel from scrap iron).

A November 2015 McKinsey Global Institute report by Michael Chui, James Manyika, and Mehdi Miremadi examined 2,000 distinct types of work activities in 800 occupations. The authors found that 45 percent of these work activities could be automated by 2055 using technologies that currently exist. About 51 percent of the work activities Americans perform involve predictable and routine physical work, data collection, and data processing. All of these tasks are ripe for some degree of automation. No one knows exactly how many U.S. jobs will be lost or how soon, but the researchers estimate that from 9 to 47 percent of jobs could eventually be affected and perhaps 5 percent of jobs eliminated entirely. These changes shouldn't lead to mass unemployment because automation could increase global productivity by 0.8 percent to 1.4 percent annually over the next 50 years and create many new jobs.

According to a study by MIT labor economist David Autor, automation advances up to this point have not eliminated most jobs. Sometimes machines do replace humans, as in agriculture and manufacturing, but not across an entire economy. Productivity gains from workforce automation have increased the demand for goods and services, in turn increasing the demand for new forms of labor. Jobs that have not been eliminated by automation are often enhanced by it. For example, since BMW's Spartanburg, South Carolina, plant automated many routine production tasks over the past decade, it has more than doubled its annual car production to more than 400,000 units. The Spartanburg labor force has grown from 4,200 workers to 10,000, and they handle vastly more complex autos. (Cars that once had 3,000 parts now have 15,000.)

The positive and negative impacts of technology are not delivered in an equal way. All the new jobs created by automation are not necessarily better jobs. There have been increases in high-paying jobs (such as accountants) but also in low-paying jobs such as food service workers and home health aides. Disappearing factory jobs have been largely replaced by new jobs in the service sector but often at lower wages.

Manufacturing jobs have been the hardest hit by robots and automation. There are more than 5 million

fewer jobs in manufacturing today than in 2000. According to a study by economists Daron Acemoglu of MIT and Pascual Restrepo of Boston University, for every robot per thousand workers, up to six workers lost their jobs and wages fell as much as 0.75 percent. Acemoglu and Restrepo found very little employment increase in other occupations to offset job losses in manufacturing. That increase could eventually happen, but right now there are large numbers of people out of work in the United States, especially blue-collar men and women without college degrees. These researchers also found industrial robots were to blame for as many as 670,000 manufacturing jobs lost between 1990 and 2007, and this number will rise going forward because the number of industrial robots is predicted to quadruple. Acemoglu and Restrepo noted that a specific local economy, such as Detroit, could be especially hard-hit, although nationally the effects of robots are smaller because jobs were created in other places. The new jobs created by technology are not necessarily in the places losing jobs, such as the Rust Belt. Those forced out of a job by robots generally do not have the skills or mobility to assume the new jobs created by automation.

Automation is not just affecting manual labor and factory jobs. Computers are now capable of taking over certain kinds of white collar and service-sector work, including X-ray analysis and sifting through documents. Job opportunities are shrinking slightly for medical technicians, supervisors, and even lawyers. Work that requires creativity, management, information technology skills, or personal caregiving is least at risk.

According to Boston University economist James Bessen, the problem is not mass unemployment; it's transitioning people from one job to another. People need to learn new skills to work in the new economy. When the United States moved from an agrarian to an industrialized economy, high school education expanded rapidly. By 1951 the average American had 6.2 more years of education than someone born 75 years earlier. Additional education enabled people to do new kinds of jobs in factories, hospitals, and schools.

Case Study Questions

1. How does automating jobs pose an ethical dilemma? Who are the stakeholders? Identify the options that can be taken and the potential consequences of each.
2. If you were the owner of a factory deciding on whether to acquire robots to perform certain tasks, what people, organization, and technology factors would you consider?