

Do information and communication technologies influence skills, competencies, health and well-being of teenagers? Current evidence

Willone Lim^{1,*}, Bee Theng Lau¹, Caslon Chua² and Fakir M Amirul Islam³

¹ Faculty of Engineering, Computing and Science, Swinburne University of Technology, Jalan Simpang Tiga, Kuching, 93350, Sarawak, Malaysia

² Faculty of Science, Engineering and Technology, Swinburne University of Technology, Hawthorn, 3122, Victoria, Australia

³ Faculty of Health, Arts and Design, Swinburne University of Technology, Hawthorn, 3122, Victoria, Australia

Abstract

INTRODUCTION: Information and Communication Technologies are deemed to be a significant influence on teenagers' development. It is important for studies to be conducted to assess the underlying influence of ICT on the teenager age group.

OBJECTIVES: The aim of this paper is to review whether ICT influences teenagers' skills, competencies, health and well-being based on previous studies.

METHODS: Articles from 2015 to 2020 were selected for analysis to identify the influences on teenagers.

RESULTS: Computer and mobile devices offer opportunities to improve literacy in digital skills and competencies. It is also evident that teenagers are prone to risks of getting musculoskeletal symptoms as a result of excessive use of such devices, and it also leads to unforeseen illnesses such as depression in the case of teenager's well-being.

CONCLUSION: Adopting ICT may have beneficial implications for teenagers, but it can pose more adverse effects on their development when used excessively.

Keywords: Information and communication technology, skills, competencies, health, well-being, influence, teenager.

Received on 14 January 2021, accepted on 30 March 2021, published on 06 April 2021

Copyright © 2021 Willone Lim *et al.*, licensed to EAI. This is an open access article distributed under the terms of the [Creative Commons Attribution license](#), which permits unlimited use, distribution and reproduction in any medium so long as the original work is properly cited.

doi: 10.4108/_____

*Corresponding author. Email: wilim@swinburne.edu.my

1. Introduction

The proliferation of ICT has become an essential medium for the young generation to learn about new tools in this interconnected world. The Digital revolution is prevalent and its influence is remarkable, which can be seen in how millennials or digital natives are already used to living with technologies. ICT offers teenagers learning opportunities and digital citizenship, as well as preparing themselves for future employment [1]. ICT tools are used extensively

among teenagers to enhance their overall learning experience. For instance, the internet and mobile phone are important to help teenagers in learning processes; these tools are essential for preparing for work as well as looking for school-related information [2]. The Internet has profoundly reshaped education as it offers more opportunities for students to improve their knowledge [3]. Learning activities supported by online learning tools provide the most effective learning domain in higher education [4], particularly during the current state of the COVID-19 pandemic, where all learning has been shifted to online. Online learning equips students with knowledge and

