

## Using Digital Media During the COVID-19 Pandemic Era: Good Online Program in Higher Education

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### Abstract

This study aims at documenting the experience and perceptions of an Indonesian university professor in regard to teaching using digital media during the coronavirus disease 2019 (COVID-19) pandemic. Ample research has pointed out that the use of digital technologies can raise both potential and challenges. This study examines the two contrasting perspectives by considering the current health disaster, the COVID-19 pandemic, which can add to the complexities of virtual education in Indonesia. Research on virtual education in the context of Indonesian higher education during the pandemic is very limited, and, thus, this study has gained its significance. We used qualitative methodology to approach this investigation with interviews as the data collection technique and thematic analysis as its method of analysis. The results of this study present some key insights into the ways to integrate digital technologies within higher education instruction and what criteria to consider when selecting digital media. We argue that using digital technology helped educators facilitate teaching and learning regardless of the health crisis they were facing. This paper can be of use for educators in higher education to find ways to infuse digital media in their everyday instructions.

**Keywords:** covid 19 pandemic era, digital media, digital technology, good online programs, online community, virtual education



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## 1. Introduction

Coronavirus disease 2019 (COVID-19) has affected almost every country in the world. The World Health Organization (WHO) declared the COVID-19 outbreak, first identified in Wuhan, China, as a pandemic on March 12, 2020 (*WHO Director-General's Opening Remarks at the Media Briefing on COVID-19 - 11 March 2020*, 2020). As of November 24, 2021, Our World in Data reported that about 26 million people had been infected with the virus, and more

than 5 million of them had died ("Coronavirus (COVID-19)," 2021). The COVID-19 pandemic is considered a biological disaster. According to Kumar (2020), a biological disaster is defined as a natural event involving disease, disability, or mass death caused by bacteria, viruses, toxins, or other microorganisms affecting the earth's creatures (humans, animals, and plants). COVID-19 has caused devastating medical and socioeconomic problems around the globe. Steinfeld (2020) argues that the COVID-19 pandemic is changing the

structures, rhythms, and routines of many contexts, including education, for an unknown period. As of now, we have witnessed how the world of education has shifted from in-person learning to remote virtual learning so massively.

Indonesia has its own story about the pandemic and education. The country is among those that closed schools the longest. Nearly 18 months have passed since schools in Indonesia were closed to reduce COVID-19 transmission rates (*Indonesia: After 18 Months of School Closures, Children Must Safely Resume Face-to-Face Learning as Soon as Possible*, 2021). Millions of Indonesian students have been affected by school and university closures. The Indonesian government has been strongly urged to find a way out of this precarious situation. In this paper, we investigate how a virtual class at a public university was conducted by documenting a faculty member's perceptions and attitudes toward using digital media for teaching and learning. This paper may be useful to university educators in informing practices to better integrate digital media into their instruction.

#### a. The Context: Indonesia

At the 64th anniversary event of Indonesian Padjadjaran University, whose theme was "Towards a Hybrid University Transformation," Nadiem Anwar Makarim, the Minister of Education, Culture, Research and Technology (MOECRT), said that distance learning during the COVID-19 pandemic has been an emergency route. According to him, the route has been taken to prevent a so-called "learning loss" (Siswadi, 2021). The MOECRT minister explained that over the last 1.5 years, there had been many changes as a result of the COVID-19 pandemic, especially in higher education contexts. One of the biggest reforms in education is the use of technology in learning. "Now technology

must change the way students learn, especially to catch up during the pandemic," said (Siswadi, 2021).

The minister asserts that learning must be meaningful and relevant so that students have sufficient provisions to face the real world. He urges Indonesian universities to adopt a hybrid approach to 21st-century learning, in which courses are designed in a more creative format using digital technologies (Siswadi, 2021). This spirit of reform can be traced to the ministry's current policies, which emphasize education reforms during the pandemic. The government revisits and revises the allocation of the special fund to be transferred directly to schools for purchasing digital devices (*The 2021 National Education Day Podcast of President Jokowi and Minister Nadiem Makarim*, 2021). The massive use of computers at schools and universities has been widely promoted such that the government bought hundreds of thousands of Chromebooks for student learning and enhanced hybrid-style learning, combining both in-person and virtual (*The 2021 National Education Day Podcast of President Jokowi and Minister Nadiem Makarim*, 2021).

#### b. Virtual Learning in Higher Education

According to Carliner (1999), virtual learning refers to educational resources offered on computers. This kind of learning allows both faculty members and students to teach and learn via teleconferencing, using, for instance, Zoom, Google Meet, or other digital applications, so they can self-direct their academic activities at a distance. Virtual learning is also defined as a model in which geographical distance separates a tutor and students, and online delivery media are used to bridge that instructional gap (Huang, 2002). However, Ally (2008) asserts that virtual learning encompasses more than just the presentation and delivery of materials online;

it also requires the inclusion of the learner and the learning process. He explains that students use the Internet to access learning resources, such as interacting with content, instructors, and other students, and to obtain support throughout the learning process, and thus can gain knowledge, construct personal meaning, and grow from that learning experience (Ally, 2008).

When it comes to which digital media to use for virtual learning, [O] highlights two criteria: “learning purposes” and “teaching purposes.” His study focuses on scrutinizing educators’ motives in using YouTube in their classes. The research setting was in-person, with digital media embedded within teaching and learning practices. Educators used YouTube to explore understandings of subject matter and thus develop their teaching. They considered the pedagogical and psychological aspects of the content to better benefit their students (Pecay, 2017). In addition, studying three different stakeholders of children, parents, and industry, Dias and Brito (2021) they explored that the three stakeholders had contrasting views on the criteria for selecting apps. For example, parents focused on the safety issues of digital media; children emphasized the fun aspects and their interfaces, while the industry highlighted the importance of a good user experience.

This study includes educators’ opinions during the pandemic, thereby contributing to the ongoing discussion of digital media criteria in contemporary developments in virtual learning. Digital technology has played and continues to play a crucial role in the growth of virtual learning. It has become an important long-term strategy for many universities. Given the rapid growth of this non-traditional form of learning and its importance to tertiary institutions, it is imperative that universities deliver high-quality online programs (Kim & Bonk, 2006). Also, Dumford and Miller

(2018) argue that it is critical to identify the current situations and issues with virtual learning in higher education to provide a better context for improving the student experience.

### c. Two Faces of Digital Technology Integration in Education

The use of technologies can raise both potentials and challenges. By reviewing the relevant literature, including research articles and books, we provide the following key insights.

#### 1) Positivists’ perspectives

We documented the proponents’ views of using digital media for learning. First of all, flexibility has become the most favorable theme that many educators and learners consider the online strategy can convey. Awaludin (2016) contends that online platforms can enable flexible learning in ways that allow students to manage their own learning pace. For example, they can slow down or speed up reading an article and pause or rewind a video lesson. In addition, a student commuter can conveniently access learning whenever and wherever so he or she can improve their studies (Awaludin, 2016; Oproiu, 2015; Owston et al., 2013). Fearon et al. (2011) This provides a broader perspective: remote speakers from industry or academia can deliver a seminar or keynote lecture via teleconferencing. Even if a participant misses the event, for instance because of illness, he or she can still catch up online.

Second, digital technology tools can facilitate collaborative activities (Oproiu, 2015). Students can do group work, share ideas, and even challenge others’ opinions via the online platform, as Loh et al. (2016) said. According to Fearon et al. (2011), universities can encourage larger collaboration with industry practitioners, for example, to foster and

improve the learning itself. Furthermore, they describe how the online environment could facilitate the development of transferable skills for junior accountants and provide helpful revision aids for both undergraduate and graduate students participating in the study (Fearon et al., 2011). Even simple collaboration with peers on homework can be carried out online (Oproiu, 2015). We think that, especially during the pandemic, this practice has been widely implemented by many students and their teachers.

Third, the virtual mode of learning can motivate students in their studies. A study by Owston et al. (2013) found that students were satisfied with the online strategy because they could understand the subject matter very well and, thus, were motivated to learn and achieve better grades. López-Pérez et al. (2011) clarify that students at the University of Granada had positive attitudes toward learning and gained better achievement, shown in their final scores. Lastly, from an economic perspective, according to Loh et al. (2016), studying at a distance can reduce transport costs. As mentioned earlier, commuter, distant, or ill students can still access learning wherever they are. Beyond reducing braking distances and saving travel time, technology may also eliminate some transport fares (Loh et al., 2016). Along with these potentials follow some constraints that need to be discussed.

## 2) Skeptics' perspectives

Despite the potentials discussed earlier, technology-based learning is, borrowing Selwyn's (2016a) a word, messy and contributes to serious problems that need attention. First and foremost, students often feel bored when dealing with static technological devices. Selwyn (2016a) argues that digital technology neglects the humanization of learning and teaching because people's relationships and social contexts in which they act and learn

vary and thus affect their learning. Students like meeting their peers in person and talking with them. In the digital sphere, these activities can be carried out only to a limited extent (Selwyn, 2016a). For example, after a Zoom class ends, there is no small talk.

Furthermore, the technology could not accommodate student desires to socialize and interact with their peers. Although some online platforms provide such mingling spaces for students to connect with each other, Zhang and Kenny (2010) the students they studied made little use of the tools. In the virtual model, most students were passive, and there were few activities available in the online environment. Selwyn (2016) contends that technology increases and worsens obstructive behaviors among students by, for example, not contributing to group activities in a meaningful way.

In addition to the final point in Selwyn's (2016) argument, some studies still problematize the matter of collaboration, which has been claimed to be facilitated virtually. Students show negative attitudes to learning because they lack opportunities to collaborate with their colleagues (Loh et al., 2016). Loh et al. (2016) Add that these negative perceptions can undermine the effectiveness of group work, given that traditional face-to-face meetings can spark student creativity. It is important to consider that learning should not just promise 'collaborative work only' but, more importantly, encourage high-quality collaboration among students so they can improve their learning.

Another challenge concerns the quality of online materials provided by universities. Specifically, in the research on university students, Weaver et al. (2008) found that student responses highlighted main issues, such as poor quality teaching (e.g., inappropriate teaching activities, feedback, and level of interaction); poor use of technology (e.g.,

inappropriate file types uploaded, little use of available features, and large file sizes); and lack of adequate maintenance of online sites (e.g., out-of-date information and broken links).

In this paper, we examine the two perspectives. Moreover, the nature of the COVID-19 pandemic can add to the complexities of virtual education. To my knowledge, studies on virtual education in Indonesian higher education during the pandemic are very limited. What we mean by “studies” is research articles published in peer-reviewed journals. Therefore, this study is significant for extending the conversation on the issue in the recent Indonesian context.

We would like to provide an important evaluation of the issues of online instruction during the COVID-19 pandemic. This paper aims to address two research questions (RQ); they are (a) RQ1: How does an Indonesian professor perceive the use of digital media for teaching and learning during the pandemic? and (b) RQ2: What are the criteria used when selecting digital media?

## 2. **Methods**

We used qualitative methodology to approach this study. Hatch (2002) asserts that qualitative studies try “to understand the world from the perspectives of those living in it” (p. 7). In the qualitative approach, investigators seek to capture the perceptions of actors, which they use as a foundation for their activities in a social context. To collect data, we conducted a semi-structured interview with Prabowo (pseudonym). We did the in-person interview in October 2021. Prabowo is

an Indonesian professor who had been in the United States as a visiting scholar for three months (August-October 2021) at the time of our interview. During the coronavirus disease (COVID-19) pandemic, Prabowo also continued to carry out his distance-learning duties for his students in Indonesia.

For the data analysis, we used thematic analysis (TA) to process the information obtained from the interview. According to Carliner (1999), TA, as a qualitative strategy, is primarily defined as a technique for researchers to identify, analyze, and report patterns (themes) in data. To find the themes, we developed five codes as shown in Table 1.

## 3. **Results and Discussion**

We would like to present Prabowo's perspective on online teaching during the COVID-19 pandemic.

### a. **The Tale of the Professor**

The professor reflected on his experience serving as the online instructor over the last one and a half years when we met him. He took the initiative to use digital media because the university where he worked did not provide him with any learning media subscriptions or a learning management system. Prabowo noted, “The university does not provide [any learning management system tools]. This is a self-initiated [response].”

In this part, two main themes emerge from the data. The first concerns potential challenges of both in-person and virtual learning during the COVID-19 crisis. The second theme concerns the criteria for selecting media to support his distance instruction.



Table 1. Data Codes

| Codes       | Definitions                                                              | Examples                                                                                                                         |
|-------------|--------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Potentials  | Enabling brought about using a certain mode of instruction               | "[With] the in-person mode, [first, I am able to cover] subject matters more maximally."                                         |
| Challenges  | Difficulties faced by the professor when teaching                        | "In Zoom, it's difficult for us to explain things more concretely."                                                              |
| Intuitive   | When digital media are easy to navigate                                  | "Even at the beginning of the pandemic, in 2020 there were still many (faculties) who used WA (WhatsApp) groups [for teaching]." |
| Widely used | When digital media are commonly used                                     | "They are more familiar with Zoom."                                                                                              |
| Efficient   | When digital media are cost-efficient as well as having quality services | "Webex is taking so much data; it is the most expensive ... the Microsoft Teams sounds like crap."                               |

### b. In-Person vs Virtual Instruction

Prabowo provided his views on the potentials and challenges of both virtual and face-to-face modes of instruction. First of all, the professor said that the main strength of the virtual mode lay in its flexibility. "So, there are no rules for this meeting. Because of the pandemic, [the class] has become more open; it's not too rigid ... it is more flexible, yes." He explained further that with this flexible nature, he and his team teaching were able to innovate in designing learning as effectively as possible. Prabowo said, "Then, the positive thing is that this virtual [model] makes us more innovative; [we are triggered] to continuously develop [our learning design] again and again in the following semesters."

On the other hand, the professor highlighted that the main challenges of the virtual model concerned its practicality, especially when he wanted to interact with his students. "It's a bit difficult to build interactions ... in Zoom. It's difficult for us to explain things more concretely; it's hard to explain abstract theories. There is a gap, isn't it?" The professor also said there was a problem with their Internet connections, saying, "The students [sometimes] have problems with the network ... there are problems with Internet signal connections ... because there are some students who live outside the cities [in villages]."

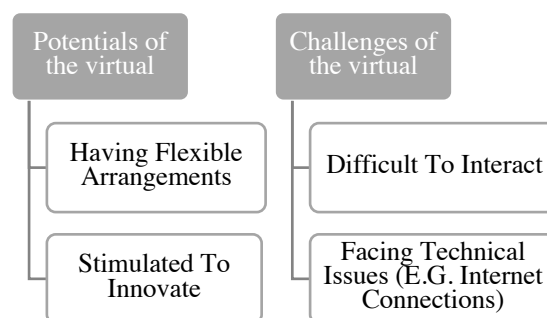


Figure 1. Potentials and Challenges of the Virtual Mode

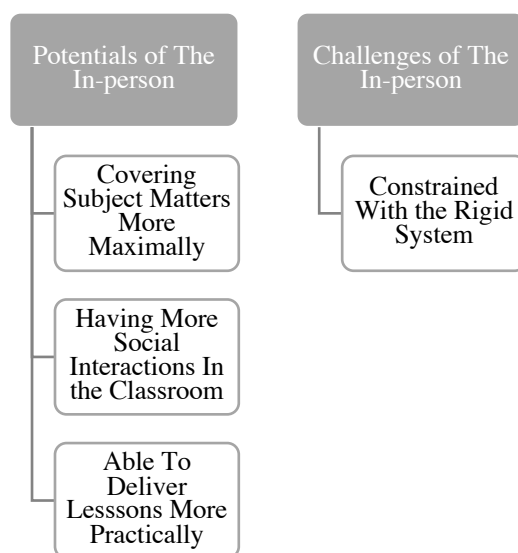
In terms of the positive side of in-person learning, Prabowo stated that "[w]ith the in-person mode, [first, I am able to cover] subject matters more maximally. Second, I can explore [when] explaining things and the

interaction [between students and me] is maximized ... Because my class is a theory course, it needs more depth [and] requires concrete examples and [I usually use] whiteboards to explain the lessons." He pointed out

social and practical aspects of delivering subject matter in the conventional classroom settings.

On the other hand, regarding challenges, the professor admitted that in traditional face-to-face learning, Prabowo found the structure

rigid and took the system for granted. “[Because we have] rules and predetermined classroom locations and schedules ... it is not that flexible.” And the professor said that he could not change that status quo.



**Figure 3. Potentials and Challenges of the in-Person Mode**

To summarize, we created a matrix (see Table 2) that lists the potential and challenges Prabowo encountered when teaching.

### c. Learning Media Criteria

Furthermore, we explored how the professor incorporated the digital media he and his students used to facilitate learning. When it came to choosing certain media or applications for learning, the professor revealed three main criteria: the learning media had to be widely used, intuitive, and efficient (Sukmawati et al, 2020). This part includes important excerpts from the interview transcripts that we classified into the three categories of learning media criteria for Prabowo.

Firstly, in the initial phase of his distance teaching during the COVID-19 pandemic, the professor used WhatsApp, a widely used messaging application among faculty and students, to facilitate learning.

“Even at the beginning of the pandemic, in 2020 there were still many (faculty members) who used WA (WhatsApp) groups [for teaching]. [We] chat via WA groups,” said the professor. In his daily activities, Prabowo used WhatsApp to communicate with his relatives, fellow professors, and students. In Indonesia, WhatsApp has been widely used as a messaging medium.

**Table 2. The Matrix of Potentials and Challenges for Both In-Person and Virtual Modes**

| Matrix            | Virtual mode                                                                                                                                                                                                           | In-person mode                                                                                                                                                                                                                                                                                                |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Potentials</b> | <ul style="list-style-type: none"> <li>• The professor was able to flexibly arrange the class</li> <li>• The professor was stimulated to continuously innovate his teaching</li> </ul>                                 | <ul style="list-style-type: none"> <li>• The professor could cover subject matters more maximally</li> <li>• The professor was able to create more social interactions in the classroom</li> <li>• The professor was able to maximize the use of the classroom facilities when delivering lessons.</li> </ul> |
| <b>Challenges</b> | <ul style="list-style-type: none"> <li>• The professor found it hard to interact with the students.</li> <li>• The professor usually had problems with technical issues, such as poor internet connections.</li> </ul> | <ul style="list-style-type: none"> <li>• The professor was constrained with the rigid system of the in-person mode.</li> </ul>                                                                                                                                                                                |

In doing so, he explained how the teaching happened on WhatsApp: “So, [I and students] chat with each other. You know what I mean. Some students were creative; maybe because they were tired of typing, they used the voice note feature to respond to my instructions. Or the lecturer, I, used voice notes or video recordings. Also, they eventually used Zoom to facilitate teleconferencing learning. “Back in 2020, when COVID-19 was still high, sometimes they also Zoomed with their friends because they couldn’t go out to meet people ... They are more familiar with Zoom.”

Secondly, a key criterion in selecting new media was that Prabowo believed the applications needed to be intuitive. The main reason for using the Zoom application is its ease of navigation. “[Zoom] is more practical, easier, and simple, especially for sharing screens,” said the professor. He then compared Zoom with another application, stating, “Well, many [faculties] are not used to using Google Meet [because] the features are a bit different [from other applications], especially regarding its share screen feature. At first, I didn’t really know where to share my screen either.”

The last criterion concerned the efficiency of the learning media. The professor noted that some teleconferencing applications

consumed large amounts of data and were less efficient for him and his students (Hermita et al., 2022).

“After trying [some applications], some were very wasteful, taking so much data; some didn’t have quality sound or visuals. So, I’ve compared those 5 applications. For example, Webex is collecting so much data that it is the most expensive. Then, Microsoft Teams sounds like crap, right?”

Prabowo was concerned about the data usage and qualities of digital media. He also argued that, even though using Zoom was not free compared to Google Meet, for example, the quality of Zoom was the main reason the professor ranked the application first. “Google Meet is still pretty good [but] it’s the second choice [after Zoom]. At the end of the day, the choice is still to use Zoom.”

#### **d. So what?**

This study explores a university professor's perceptions of using digital media for teaching during the COVID-19 pandemic. Beyond describing individual experiences, the findings demonstrate how digital technology supports teaching continuity while highlighting important considerations for improving online learning in higher education. During the pandemic, the



Indonesian government introduced several initiatives, including Chromebook distribution, hybrid learning implementation, and internet subsidies, to support digital transformation in education. These policies indicate that digital learning has become an important component of long-term educational development rather than merely an emergency response.

The findings show that digital technology enabled the professor to continue teaching effectively despite the challenges posed by the pandemic (Prayitno et al., 2019). However, successful technology integration depended not only on the availability of digital tools but also on pedagogical needs, infrastructure, and user readiness. The professor selected learning media based on

practicality and instructional suitability, suggesting that educational technology should always support learning objectives rather than simply introduce new technological features.

The professor identified flexibility as the greatest advantage of virtual learning. This finding supports Fearon et al. (2011) and Awaludin (2016), who argue that online learning allows educators to organize learning more flexibly. More importantly, this study extends previous research by showing that flexibility also encourages lecturers to continuously improve their teaching strategies and redesign learning activities. Thus, digital learning contributes not only to instructional continuity but also to lecturers' professional development.

**Table 3. Practical Implications of the Study for Sustainable Digital Learning**

| Research Finding                                                  | Educational Meaning                                        | Practical Implication                               | Institutional Recommendation                                 |
|-------------------------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------------------|
| Flexible learning encourages instructional innovation             | Lecturers can redesign learning more effectively           | Promote adaptive and innovative teaching            | Support flexible and hybrid curricula                        |
| Limited interaction remains a challenge                           | Technology cannot fully replace face-to-face communication | Develop more interactive online learning activities | Provide training in online pedagogy                          |
| Media selection emphasizes usability, familiarity, and efficiency | Technology should fit instructional needs                  | Select intuitive and accessible platforms           | Develop institutional guidelines for digital media selection |
| Technical issues influence learning quality                       | Infrastructure affects learning effectiveness              | Improve internet access and digital support         | Strengthen institutional digital infrastructure              |

As shown in Table 3, the study suggests that effective digital learning depends on the balance between technology, pedagogy, and institutional support. Providing advanced technology alone is insufficient if educators are not equipped to use it effectively. Therefore, universities should strengthen professional development while continuously improving digital infrastructure.

Although virtual learning offered flexibility, the professor also emphasized difficulties in maintaining meaningful

interaction with students. This finding contrasts with Oproiu (2015) and Loh et al. (2016), who suggest that online learning facilitates collaboration. Instead, the present study supports Selwyn's (2016a) argument that digital learning cannot fully replace the social and human dimensions of face-to-face instruction. Consequently, lecturers should design more engaging learning activities to enhance interaction in virtual classrooms.

The findings also extend previous studies on digital media selection by Pecay (2017)

and Dias and Brito (2021). The professor consistently prioritized learning platforms that were widely used, intuitive, and efficient. These criteria indicate that successful technology adoption depends more on accessibility and pedagogical suitability than on sophisticated features. Applications that are easy to use and require fewer technical resources are more likely to support sustainable online learning.

Overall, this study contributes empirical evidence from the Indonesian higher education context, where research on lecturers' experiences during the COVID-19 pandemic remains limited. The findings demonstrate that effective digital learning requires the integration of appropriate technology, sound pedagogy, and institutional commitment. Therefore, the results provide practical guidance for educators, university leaders, and policymakers in designing sustainable and high-quality digital learning environments beyond the pandemic.

#### 4. Conclusion

As the objective of this study is to examine a faculty member's teaching experience during the pandemic, this investigation provides pivotal insights into integrating digital technologies into higher education instruction. With the empirical data, this research extends some understanding from the previous studies being assessed.

To conclude the discussion, we present three useful recommendations for educators when assessing digital media. These recommendations are based on the criteria Prabowo mentioned in the interview. Given the limitations the professor faced (the pandemic, the lack of support from the university, and his visit to the United States), he believed that these three important criteria could be significant for other educators as well. (1) Consider selecting digital media widely used by

students; (2) Choose intuitive digital tools for ease of delivering learning materials; (3) Use efficient digital media for learning in ways that can save you and your students some money but at the same time have quality services.

Finally, we hope this exploration can shed light on educators in higher education, particularly on utilizing digital media and embracing best practices, as well as alleviate some of their burdens during this difficult time.

#### 5. Authors Contribution

**Aziz Awaludin:** Conceptualization, Methodology, Investigation, Formal Analysis, Writing – Original Draft; **Harun Joko Prayitno:** Conceptualization, Formal Analysis, Writing – Review & Editing; **Muhammad Izzul Haq:** Formal Analysis, Writing – Review & Editing.

#### 6. References

- Ally, M. (2008). Foundations of Educational Theory for Online Learning. In *The theory and practice of online learning* (2nd Edition, pp. 15–44). Athabasca University Press.
- Awaludin, A. (2016). Connecting the World: The Utilization of ICT for Rural Teacher Education in Indonesia. *Tarbiya: Journal Of Education In Muslim Society*, 3(2), 218–226.  
<https://doi.org/10.15408/tjems.v3i2.4984>
- Carliner, S. (1999). *Overview of Online Learning*. Human Resource Development Press.
- Coronavirus (COVID-19). (2021). *Our World in Data*.
- Dias, P., & Brito, R. (2021). Criteria for Selecting Apps: Debating the Perceptions of Young Children, Parents and Industry Stakeholders. *Computers & Education*, 165, 104134.  
<https://doi.org/10.1016/j.compedu.2021.104134>

- Dumford, A. D., & Miller, A. L. (2018). Online Learning in Higher Education: Exploring Advantages and Disadvantages for Engagement. *Journal of Computing in Higher Education*, 30(3), 452–465.  
<https://doi.org/10.1007/s12528-018-9179-z>
- Fearon, C., Starr, S., & McLaughlin, H. (2011). Value of Blended Learning in University and the Workplace: Some Experiences of University Students. *Industrial and Commercial Training*, 43(7), 446–450.  
<https://doi.org/10.1108/00197851111171872>
- Hatch, J. A. (2002). *Doing Qualitative Research in Education Settings*. Suny Press.
- Hermita, N., Putra, Z., Alim, J., Wijaya, T., Anggoro, S., & Diniya, D. (2021). Elementary Teachers' Perceptions on Genially Learning Media Using Item Response Theory (IRT). *Indonesian Journal on Learning and Advanced Education (IJOLAE)*, 4(1), 1–20.  
[doi:https://doi.org/10.23917/ijolae.v4i1.14757](https://doi.org/10.23917/ijolae.v4i1.14757)
- Huang, H. (2002). Toward Constructivism for Adult Learners in Online Learning Environments. *British Journal of Educational Technology*, 33(1), 27–37.  
<https://doi.org/10.1111/1467-8535.00236>
- Indonesia: After 18 months of school closures, children must safely resume face-to-face learning as soon as possible. (2021). UNICEF.  
<https://www.unicef.org/press-releases/indonesia-after-18-months-school-closures-children-must-safely-resume-face-face>
- Kim, K.-J., & Bonk, C. J. (2006). The Future OF Online Teaching and Learning in Higher Education: The Survey Says. *Educuse Quarterly*, 29(4), 22–30.  
[https://faculty.weber.edu/eamsel/Research%20Groups/On-line%20Learning/Bonk%20\(2006\).pdf](https://faculty.weber.edu/eamsel/Research%20Groups/On-line%20Learning/Bonk%20(2006).pdf)
- Kumar, Dr. J. (2020). Biological Disaster Management. *International Journal of Technical Research & Science*, 5(7), 5–10.  
<https://doi.org/10.30780/IJTRS.V05.I07.002>
- Loh, C., Wong, D. H., Quazi, A., & Kingshott, R. P. (2016). Re-examining Students' Perception of E-Learning: An Australian Perspective. *International Journal of Educational Management*, 30(1), 129–139.  
<https://doi.org/10.1108/IJEM-08-2014-0114>
- López-Pérez, M. V., Pérez-López, M. C., & Rodríguez-Ariza, L. (2011). Blended Learning in Higher Education: Students' Perceptions and Their Relation to Outcomes. *Computers & Education*, 56(3), 818–826.  
<https://doi.org/10.1016/j.compedu.2010.10.023>
- Oproiu, G. C. (2015). A Study about Using E-learning Platform (Moodle) in University Teaching Process. *Procedia - Social and Behavioral Sciences*, 180, 426–432.  
<https://doi.org/10.1016/j.sbspro.2015.02.140>
- Owston, R., York, D., & Murtha, S. (2013). Student Perceptions and Achievement in A University Blended Learning Strategic Initiative. *The Internet and Higher Education*, 18, 38–46.  
<https://doi.org/10.1016/j.iheduc.2012.12.003>
- Pecay, R. K. D. (2017). *YouTube Integration in Science Classes: Understanding Its Roots, Ways and Selection Criteria*. 22(4), 1015–1030.  
<https://nsuworks.nova.edu/tqr/vol22/iss4/6/>
- Prayitno, H., Kusmanto, H., Nasucha, Y., Rahmawati, L., Jamaluddin, N., Samsuddin, S., & Ilma, A. (2019). The Politeness Comments on The Indonesian President Jokowi Instagram Official Account Viewed From Politico Pragmatics and The Character Education Orientation in The Disruption Era. *Indonesian Journal on Learning and Advanced Education (IJOLAE)*, 1(2), 52–71.

- doi:<https://doi.org/10.23917/ijolae.v1i2.8785>
- Selwyn, N. (2016a). *Is Technology Good for Education?* John Wiley & Sons.
- Selwyn, N. (2016b). Digital Downsides: Exploring University Students' Negative Engagements with Digital Technology. *Teaching in Higher Education*, 21(8), 1006–1021. <https://doi.org/10.1080/13562517.2016.1213229>
- Siswadi, A. (2021). *Proyeksi Kampus Hibrida Menteri Nadiem Pascapandemi Covid-19 (Minister Nadiem's Hybrid Campus Projection Post-Covid-19 Pandemic)*. <https://tekno.tempo.co/read/1504937/proyeksi-kampus-hibrida-menteri-nadiem-pascapandemi-covid-19>
- Steinfeld, J. (2020). *Unprepared: America in the Time of Coronavirus*. Bloomsbury Publisher.
- Sukmawati, R., Pramita, M., Purba, H., & Utami, B. (2020). The Use of Blended Cooperative Learning Model in Introduction to Digital Systems Learning. *Indonesian Journal on Learning and Advanced Education (IJOLAE)*, 2(2), 75-81. doi:<https://doi.org/10.23917/ijolae.v2i2.9263>
- The 2021 National Education Day Podcast of President Jokowi and Minister Nadiem Makarim* (No. 2021). (n.d.). Retrieved May 2, 2021, from <https://www.youtube.com/watch?v=36Q3-BQIi4A&t=193s>
- Weaver, D., Spratt, C., & Nair, C. S. (2008). Academic and Student Use of a Learning Management System: Implications for Quality. *Australasian Journal of Educational Technology*, 24(1). <https://doi.org/10.14742/ajet.1228>
- WHO Director-General's opening remarks at the media briefing on COVID-19—11 March 2020. (2020). WHO. <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020>
- Zhang, Z., & Kenny, R. (2010). Learning in an Online Distance Education Course: Experiences of Three International Students. *The International Review of Research in Open and Distributed Learning*, 11(1), 17-36. <https://doi.org/10.19173/irrodl.v11i1.775>