Chapter 1
Effect of Digital Technology on Adolescents

Nurul Naimah Rose
Universiti Malaysia Perlis, Malaysia

Nor Hafizan Habib Sultan
Universiti Malaysia Perlis, Malaysia

Aida Shakila Ishak
Universiti Malaysia Perlis, Malaysia

Fauziah Ismail
Universiti Malaysia Perlis, Malaysia

Adi Fahrudin
https://orcid.org/0000-0001-7140-6006
University of Muhammadiyah, Jakarta, Indonesia

ABSTRACT

Digital technology has become more advanced, and it is transforming human life rapidly. Not long ago, digital technology was only meant for adults in the working environment. Nowadays, the assimilation of technology has transformed our lives into a new digital culture across all ages. The adolescent has to keep up with the current trend in digital technology as they use it as a platform for education, entertainment, social, as well as sport. Technology use among adolescents has so many positive sides such as virtual classrooms, widening social circles, and increasing visual reasoning. Apart from that, it also increases creativity and improves technical skills and self-esteem.

INTRODUCTION

Recent development in digital technology has heightened the need for our society to carefully examine the effects among adolescents. Over a year, the world experiences a great change in the way of living due to the outbreak of covid-19 pandemic. At the early outbreak, people around the world were forced to undergone a movement control order and practise social distancing to minimize the spread of the virus infection. Thus, everyone needs to change their normal way of doing things by utilizing the digital technology in almost all aspects of lives. Digital technology help them to go through their lives such as

working and schooling remotely from home, buying food, household necessities, getting medications supply and also as a medium of communication. Digital media technology has been a useful medium as it provides many advantages to users especially adolescents.

The process of growth and development among adolescent may be influences by internal and external factors and both are interrelated. As child growing up and enter the adolescence, they will quickly absorb everything around them and later on will shape them as an adult individual. Affective Neuroscience Theory (ANT) suggested that social emotions and learning strongly influenced by social and cultural experience (Immordino-Yang, M. H., & Singh, V., 2011). Digital technology affected adolescence growth and development process in the sense that it regulates the emotion control. By right, digital technology such as computers and smart phone does not have any emotions but it contains data and algorithms provided to them. The users somehow put the emotion and later establishing close engagement to the technology (Liberati, 2019). Otherwise, if users fail to establish connections, technology becomes meaningless to them. In the case of adolescent, letting the digital technology as a sources of social and emotional learning may resulted to adolescent involves in prosocial or anti-social behaviour depending on how they process the digital media content from any websites, social media sites or gaming site (Erreygers. et al, 2017).

This chapter will discuss about the effect of digital technology on adolescent, including the current trend and types of digital technology mostly used among adolescent. The chapter also touches on the issue of overusing the internet during pandemic covid-19 among the adolescent. It can be seen that even though the digital technology has helped adolescent in many ways to get through the pandemic time but it also carries other risks such as behavioural and psychological problems. As the pandemic is still on going, the current situation is at alarming and in need of certain control mechanism especially from parents. The chapter has been organised in the following way, the first part deals with the current trend of digital technology and the types of social media and digital use among adolescent. The second part deals with the adolescent development in the digital age and the effects of digital technology among adolescent.

CURRENT TREND IN DIGITAL TECHNOLOGY

Going into the 2020 century, the increasingly popular digital technologies consist of the internet of things (IoT), artificial intelligence (AI), big data, block chain technology and telecommunication networks 5G. These technologies are interconnected with each other and benefit human life in general. The following is a description of some examples of digital technology applied according to the current developments. Internet of things (IoT) defined as dynamic global network infrastructure with self-configuring capabilities based on standards and interoperable communication protocols, physical and virtual things. While IoT also have identities and attributes and using intelligent interfaces and being integrated as information network (Shancang Li & Li Da Xu & Shanshan Zhao, 2015). IoT also known as an inter-connected worldwide network based on sensory, communication, networking, and information processing technologies. Moreover, IoT is able to interact without human intervention. This is a new version of information and communication technology (ICT) (Kranenburg 2013; Marry 2013). Several technologies are applied in IoT include wireless sensor networks (WSNs), barcodes, intelligent sensing, RFID, NFC, low energy wireless communications, cloud computing, and so on (Shancang Li & Li Da Xu & Shanshan Zhao, 2015). The sectors involved in the adoption of IoT technology consist of the healthcare, transportation, banking, automotive industries, education, and others (Ri et al., 2014)

Related Content

Spelling Practices in Text Messaging
Akinmade Timothy Akandeand Olayiwola Timothy Akinwale (2010). *Handbook of Research on Discourse Behavior and Digital Communication: Language Structures and Social Interaction (pp. 349-362).*
www.irma-international.org/chapter/spelling-practices-text-messaging/42790

Attention Versus Learning of Online Content: Preliminary Findings from an Eye-Tracking Study
Ronald A. Yarosand Anne E. Cook (2011). *International Journal of Cyber Behavior, Psychology and Learning (pp. 49-69).*
www.irma-international.org/article/attention-versus-learning-online-content/60870

Multitasking Among College Students: Are Freshmen More Distracted?
Julie A. Delello, Carla A. Reichardand Kouider Mokhtari (2016). *International Journal of Cyber Behavior, Psychology and Learning (pp. 1-12).*
www.irma-international.org/article/multitasking-among-college-students/173739

Comparing the Characteristics of Text-Speak Used by English and Japanese Students
Jean Underwoodand Taiichiro Okubayashi (2013). *Evolving Psychological and Educational Perspectives on Cyber Behavior (pp. 258-271).*
www.irma-international.org/chapter/comparing-characteristics-text-speak-used/67888

The Impact of Human Behavior on Cyber Security
Nancy Houston (2019). *Multigenerational Online Behavior and Media Use: Concepts, Methodologies, Tools, and Applications (pp. 1245-1266).*
www.irma-international.org/chapter/the-impact-of-human-behavior-on-cyber-security/221002