



Analysis of the Benefits of Information Technology During the Covid Pandemic

Hafifah Gina Febiyasari¹(✉) and Yohanes Suwanto²

¹ Faculty of Teacher Training and Education, Sebelas Maret University, Surakarta, Indonesia
hafifahgina1@student.uns.ac.id

² Faculty of Humanities, Sebelas Maret University, Surakarta, Indonesia

Abstract. Corona Virus Disease 2019 or commonly abbreviated as COVID-19 is an infectious disease caused by SARS-CoV-2, a type of corona virus. People with COVID-19 may experience fever, dry cough, and difficulty breathing. This year, the occurrence of a global-scale pandemic that has spread to various countries, including Indonesia, has also not escaped the impact of this pandemic, especially students like us, where teaching and learning activities that were previously carried out face-to-face have drastically changed to online. Students who are not used to this way of learning and do not understand the benefits of technology which ultimately lead to several negative aspects, such as lack of knowledge gained, decreased learning effectiveness, enthusiasm for learning, and even boredom for students because of online learning methods. Due to the sudden change in learning methods, many parents complain because it is difficult to prepare what needs to be prepared for online activities and many people are still ignorant or do not understand this new technology. This lack of information causes the community, especially parents of students, to have difficulty with this.

Keywords: covid-19 · pandemic · infectious

1 Introduction

Corona Virus Disease 2019 or commonly abbreviated as COVID-19 is a very dangerous and certainly contagious disease caused by SARS-CoV-2, a type of corona virus. A person who is exposed to this virus must experience symptoms such as fever, cough, and some are experiencing shortness of breath. SARS-CoV-2 is a new type of Corona virus that is transmitted to humans. The SARS-CoV-2 virus may infect anybody, including the elderly, adults, kids, and infants, as well as pregnant women and nursing moms, making it extremely deadly. Typically, the droplet range is up to 1 m. Droplets can adhere to surfaces but won't hang around for very long. The corona virus can often be exposed for up to 5 days. Therefore, masks must be worn by ill persons to reduce the transmission of droplets. Staying at home, avoiding the environment and being active in public spaces, often washing your hands with soap and water, and refraining from contacting your eyes, nose, or mouth with uninfected hands are all preventative methods to lessen the risk of infection [1].

© The Author(s) 2023

S. U. Firdaus et al. (Eds.): YICGH 2022, AHSR 65, pp. 268–273, 2023.

https://doi.org/10.2991/978-94-6463-206-4_40

Many nations have put in place lockdown measures to stop the Corona virus from spreading as a result of the Covid-19 virus. To stop the spread of this virus, the government has also created a Community Activity Restriction (PPKM) policy in Indonesia. The government has been enforcing PPKM from the start of 2021. Volume I and Volume II, Micro PPKM, and Emergency PPKM are only a few of the phases that make up the PPKM implementation process [2].

PPKM Volume I was in effect in 7 provinces (DKI Jakarta, West Java, Banten, Central Java, Yogyakarta, East Java, and Bali) from January 11 until January 25, 2021. Volume II PPKM, which included seven provinces (DKI Jakarta, West Java, Banten, Central Java, Yogyakarta, East Java, and Bali), was in effect from January 26, 2021, until February 8, 2021. According to the Instruction of Minister of Home Affairs No. 23 of 2021, Micro-based PPKM began on July 9 and terminated on July 5, 2021 in seven provinces [3]. The emergency PPKM, which was in effect from July 3 to July 25, 2021, attempts to lower the number of confirmation occurrences per day to around 10,000. The programme is carried out in 136 districts and cities across Indonesia by categorising the level of handling according to the assessment's value, which is defined by the correlation between indicators of the transmission rate and the capacity for response, which includes the availability of hospital beds [2].

By carrying out the following actions, Covid-19 Emergency PPKM in districts and cities in the Java and Bali areas with level 3 (three) criteria and level 4 (four), as mentioned in the first statement, would be achieved: a) All teaching and learning activities in schools, colleges, academies, and other institutions of higher learning are carried out online; b) all work-from-home (WFH) activities in the non-essential sector are implemented; and c) activities are implemented in the following sectors: 1. Essential such as banking 50% maximum staff work from office (WFO) with a strict health protocol; 2. Vital in the government sector Twenty-five percent (25%) of the maximum staff work from the office (WFO) following strict health protocols. 3. Energy, Health, Safety, Logistics and transportation, Food and Beverage Industries and their Support, Petrochemicals, Cement, National Importance, Disaster Management, National Strategic Projects, Construction, Basic Services (Electricity and Water), and Fulfillment Industries [2].

The Indonesia WFH policy was started through Circular Letter of Ministry of Communication and Information of the Republic of Indonesia Number 4 2020 concerning The Follow-up Efforts to Prevent COVID-19 Spread (SE No. 4 2020)[4]. The SE No. 4 2020 ordered that only Echelon IV and non-echelon (non civil/public servants) will do WFH. While SFH Policy regulated through The Circular Letter of The Ministry of Education and Culture concerning Education Implementation during Emergency Time of COVID-19 [5]. Furthermore, the WFH and SFH policies follow the follow-up of PPKM enforcement policy.

This compromise initially sounds like win-win solution where people can be protected from the outbreak disease while still doing their activities, The Government can keep national stability, the workers can have their incomes, and the students keep pursuing their studies. Moreover, WFH concept has been existing for the last 11 years [6] and college like Universitas Terbuka (UT) has been applying hybrid system (both online and offline class system). Even so with the sudden change of life dynamics in society, it's understandable that there might be difficulties in adjusting to this concept. Thus through

this paper, the authors will discuss about: which technology informations that commnly used during pandemic COVID-19 and how they benefits people on doing their virtual activities.

2 Method

This paper discussion scope is limited to application that commonly used in COVID-19 pandemic era collected through normative method. Normative or also widely know as doctrinal method is where a research used library research or secondary data as its source, such as book, reports, journals, and official documents. Even if the authors show any data from surveys later, they are collected from second parties that the legitimization is verified.

3 Discussion

3.1 Information Technology during the COVID-19

This year, the occurrence of a global-scale pandemic that has spread to various countries, including Indonesia, has also not escaped the impact of this pandemic, especially students, where teaching and learning activities that were previously carried out face-to-face have drastically changed to online. Students who are not used to this way of learning and do not understand the benefits of technology which ultimately lead to several negative aspects, such as lack of knowledge gained, decreased learning effectiveness, enthusiasm for learning, and even boredom for students because of online learning methods [7].

Due to the sudden change in learning methods, many parents complain because it is difficult to prepare what needs to be prepared for online activities and many people are still ignorant or do not understand this new technology. This lack of information causes the community, especially parents of students, to have difficulty with this. Therefore, in this article, it aims to educate or provide information to the public so that they can access several online platforms that are important for education for their children, and also provide direction so that online learning can produce an effective learning understanding and provide an understanding of the benefits of online learning technology [8].

Zoom. The Zoom application is an application that can make it easier for us to make video calls when we need work efficiently and regularly. The advantage of using this Zoom application is that it can share screens easily, conference calls, can easily invite more than 100 people using premium zoom, can provide an experience without face-to-face interaction, and also video calls without buffering. At this time, schools and colleges also use this application to make it easier for students to interact face-to-face virtual.

Based on previous studies, Naserly et al., explains that Zoom Meeting preferebly used in 20 students class (mid-size class) to maintain the effectiveness. Moreover, Zoom is a live-streaming application with verbose letters of quota, which can reduce the live-streaming time to 10–15 min in one meeting, thus making it easier for teachers and students to learn in the same way as traditional classroom learning interaction can be tightly coupled [9]. Zoom Meeting also help researcher collect empirical data through

interview and virtual focus group discussion. It's more cost-effective (time and financial wise) and stabil security. [10].

Google Add-On Applications. Google, even though is famous as search engine, has many of add-on applications that actually supporting WFH and SFH Activities. Google add-on application that commonly used in WFH and SFH is Google Hangout, Google Meet, Google Classroom, and Google Calendar.

The advantages of using the Google Hangouts app are: (a) It's free. (b) Integrates with G Suite. (c) Group video calls. (d) Gmail server integration. (e) Great for making phone calls. (f) Can be recorded for future review. (g) User friendly mobile application. (h) Can save chats for future reference. (i) Easy to add and delete contacts. (j) Delivery of messages in a short time.

The Google meet application is also the same as the zoom application which can make it easier for us to make video calls, even though we are not able to meet face to face during the covid 19 pandemic, but we can use this application. This application can facilitate our access so as to facilitate the learning process quickly and precisely in this pandemic era. At this time, schools and colleges also use this application to make it easier for students to interact face-to-face virtual.

As a learning app, Google Classroom allows educators to create custom classrooms and share class codes for their students to join. This free-to-access application also allows educators to provide assignments and materials without having to meet face-to-face. Google Classroom makes the learning system and process more efficient, saves time and effort, and is more economical. Thanks to online learning, the distance between home and school or between teachers and students is only a few steps.

Google Calendar is a time management and scheduling application that can regulate our daily activities during this pandemic, and can also make schedules when we want to have a meeting or others. It's beneficial for individual to arrange their schedule such as meeting, tasks, deadline, and even events.

Whatsapp. The Whatsapp application is an application that can make it easier for us to exchange messages during the Covid 19 pandemic, without being limited by distance. This application is also very, simple and reliable. This Whatsapp application can also create group chats up to 250 people at once. Through WhatsApp, we can send photos, audio, documents, and videos not only individually. However, we can also be done in groups with various facilities available in the WhatsApp feature, so it is appropriate for educators and students to use WhatsApp as the learning platform in the COVID-19 period [11].

Zenius. The Zenius learning app provides access to a practice question bank for student self-study materials. Teachers can also share content in the form of learning videos and practice questions to students and parents through various existing social media platforms, such as WhatsApp groups. Zenius online class teaching sessions are guided by Zenius tutors from various subjects and broadcast live [12]. Moreover, Zenius online classes are also equipped with a Live Chat feature, so students can interact and ask questions to tutors during the teaching process. In addition to schools, universities are

currently carrying out distance learning activities using various available facilities, for example using e-learning applications that are already available in the Academic System.

Peduli Lindungi. The “PeduliLindung” application makes it easy for us to share location data while traveling so that we can trace contact history with Covid-19 sufferers. If we use this application, when there is a red zone, we will be notified if we are in a red zone. This application aims to stop the spread of Covid 19. Nowadays, we also have to scan using a care-protect application if we want to enter the mall or even to places where there are a lot of people.

4 Conclusion

The Covid-19 pandemic forced humankind to adapt in new era where we need to survive through virtual activities for study and working. This actually bring benefits for advances in technology. The government is forcing people to be technology literate to get used to it, especially during this pandemic. The sudden change might scared people however with many of technology options that provided, there’s high possibility that later even without pandemic people can do their activities virtually with the help of information technology.

References

1. Prabowo, D.: 5 Fakta Warga Depok Positif Virus Corona, Dari Kronologi Hingga Status Siaga 1. (2020), <https://nasional.kompas.com/read/2020/03/03/07170461/5-fakta-warga-depok-positif-virus-corona-dari-kronologi-hingga-status-siaga>, last accessed 2022/5/15.
2. Miharja, M., Salim, E., Nachrawi, G., Putranto, R. D., Hendrawan, A.: Implementation of emergency public activity restrictions (PPKM) in accordance with human rights and Pancasila principles. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)* 4(3), 6855–6866 (2021).
3. Instruction of Minister of Home Affairs No. 23 of 2021
4. Circular Letter of Ministry of Communication and Information of the Republic of Indonesia Number 4 2020 concerning The Follow-up Efforts to Prevent COVID-19 Spread
5. Circular Letter of The Ministry of Education and Culture concerning Education Implementation during Emergency Time of COVID-19
6. Holland, S. J., Simpson, K. M., Dalal, R. S., Vega, R. P.: I can’t steal from a coworker if I work from home: Conceptual and measurement-related issues associated with studying counterproductive work behavior in a telework setting. *Human Performance* 29(3), 172-190 (2016).
7. Astini, N. K. S.: Utilization of Information Technology in Elementary School Level Learning during the Covid-19 Pandemic. *STKIP Hindu Religion Amlapura* 11(2), (2020).
8. Komalasari, R.: Benefits of Information and Communication Technology in the Time of the Covid Pandemic 19. *LP3I Polytechnic Bandung* 7(June 1), (2020).
9. Napratilora, M., Lisa, H., Bangsawan, I.: Using WhatsApp as a learning media in teaching reading. *Mitra PGMI: Jurnal Kependidikan MI* 6(2), 116-125 (2020).
10. Brahma, I. A.: Penggunaan zoom sebagai pembelajaran berbasis online dalam mata kuliah sosiologi dan antropologi pada mahasiswa PPKN di STKIP Kusumanegara Jakarta. *Aksara: Jurnal Ilmu Pendidikan Nonformal* 6(2), 97–102 (2020).

11. Naserly, M. K.: Implementasi zoom, google classroom, dan whatsapp group dalam mendukung pembelajaran daring (online) pada mata kuliah bahasa inggris lanjut (Studi Kasus Pada 2 Kelas Semester 2, Jurusan Administrasi Bisnis, Fakultas Ekonomi dan Bisnis, Universitas Bina Sarana Informatika Jakarta). *Journal of Chemical Information and Modeling* 4(2), 155-165 (2020).
12. Roza, L., Aulia, N., Zulherman, Z.: Analisa pemanfaatan e-learning menggunakan data statistik pengguna aplikasi startup pendidikan selama wabah pandemi COVID-19. *Jurnal Pendidikan Sains Indonesia* 9(3), 407-420 (2021).

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

