



Contents lists available at Jurnal Perduli

JURNAL PERDULI

ICT Literacy for Indonesian Workers in Singapore

Mutia Delina¹, Bambang Heru Iswanto¹, Lipur Sugiyanta², Faisal Madani³, Surano Muhasyah⁴, Muhammad Ilham Fauzi¹, Ahmad Fauzan¹

¹Physics Department, Faculty of Mathematics and Sciences, Universitas Negeri Jakarta

²Faculty of Engineering, Universitas Negeri Jakarta

³Postgraduate Program, Universitas Negeri Jakarta

⁴Ministry of Foreign Affairs of the Republic of Indonesia

Article Info

Article history:

Received October 19th, 2021

Revised October 25th, 2021

Accepted November 26th, 2021

Keyword:

ICT, Skills, Literacy,
Indonesian Workers

Abstract

Information and communication technology (ICT) has become an essential aspect of modern life. Everybody has to deal with ICT, especially for work. In Asia, ICT skills involve five main aspects: software development, ICT project management, enterprise architecture design, network and system administration, and information system and network security. Every year Indonesia sends workers to Singapore. In contrast, most of those workers are skilled workers for the household which their job responsibilities are taking care of the house, babysitting, taking care of the elderly and drivers. However, some of them have ICT skills, and some others do not have them. Therefore, Universitas Negeri Jakarta conducted a webinar on "the success key of digital technology utilization" to enhance the Indonesia Worker's comprehension of ICT literacy, which was participated by 210 Indonesian workers in Singapore. The webinar was divided into three parts, pre-test, speaker presentation, and post-test. The results showed that there was an increment of participant comprehension on ICT literacy after the webinar.



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Corresponding Author:

Mutia Delina,

Email: mutia_delina@unj.ac.id

1. Introduction

Information and communication technology (ICT) has become an essential aspect of modern life (Siddiquah & Salim, 2017). You can find ICT applications from everyday activities such as make phone calls and send out a message via mobile phone to job responsibilities such as programming to develop a new application (de Wet & Koekemoer, 2016). ICT accelerates new product innovation and entrepreneurship. Today, ICT skills influence a career's success, performing ability to participate in society, and contributing to employability (Agrawal, Kumar, & Mukti, 2020). The government provides vocational education to prepare young people's life and work with ICT skills. The ICT skills are related to the knowledge of new information and communication technologies (ICT) and their application or digital competence (Moreira-Fontán, García-Señorán, & Conde-Rodríguez, 2019). ICT Types consist of ICT generic skills, ICT specialist skills, and ICT complementary skills. The purpose of ICT generic skill is to perform everyday work, such as work with word processors and access websites. The purpose of ICT specialist skills is to program, develop applications, and manage networks. The purpose of ICT

complementary skill is to perform multiple and aggregated tasks, such as processing complex information, communicating with others, solving problems, and managing a team (Parkin, 2016)

The definition of ICT skills is different among Asian countries. Let take the example in Indonesia and Singapore. In Indonesia, the ICT graduates' skill sets often fall short of what the industry requires. While in Singapore, the ICT skill is set for cybersecurity at the middle and senior tiers due to insufficient training programs and entry routes for mid-career professionals. Meanwhile, the ICT skills demand in Asia involves five main ICT occupational domains: software development, ICT project management, enterprise architecture design, network and system administration, and information system and network security. Those facts show a gap between ICT skills in Indonesia and the demand in the Asia framework.

Every year Indonesia sends workers to Singapore. Most of those workers are skilled workers for the household. Their job responsibilities are taking care of the house, babysitting, nursing, and taking care of the elderly. Some of them have ICT skills, and some others do not have them. Sometimes, this limitation gives the worker a problem in daily activity. For example, using a computer, accessing the internet, or using modern devices at home. In addition, many cases ensnare Indonesian migrant workers abroad, including in Singapore. They upload photos without permission, spread inappropriate content, read hoax, and many other.

The technology accessed is an essential issue. By not taking prompt actions to access technology, the skills gap will be widened. ICT skills allow Indonesian Workers to become 'ICT literate,' able to use and comprehend technology, create and share digital content, enhance knowledge, solve problems and conduct digital technology. Based on this need, the Community service team of Universitas Negeri Jakarta in collaboration with the Indonesian Embassy of the Republic of Indonesia in Singapore, conducted an ICT literacy program on "Digital Literacy Webinar" for Indonesian Worker in Singapore to enhance their comprehension of ICT literacy. With this program, we expected that the Indonesian workers understand the ICT skill demand in Asia, apply gadgets, computers, and the internet, use ICT wisely on social media, and conduct ICT for digital marketing.

2. Method

The community service team of Universitas Negeri Jakarta conducted the webinar on ICT literacy in collaboration with the Indonesian Embassy of the Republic of Indonesia in Singapore. Here, the community service team was preparing the webinar's material, certificate, and module. Meanwhile, the Indonesian Embassy was preparing the webinar participants. The ICT literacy was delivered in the form of a webinar which was conducted on October 31, 2021. The webinar consists of three phases: pre-test, speakers' presentation, and post-test. The pre-test was conducted to gain initial information on participants' comprehension of ICT literacy. Meanwhile, the webinar provided three materials: the ICT skills demand in Asia, be wise and save in social media, and ICT in the marketing digital. Finally, the post-test was conducted after the speakers' presentation to gain final information on participant comprehension. The pre-test and post-test results were then compared to find the participants' comprehension enhancement.

3. Result and Discussion

Webinar on ICT literacy was conducted on 31 October 2021 virtually via zoom meeting. The webinar recording is available on the following link <https://youtu.be/Q5xLjE6GZMw>. The

webinar was participated by 210 audiences which consisted of 174 females and 38 males. In addition, 2% of participants graduated from elementary school, 28.6% of participants graduated from junior high school, 55.5% of participants graduated from senior high school, and 13.9% were bachelor students at Universitas Terbuka in Singapore’s study groups/kelompok belajar.

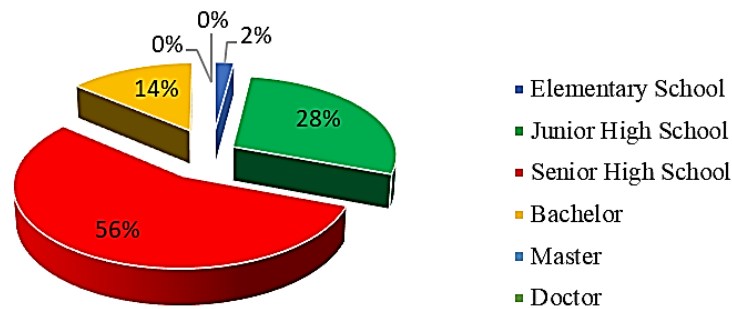


Figure 1. The participants’ educational background

Most of the participants graduated from senior high school and were between 26 to 35 years old. The details were shown in figure 2, where 34% of the participants were in the age of 15 to 25 years old, 42% were 25 to 35 years old, 22% were in the age of 36 to 45 years old, and 2% were above 46% years old. In addition, the occupation was dominated by labor/helper/cleaning service/chef. Meanwhile, the rest was student, babysitter/nurse, administrator/security/courier, household assistant, and entrepreneur.

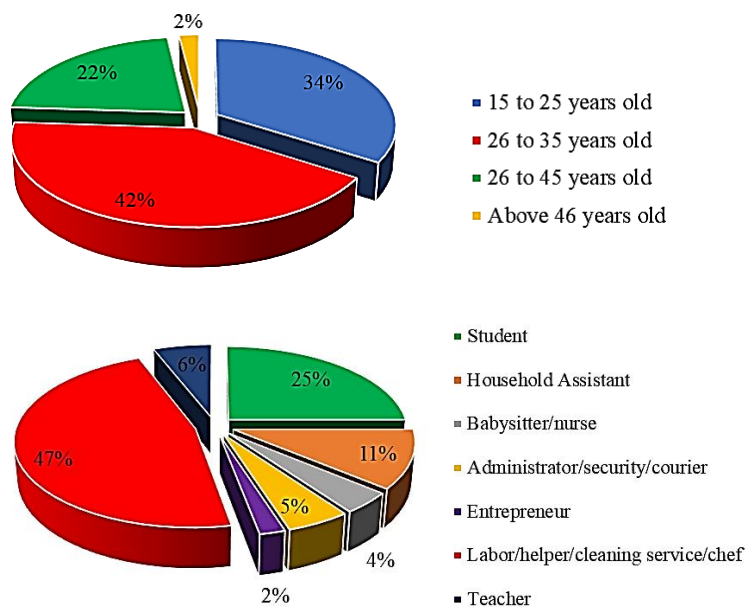


Figure 2. The participants’ age and occupation

In the first phase, the participants did the pretest. The test consisted of a multiple-choice question—the question cover the participant comprehension on ICT literacy, digital media

security, and digital marketing. The pretest result is shown in figure 3. The results showed that 21,4% of the participants were excellent, 49,5% were good, 28% were fair, and 1% were poor. It means the participants were familiar with ICT tools, functions, and security.

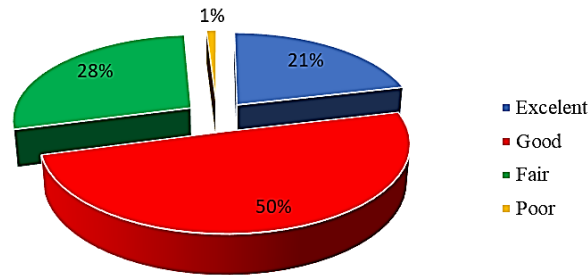


Figure 3. The participant comprehension on digital literacy

After that, the participant got three ICT topics from three speakers. The topics were the ICT skills demand in Asia, being wise and safe in social media, and ICT in digital marketing. The webinar is shown in figure 4.

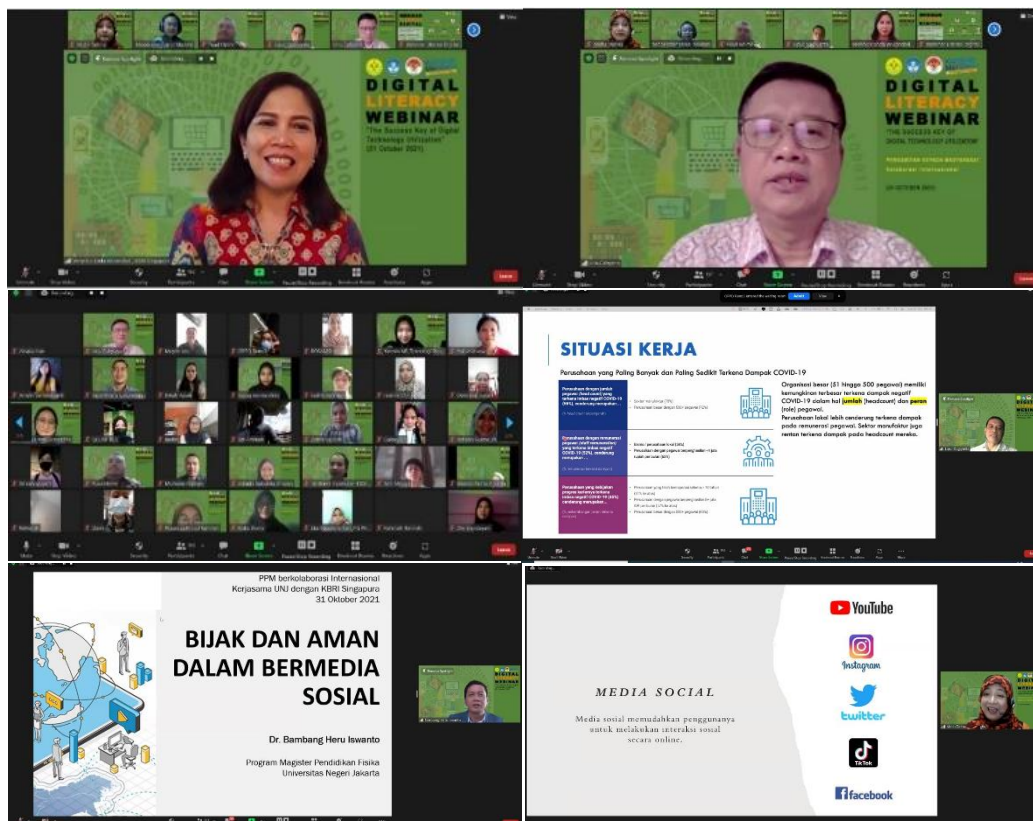
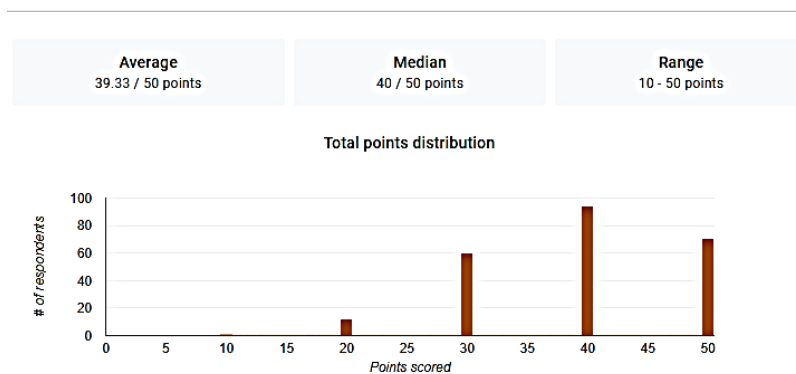


Figure 4. The webinar of ICT literacy on 31 October 2021

The topic of “ICT skills demand in Asia” informed the development of ICT and the skill demand in Asia. The skills are software development, ICT project management, enterprise architecture design, network and system administration, and information system and network security. Meanwhile, the topic of “Be wise and save in social media” presented the information and advice on managing their social media securely. Therefore, the participants avoid cyberbullying, hoaxes, hackers, and data theft. Finally, the last topic, “digital marketing,” discussed the opportunity of marketing through social media.

Furthermore, after the speakers' presentation, the participants' comprehension was then measured by a post-test. The post-test was a multiple-choice question. The pre-test and post-test results were then compared. The data showed that there was a significant enhancement of participant comprehension on ICT literacy. The average score of pre-tests was 39.33. Meanwhile, the post-test was 81.9. The result details are shown in figure 5. In addition, the post-test example of participants comprehension on digital security is shown in figure 6.

Insights



Insights

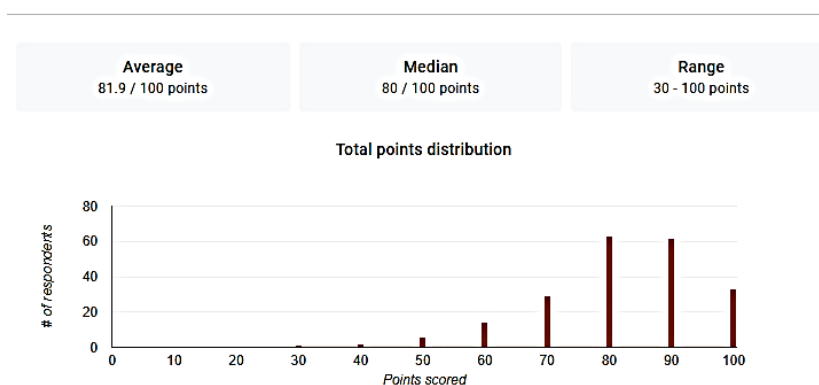


Figure 5. The Result of Pre-test and Post-Test

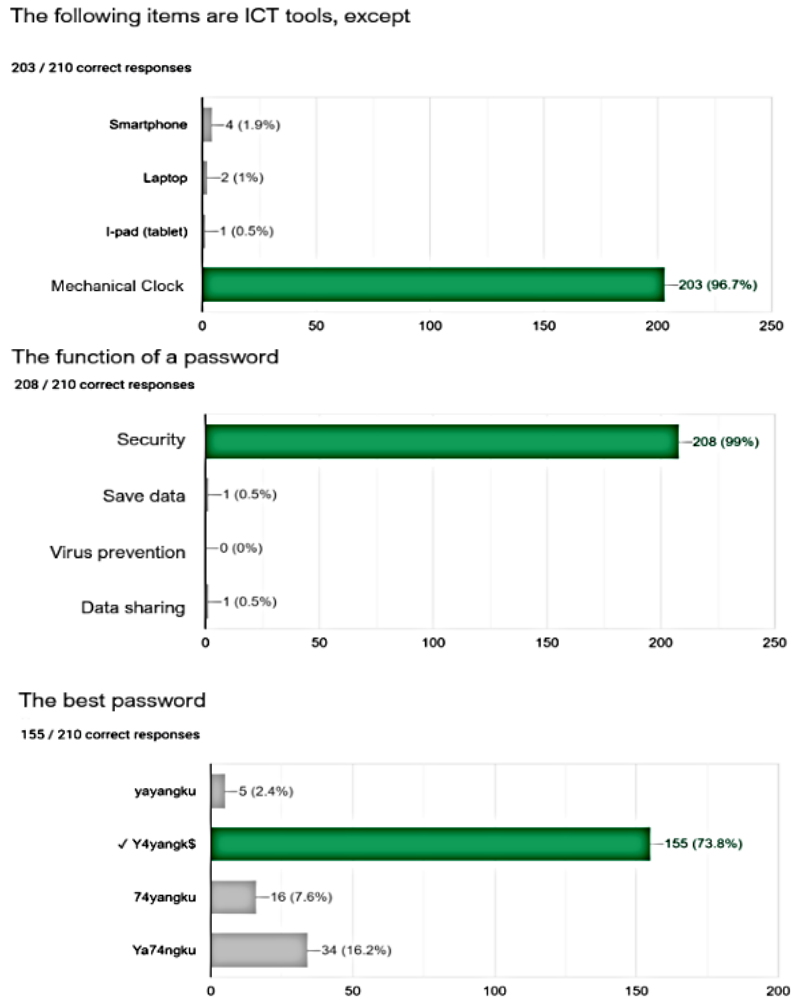


Figure 6. Participants comprehension on digital security

The result of the post-test and pre-test presented the enhancement of participants' comprehension of ICT literacy in daily activity. Therefore, participants' awareness to improve their ICT skills is increased. Finally, they are ready to face the rapid changes of technology.

4. Conclusion

ICT literacy comprehension is essential for Indonesian Worker in Singapore. Therefore, the workers are aware of enhancing their knowledge and skills to face the new technology improvement. Moreover, they are ready to deal with the new technology, live with it and work with it. Finally, they are ready to compete with workers from other countries and get a better job, salary, and future.

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