Chapter 5
Cybercitizens at Schools

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ABSTRACT

In recent decades, cyberethics, cybersecurity, and cybersafety have been the center of interest at schools. This chapter uses a case study approach to describe the issue of cyberethics, cybersafety, and cybersecurity (3Cs) as well as how problems of these three Cs are intermingled to become general cyberethics issues for the society. The chapter also promotes good cybercitizens at schools because it is of great importance for the school districts to take some measures to improve students' knowledge and awareness of cyberethics, cybersafety, and cybersecurity, to enhance the safety and security of school infrastructure, to avoid cyberbullying, to ensure students are good cybercitizens, and to help train teachers to be cyber professionals.

INTRODUCTION

Guiding students to be responsible and respectful when using the Internet is an important mission for teachers, parents, and educators. Students need to learn the appropriate way and ethical manner of using the Internet in schools and at home. "Some kinds of computer and Internet misuses include hacking, unauthorized use of data, copying and distributing information and copyrighted software, computer abuses, and cybercrime without respect for social and legal consequences" (Harncharnchai & Inplao, 2015, p.100). In other words, students need to learn the importance of being a good cybercitizen to maintain cyberethics, cybersafety, and cybersecurity in schools.

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Cybersecurity has been a critical issue in recent years. According to *Data Breach Reports* (2015), there were 690 data breaches with 176,183,204 records exposed in the categories of banking/ credit/financial, business, education, government/ military, and medical/healthcare. Among them, 53 (7.7%) breaches were educational with 759,600 records exposed (Data Breach Reports, 2015). In fact, the number of data breaches in the U.S. reached a half-year record high of 791" (Identity Theft Resource Center, 2017). The Identity Theft Resource Center (2017) predicted that the number of breaches in 2017 could reach 1,500, a 37% increase over 2016.

Cyberbullying is a violation of cyberethics, and it could occur anywhere (e.g., blogs, websites, emails, chats, text messaging, and social media such as Facebook, WhatsApp, Instagram). According to Bullying Statistics (2017), "more than half of adolescents and teens have been bullied online and about the same number have engaged in cyber bullying" (para 1). There are many types of cyberbullying; for example, sending cruel messages, spreading rumors online, posting hurtful messages on social media, stealing a person's account to post damaging messages, sexting, circulating sexually explicit pictures, sending threating emails, and so on (Bullying Statistics, 2017). "Only one in ten teens tells a parent if they have been a cyber bully victim" (Bullying Statistics, 2017, para 2). Ncube and Dube (2016) stated that "cyberbullying might have detrimental effects on victims, such as alcohol and drug abuse, low self-esteem, high level of absenteeism, poor grades and depression and suicidal thoughts" (p.313). Additionally, Hipsky and Younes (2015) found that 72% of the faculty and staff were aware of cyberbullying without training, while 43% of them were trained at school on cyberbullying. It is of great importance to educate students at schools regarding cyberethics, cybersafety, and cybersecurity so as to avoid more threats and damages.

Cyberethics, Cybersafety, and Cybersecurity

The concepts of cybersafety, cybersecurity, and cyberethics (C3) were coined by Pruitt-Mentle (2000). She was one of the pioneers to integrate C3 into K-12 curriculum through organizations such as iKeepSafe. Cybersafety is "the ability to act in a safe and responsible manner on the Internet and other connected environments"; cybersecurity "covers physical protection (both hardware and software) of personal information and technology resources from unauthorized access gained via technological means"; cyberethics is "the discipline of using appropriate and ethical behaviors and acknowledging moral duties and obligations pertaining to online environments and digital media" (C3Matrix, 2015, p.2). The concepts of cybersafety, cybersecurity, and cyberethics are tightly integrated and ever-changing.

Pusey and Sadera (2012, p.82) indicated that "cyberethics are the moral choices individuals make when using Internet-capable technologies and digital media"