

BOOK REVIEW

Ethical Technology Use, Policy, and Reactions in Educational Settings

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Ethical Technology Use, Policy, and Reactions in Educational Settings

Kadir Beycioglu, Ed.

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Widespread use of digital technologies (especially web 2.0 technologies) from the beginning of new millennium has deeply affected social life, and it makes change and transform serving institutions in different sectors such as schools that are responsible to provide educated human resources to the society. Penetration of digital technologies to schools provided useful learning environments with a better quality and also caused the negative and inappropriate effects in context of individual and social life. The negative consequences from the use of digital technologies can be seen as side effects of using digital technologies in educational context, and these effects can be manifested such as privacy, piracy, safety, fairness, data security,

equal access, intellectual property/copyright, computer crime, software reliability. Research findings have shown that inappropriately usage of information/digital technologies could be damaged on students' moral development. On the other hand, the number of qualified research have increased in order find the best way to take advantage of digital technologies for learning process, and also in order to prevent inappropriate use of technology in educational landscape.

The book *Ethical Technology Use, Policy, and Reactions in Educational Settings* was edited by Kadir Beycioglu, Dokuz Eylul University-Turkey, and published by IGI Global to facilitate a better understanding about the ethical use of educational Internet and computer applications. As the editor highlighted "if computers are to be used effectively and continuously, teachers, the closest practitioners to children, are expected to teach students about the potential dangers of unethical use of technology and ethical challenges arising in the education environment." In this context, this book gives the the readers the opportunity to understand cyber philosophical

debates and research findings about ethical and moral use of computers.

The book has four parts. In the first part of the book (i.e., Chapters 1-7), the editor focused on the concept of cyber ethics that is considered in order to create a strong awareness. Specifically, in the first chapter, the editor presents recent researches drawn upon international literature on key issues with a wide point of view. Additionally, the editor discusses the necessity of the concept of cyber ethics and how important ethical behaviors are regarding the use of technology. Finally, the editor states that theoreticians and practitioners concerned with cyber ethics tend to address the question “what is the nature of right and wrong” in context of virtual philosophy in the first chapter.

Current trends and behaviors in online communication (i.e., online chat rooms, internet blogs, forums and social networks) require a self-centered virtue ethics standpoint are discussed by Giannis Stamatellos in the first chapter. The author claims that computer ethics is related to the systematic study of the ethical and social impact of computers and computer networks. Moreover, Stamatellos linked between the computer users’ ethical behaviors and the Plotinus’ message from the past. At end of this chapter, the author emphasises the key factors that are self-responsibility, intellectual autonomy, moral self-determination of character and virtue.

Two discussions are presented in Chapter 2 by Anne Gerdes. The first discussion is about the connection between biotechnology, treatment and enhancement. In this part, the technology-enhanced human being is clearly explained based on key experiments that are Warnick’s and Duke University’s. In this phase, the author pays special attention to curing versus improving. The ideas of transhumanism as a framework for an examination of our human condition are discussed in the second part of this chapter. The most noticeable point of this part in this chapter is focused on human nature as a decisive point at the intersection of technology and the concept of ethical issues. The first part of this chapter discusses that it

cannot be known anything essential about basic conditions of cyborg ethics, and the second part of this chapter discusses what it means to be an ethical being from the perspective of Francis Fukuyama’s ideas of the importance of human nature to our humanity, and further elaborated on by bringing attention to the significance of our vulnerability to our moral reasoning. Finally, the author emphasizes that core values and emotions are not relative to culture, but seem to be rooted in our common nature and a common human predicament.

The authors, Talab and Botterbusch, aim to investigate the ethical and legal considerations of constructivist and constructionist teaching by using a virtual class in this research which was conducted rarely in the literature in Chapter 3. What makes this research interesting is that half of participants are faculty and staff, and using Skype and a learning management system for communication. The research findings show that ethical considerations in constructivist and constructionist teaching defined some violations such as time, appearance, skills, scaffolded instruction, playful exploration, vicarious experience, self-directed project development, construction of objects.

In Chapter 4, Ozer, Beycioglu and Ugurlu investigated elementary school computer teachers’ attitudes and awareness regarding ethical computer use in classrooms in their research. The authors focused on attitude to and awareness of cyber ethics and teaching practices of computer teachers. Research findings show that the participants considered ethical use of computers and they were aware of the ethical problems of computer use. On the other hand, the authors emphasized that participants tend to undermine the ethical use of computers in practice because of the insufficient education about using computers ethically. In this context, it is strongly recommended that computer ethics education be included in all teacher education and preparation programs by the authors.

In Chapter 5, teaching cyber ethics is discussed by Holtz for everyone in the light of the question of whether virtue, ethics, or morality can be taught. The author collected

data from an evaluation of a course on the social consequences of information technology which was attended mostly by software engineer at the University of Linz. The author aims to investigate whether value orientations predict the acquisition of moral competence over the duration of the course. What makes this research remarkable is that two IT specific dilemmas (the principal dilemma and the statistics software dilemma) discussions were used extensively. Research findings show that the participants' average level of moral competence did not change significantly; there was evidence that participants with a high degree of materialistic values were less likely to acquire moral competence during the course.

The issue of ethical decision making, which Alhawari and Talet consider as problematic, is discussed in Chapter 6. The authors aim to investigate the ethical issues in education in terms of IS (Information Systems) students' attitudes towards digital piracy. The highlight of this study is that the data collected with 18 ethical scenarios which are based on real life statements. The findings of the study highlight following:

- The ethical beliefs of students are somehow identical whatever the independent factor considered (Gender, Age and University Level),
- The pervasive nature of technology has conceivably made more students aware of the relevant IT issues.
- Students are most affected by the moral intensity factor of magnitude of consequences.

In chapter 7, Stamatellos argues that the problem of information privacy should be reconsidered in the light of Plotinus' virtue ethics and self-determination. The author focused on extensive use personal data in digital networks which is poses a serious threat to the user's right of privacy (data integrity and security, and user's identity and freedom). In this context, the author clearly explained and summarized what Plotinus's virtue ethics and self-determination

in this chapter, and also emphasized that we have to consider the importance of privacy in the information age not in terms of disclosure but in terms of freedom to determine our own life and self.

In the second part of the book (i.e., Chapters 8-14), the editor focused on the cyber ethical issues which are related with ethical and/or responsible use of computers in terms of higher education drawn from various countries around the world. The salient point of this part of book is that almost all chapters were written about ethical considerations on using networks in higher education. Although it would be very interesting to present and discuss all the chapters, yet it is impossible to do so in this book review due to their large number. Therefore, only Chapters 8, 10, 11 and 14 are presented.

In chapter 8, da Silva, da Costa, Prior and Rogerson focused on a consideration of e-learning definition and its ethical dilemmas, and human-centered learning concept and its dimensions, to examine the implications of integrating social and cultural contexts. The authors aim to investigate whether personalized learning environments enhance ethical dilemmas. In this context, the evolution of e-learning management systems was examined in two parts: content management systems and knowledge management systems. After that point, the argument was progressed to a discussion of the relationships between pedagogy and ethics. By framing evidence at micro and macro dimensions, the authors critically reflect on the ethical dilemmas embedded in e-learning systems. The discussion concludes with advocating the adoption of an extension of "three P" mode of pedagogy to become the "P3E" model: personalization, participation, productivity, lecturer's ethics, learner's ethics, and organizational ethics.

Kenon, the author of Chapter 10, explores implications for emerging trends in Global Learning Communities (GLC), and how these trends may be able to prepare, support and promote access to higher education for disadvantaged socio-economic status high school students in the U.S. and in similar communities

worldwide. The author emphasized that GLCs, with easily accessible portals and modules for students and teachers, will continue to evolve rapidly with increased development of technology in fully functional mobile devices that both students and faculty may utilize anywhere in the world through the internet.

In Chapter 11, Ueno and Maruyama states that Japanese teenagers enter colleges without moral education in the Internet society, and this can therefore cause problems on campus: students' plagiarizing from the Internet, or posting anonymous defamatory messages on bulletin boards. The authors analyzed the history of Japanese network ethics education in three periods: the late 1990s (from 1995 to 1999); the early 2000s (from 2000 to 2005) and the late 2000s (from 2006 to present). In this context, the authors examined what network ethics terms were used during the each of three periods to clarify what Japanese network ethics education aimed to achieve and the issues it failed to resolve. At the end of the chapter, the authors emphasized that an ideal education in network ethics would be the case method using cases of network ethical dilemmas that stimulate moral sensibility of students, and the effectiveness of network ethics education at tertiary level institutions, such as modern universities in Japan is discussed.

In Chapter 14, Harris, Warren, Smith and Carey focus their discussion on web 2.0 technologies which have the potential to shift the traditional boundaries between educators and their students. In this context, the potential of technology is introduced, and the digital native concept is discussed for students. Moreover, to clarify privacy and integrity in the virtual campus, three of the authors' own stories analyzed related to their experiences of engaging with Web 2.0 with in the classroom. It can be said that this kind of methodology provide better understanding of the research topic. At the end of the chapter the authors stated that integrating social media into the teaching and learning experience highlights that many of the opportunities are accompanied by significant challenges in the form of privacy concerns that

are not yet well addressed in law and fear of the unknown, a subtle yet powerful emotional force.

In the third part of the book, Chapters 15 to 17, the authors focused on the concept of digital equity that equal use of computers as one of the most debated issues in educational settings. While one of the chapters investigated digital equity with the help of empirical data, the others reviewed the research literature on digital equity.

In Chapter 15, Chan investigated the effect of technology application on student learning in Georgia. The technology applications are technology access, technology integration, and teacher technology proficiency. Student learning was measured by students' performance on standardized tests of social studies, language, mathematics and science. Data was collected from elementary, middle and high school students. Multiple regression analysis was conducted to find the effects of technology applications on achievement. It was found out that Internet connected computer access significantly predicts student achievement. Another finding of the research is that students of high socioeconomic status were found to have fewer opportunities to access Internet connected computers.

In Chapter 16, Williamson reviewed 42 research articles published between 2009 and 2010. The goal of the review was to understand the most recent trends in digital equity for K-12 schools and universities. Williamson explored the history of digital equity in five dimensions: school access and use, essential conditions for effective technology integration, beyond-school access and use, beyond-school knowledge networks, and cultural influences on technology literacy development and use patterns. The author investigated digital equity from a wide spectrum, and presented current directions in digital equity in four components: anywhere-anytime access, technology use patterns, strengthening knowledge networks, and the culture connection. The literature review concludes that recent research studies mostly one of the three research methodologies. While most of them were correlational comparative

studies, others were naturalistic qualitative studies.

In Chapter 17, Naidoo examines the varied learning experiences that integrated socio-cultural theory, community engagement and e-learning offered by the “Diversity, Social Justice and Schooling” subject at the University of Western Sydney. In this context, the author focused on the role of e-learning in assisting educators to critique the larger socio-cultural, political dimensions of teaching and schooling. Moreover, the author explored that there is a valuable link between academic knowledge, service learning knowledge and e-learning.

In the last part of this book entitled “Responsible use of computers” reflects some issues which are about the using technology appropriately in educational landscape. There are four chapters in this section and two of them based on empirical data, and the other two chapters present a comprehensive research literature.

In Chapter 18, Sincar investigated digital citizenship behavior norms for pre-service teachers. At the beginning, he defined what digital citizenship mean in context of education, and then he present digital citizenship elements that are digital access, digital communication, digital literacy, digital etiquette, digital commerce, digital law, digital rights and responsibilities, digital health wellness, and digital security for students and teachers. The research was carried out with 17 pre-service teachers, and the data was collected and analyzed with qualitative method at University of Gaziantep in Turkey. Research findings show that the participants adequately demonstrated behavior norms regarding digital communication and digital literacy, yet only few showed behavior norms concerning digital access, digital etiquette, digital commerce, digital rights and responsibilities, digital law, digital health and wellness, and digital security categories.

In Chapter 19, Curran, Middleton and Doherty examined technology used to cheat in examinations, how such cheats are carried out, and how to prevent such methods of cheating. The authors present traditional methods of cheating, and then explore cheating using

technology with some devices which are cell phone, calculator, mp3 players, wireless receivers, PDAs, invisible ink pens, wrist watches, and printed labels. At end of the chapter, some preventing methods are discussed such as using signal jamming device, faraday cage, detection devices, and Closed-circuit television (CCTV) system.

In Chapter 20, Söderström examines adult online education by investigating the complex relationship between technology and community. The purpose of this investigation was defined to explore online teaching in relation to the handbook dilemma teachers meet in their teacher profession by focusing on participation and sharing opportunities. Specifically, the author focused on how two cases – online adult education courses and special needs teacher training courses – implemented online education with respect to participation and sharing. In this context, the author emphasized that pedagogy is the crucial point and a planned pedagogy is absolutely necessary for designing and implementing effective online education, education that encourages participation and sharing. At the end of the chapter, research findings are explored in two points: some handbooks offer meaningful guidance regarding the development of online education, but other publications were not helpful which creates a dilemma for teachers.

The last chapter of the forth part, and also the book was written by Asunka. The author used design-based research approaches in his research and investigated student plagiarism in an online course with 28 pre-service teachers. Three objectives werestated for the research by the author:

- A group of undergraduate students’ perceptions and self-reported acts of plagiarism.
- Students’ individual and group levels of plagiarism as evidenced in their course writings, prior to any interventionist measures.
- The effectiveness of particular interventionist instructional strategies within the online learning environment in helping students reduces or avoids plagiarism.

Moreover, the author presented a powerful literature review, and then explained methodology that used to in this research. After that, the author explained the course and its components was designed, and how carried out on a learning management system named CyberCampus.

Notwithstanding this minor point, this book represents a valuable addition to the cyber ethics literature and is very useful to researchers and practitioners who are focus on cyber ethics.