



Fatmawati Nursing Academy Student Response to Online Learning During Pandemic Covid-19

Ayuda Nia Agustina

Nursing Academy of Fatmawati

ARTICLE INFO

Article history:

Received 24 January 2021
Accepted 10 March 2021
Published 25 June 2021

Keyword:

Covid-19 pandemic
Online learning
Student responses
Zoom

ABSTRACT

The COVID-19 pandemic is a global pandemic, and this pandemic affects all aspects of human life, such as health, economy, food and clothing. The spread of this pandemic has resulted in the closure of public areas in the education sector, one of which is the Fatmawati Nursing Academy. The purpose of this study was to identify student responses to online learning during the Covid-19 period. This research design is quantitative with a survey method. The sampling technique in this study was cluster random sampling totalling 105 people who received online learning. The research was conducted from March to July 2020 at the Fatmawati Nursing Academy. The survey is made in the form of a questionnaire using google form which can be easily accessed by respondents. The data analysis technique uses a percentage of the score for each statement item. The results showed that: 1) the average respondent had a high or good response (70, 86%) to online learning during the pandemic; 2) The obstacles faced by students during online learning are internet networks, finance. Online learning during the pandemic at the Fatmawati Nursing Academy is considered effective but requires improvement in order to achieve the learning outcomes that have been formulated.

This open access article is under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



Tanggapan Mahasiswa Akademi Keperawatan Fatmawati Terhadap Pembelajaran Online Selama Pandemi Covid-19

Kata kunci:

Pandemi covid-19
Pembelajaran daring
Tanggapan mahasiswa
Zoom

*) corresponding author

Dosen Akademi Keperawatan Fatmawati
Jl. Margasatwa (H.Beden) No. 25
Pondok Labu, Cilandak, Jakarta Selatan 12450.
E-mail: ayudania@akperfatmawati.ac.id/
ayudania.agustina@gmail.com
Telp. +628128037507

Email:

DOI: <https://doi.org/10.30604/jika.v6i2.434>

ABSTRAK

Pandemi COVID-19 merupakan pandemi global, dan pandemic ini mempengaruhi seluruh aspek kehidupan manusia, seperti: Kesehatan, ekonomi, sandang pangan dan pendidikan. Adanya penyebaran pandemi ini menyebabkan penutupan-penutupan area umum di bidang pendidikan, salah satu yang terdampak adalah Akademi Keperawatan Fatmawati. Tujuan penelitian ini adalah mengidentifikasi tanggapan mahasiswa terhadap pembelajaran daring di masa Covid-19. Rancangan penelitian ini adalah kuantitatif dengan metode survey. Teknik pengambilan sampling pada penelitian ini adalah cluster random sampling berjumlah 105 orang yang mendapatkan pembelajaran daring. Penelitian dilaksanakan pada bulan Maret sampai dengan bulan Juli 2020 di Akademi Keperawatan Fatmawati. Survey dibuat dalam bentuk kuisisioner menggunakan *google form* yang dapat mudah diakses oleh responden. Teknik Analisa data menggunakan presentase hasil skor untuk setiap butir pernyataan. Hasil penelitian menunjukkan bahwa: 1) rata-rata responden memiliki tanggapan yang tinggi atau baik (70, 86%) terhadap pembelajaran daring selama masa pandemi Covid-19; 2) Kendala yang dihadapi mahasiswa selama pembelajaran daring adalah jaringan internet dan keuangan. Pembelajaran daring selama masa pandemic Covid-19 di Akademi Keperawatan Fatmawati dinilai efektif, namun memerlukan perbaikan demi tercapai capaian pembelajaran yang telah dirumuskan.

This open access article is under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



INTRODUCTION

Today, the world is experiencing an outbreak of Corona Virus Disease 2019 (COVID-19) which was caused by the SARS-CoV-2 virus. COVID-19 has also been designated by WHO since March 11, 2020, as an epidemic because COVID-19 has become a Public Health Emergency of International Concern (PHEIC). Coronavirus (COVID-19) is an infectious disease caused by the corona-2 virus (severe acute respiratory syndrome coronavirus 2 or SARS-CoV-2). Corona virus is the name of a large family of viruses that can attack humans and animals. Corona virus in humans attacks the respiratory organs.

Until now, at least five types of Corona virus have been identified in the human body. The three most notorious ones cause SARS, MERS, and the Corona virus. This virus is called Corona which in Latin means crown. This is because when viewed using a microscope, the virus looks like a crown circled (Health Ministry of Republik Indonesia, 2020). The first cases of coronavirus were initially identified as flu in 1960 with about 500 patients identified as having flu-like disorders (Singh, Sharma, Malviya, & Awasthi, 2020). Furthermore, corona was treated as a non-lethal virus and was considered simple until 2002. After the existence of severe acute respiratory syndrome (SARSCov) in China, experts began to focus on the causes and find results if this outbreak was caused by a new form of corona (Handayani, Hadi, Isbaniah, Burhan., & Agustin, 2020). Based on these two events, it is known that the corona virus is not a stable virus and is capable of adapting to be more virulent, it can even lead to death.

The most disturbing new corona virus (COVID-19) occurred at the end of 2019 in Wuhan, China. As of March 31, 2020, there were 81,620 cases of COVID-19 in China, with 3,322 people having died, and 76,571 people had recovered (CNN Indonesia, 2020). The virus has spread to 203 countries, with 938,565 confirmed cases with a death toll of 195,397. Indonesia is inseparable from COVID-19, with data on positive cases as of 2 April 2020 totaling 1,790 people, 112 people recovered, and 170 deaths (Putri, 2020). According to information on the Ministry of Health's website on March 17, 2020 the affected areas (areas that reported confirmed cases of COVID-19) in Indonesia include: DKI Jakarta, West Java (Bekasi, Depok, Cirebon, Purwakarta, Bandung Regency), Banten (Tangerang Regency), Tangerang City, South Tangerang), Central Java (Solo, Semarang, Magelang), West Kalimantan (Pontianak), North Sulawesi (Manado), Bali, and DI Yogyakarta (Sleman Regency). Whereas areas with local transmission (areas that report confirmed cases of COVID-19 and proven local transmission) in Indonesia include: DKI Jakarta, West Java (Kab. Bekasi, Depok, Cirebon, Purwakarta, Bandung), Banten (Kab. Tangerang, Kota. Tangerang, South Tangerang), Central Java (Solo).

The COVID-19 pandemic is a global pandemic, and this pandemic affects all aspects of human life, such as: health, economy, food and clothing. The spread of this pandemic has resulted in the closure of public areas in the education sector, namely: schools, madrasas, universities and Islamic boarding schools. UNESCO (United Nations Educational, Scientific and Cultural Organization) on 4 April 2020 suggested using distance learning and opening up educational platforms that schools and educators could use to reach learners remotely and limit educational disruptions (UNESCO, 2020). In connection with these developments, the Directorate General of Higher Education of the Ministry of Education and Culture of the Republic of Indonesia (2020) also took a policy as a guide in dealing with this disease at the educational unit level in the form of implementing distance learning and advising

students to study from home. Globally, the results of UNESCO's monitoring state that as of April 13, 191 countries had implemented a national closure which affected 1,575,270,054 students (91.3% of the world's student population) (UNESCO, 2020).

Higher education institutions have also felt the impact of the widespread closure of universities, one of which is the Fatmawati Nursing Academy. The health crisis caused by COVID-19 has become a stimulus for simultaneous online learning. The implementation of online learning has been carried out almost all over the world during the COVID-19 pandemic (Goldschmidt, 2020). Lecture as essential elements in teaching are required to undertake an unprecedented large-scale migration from face-to-face education to online education or distance education (Bao, 2020; Basilaia & Kavadze, 2020).

This is supported by technological developments that are not limited to the current 4.0 industrial revolution. Online learning is effective for implementing learning even though educators and students are in different places (Verawardina. Asnur, Lubis, Hendriyani, Ramadhani, Dewi et al, 2020). Distance learning is able to solve the problem of students' delay in acquiring knowledge. Online learning can take advantage of platforms in the form of applications, websites, social networks and learning system management provided by universities or the Ministry of Education and Culture of the Republic of Indonesia (Gunawan, Suranti, & Fathoroni, 2020). These various platforms can be used to support the transfer of knowledge which is supported by various discussion techniques and others.

Fatmawati Academy of Nursing is a health vocational institution. Nursing procedure skills are emphasized so that nursing students are skilled at work. The existence of this global pandemic will reduce the intensity of students studying in nursing laboratories and this is a concern for educational institutions in the health sector, especially nursing. This pandemic does not rule out a decrease in the quality of learning in students (Sahu, 2020).

To support online learning, you can use the zoom, edlink, google classroom, and what's app, where these applications can be used by students or lecturers when they are outside the classroom and at any time (Dhull & Sakshi, 2017). Meanwhile, face-to-face learning activities can be carried out in the nursing laboratory to facilitate nursing procedure skills. There are many things that need to be prepared so that the implementation of online learning can run properly, such as: student readiness, support for facilities and infrastructure.

Online learning is an educational innovation that involves elements of information technology in learning. According to Mustofa, Chodzirin, Sayekti and Fauzan (2019) that online learning is a distance education system with a set of teaching methods where there are teaching activities that are carried out separately from learning activities. Online learning is organized through the internet and web 2.0 (Brolpito, 2018). Online learning has been done a lot in the context of higher education, as evidenced by several studies that explain this (Crews & Parker, 2017; Mather & Sarkans, 2018), online learning provides benefits in helping provide access to learning for everyone, thereby removing physical barriers as a factor for learning within the scope of the classroom (Ahmed, 2018), even this is seen as something that is effective to be applied, especially in higher education, but according to Pilkington (2018) it cannot be denied that not all learning can be transferred to a learning environment on line.

Based on the description above, this research can provide information on how educational institutions respond and the responses of nursing students so that it can be an evaluation of education providers and the government in the implementation of higher education during a pandemic, where it cannot be ascertained yet.

METHOD

The research design used was quantitative using a survey method. The sampling technique was cluster random sampling. Research respondents were 105 students of semester 4 of the nursing study program at the Fatmawati Academy of Nursing, Jakarta, totaling 105 people who received online learning. The research was conducted from March to July 2020. The data collection tool used was survey data. Data collection tools to determine student responses to online learning. The survey that was made aims to reveal in detail about student responses while using online learning

during the Covid-19 Pandemic. The questionnaire is divided into 2 types, namely open and closed. In a closed questionnaire, students are free to provide answers according to themselves and the predetermined categories. Open questionnaires were conducted by students giving answers to questions freely, without any limitations in filling out the answers.

The questionnaire was used to determine the readiness, facilities and infrastructure, as well as the difficulties experienced by students in accessing various applications used during the learning process. The type of survey used a Likert scale. According to Sugiyono (2018) that the Likert scale is used as a tool to measure the attitudes, opinions and perceptions of individuals or groups of people towards social phenomena. The categories of assessment used in the closed questionnaire of this study are divided into 4 categories, namely strongly agree (SS), agree (S), disagree (TS), and strongly disagree (STS). The survey in the form of a questionnaire is made on google form so that it is easily accessed by students. The Likert scale is presented in table 1.

Table 1
Score categories in the closed questionnaire

Category Statement	Score	
	Positive	Negative
strongly agree	4	1
agree	3	2
disagree	2	3
strongly disagree	1	4

Closed questionnaires regarding student responses to the blended learning model were analyzed by conducting a scoring system. Where the score given for each statement answer is in accordance with table 1, then for each statement the maximum score is 4. To find out the student's response, the researcher used the percentage data analysis technique for the score results for each statement item. The formula for calculating the percentage for each item of the statement is:

$$\text{Percentage} = \frac{\text{Score each item statement}}{\text{(Total score of the statement X number of students)}} \times 100\%$$

The percentage results obtained are interpreted according to the interval table 2.

Table 2
Categories of student response percentage

Percentage	Category
0% - 20%	very low
21% -40%	low
41% - 60%	moderate
61% - 80%	high
81% - 100%	Very high

The results of the calculations in table 2 are the basis for in-depth analysis and conclusions on how the responses of 4th semester students of the Fatmawati Academy of Nursing study programs in Jakarta. Meanwhile, the open questionnaire was analyzed qualitatively, in which all the students' answers were summarized to find out more about what the students experienced.

RESULT

This research involved students of the Fatmawati Jakarta Nursing Academy in the fourth semester of the 2019-2020 academic year. In the table above, it is known that the

majority of respondents are late adolescents (aged 21-23 years), namely 90.48% (95 respondents). The table also shows that the majority of respondents are female, namely 89.52% (94 respondents), and 10.48% (11 respondents) are male.

So that the percentage for each statement can be found. Based on table 4, it is known that the highest percentage of 82.14% stated that they agreed that respondents downloaded the learning materials provided in the application: Zoom, WhatsApp, Google classroom and edlink. Student responses to downloading material are one of the indicators of student motivation during online learning as stated in the research of Fitriyani, Fauzi, and Sari (2020).

While the lowest percentage was 54.29% in statements regarding internet connection problems to access the application: Google classroom, Edlink, zoom while studying.

Based on the average percentage obtained 70.86%, thus that is included in the high category. This can be seen in the table above, that 79.29% responded happily learning in class.

To find out student involvement and student difficulties while implementing online learning, the researchers distributed student questionnaires related to facilities and infrastructure, with the results shown in table 5.

Table 3
Frequency distribution of respondent demographic data characteristics (n = 105)

characteristics	n	%
Age		
Late teens (17-20 y.o)	95	90,48%
early adulthood (21-23 y.o)	10	9,52%
Gender		
Male	11	10,48%
Female	94	89,52%

Based on table 5, it is known that the majority of respondents have difficulty accessing applications used during online learning. Respondents disclosed these difficulties, including Internet network difficulties and financial difficulties in buying data packages.

responded positively and adaptively in responding to the challenges of the 21st century which is full of various kinds of complex challenges (Gamar, Al Faruq, & Lina, 2018). The existence of technology for the world of education is a means that can be used as a medium for delivering learning programs both in an unidirectional and interactive way (Husaini, 2014), the learning process is no longer limited by certain classrooms (Denker, 2012), besides the use of technology has enabled learning to emerge. distance and encourage greater innovation in creating teaching methods inside and outside the classroom (Almeida & Simoes, 2019).

DISCUSSION

Technological development is a potential in various fields, one of which is in the field of education, so it must be

Table 4
Student responses regarding online learning during the pandemic period (n = 105)

No	Statement	Percentage	Category
1	online learning made it easier for me to study during a pandemic	76,19%	High
2	I am interested in online learning	65,71%	High
3	I enjoy using online learning	65,23%	High
4	I am interested in using the following applications: Zoom, google classroom, Edlink, Zoom and while studying online	64,76%	High
5	I did not master the use of the Zoom, google classroom, Edlink, Zoom applications before being taught	72,38%	High
6	I mastered the use of the Zoom application, google classroom, Edlink, Zoom after being taught	76,90%	High
7	I'm having problems with my internet connection to access the application: google classroom, Edlink, zoom while studying	54,29%	moderate
8	I downloaded materials related to in-app learning: edlink, google classroom, edlink	82,14%	Very high
9	Edlink application, google classroom, zoom helps me in studying the material	74,76%	High
10	I enjoy learning directly in the classroom	79,29%	High
Average		70,86%	High

Based on table 4, the majority of respondents agree that online learning makes learning easier during a pandemic, and the majority agree that respondents like to learn directly in class. This shows that online learning still has to be balanced by face-to-face learning, because students feel that they understand the material presented directly, especially at the time of explanation related to nursing procedure skills.

The majority of respondents feel interested and enjoy learning online using various applications provided by educational institutions. Prior to the pandemic, the Fatmawati Nursing Academy had conducted online learning, but only 1-2 meetings out of 14 total meetings, and had not used the Zoom, Edlink, google classroom applications and so on, so this was considered something new for respondents and

interested in try it. Something new will spark someone's interest.

The use of smartphones and laptops in online learning can improve student learning outcomes (Anggrawan, 2019). Pangondian, Santosa, and Nugroho (2019) state that there are many advantages to the use of information and communication technology in the implementation of online learning. between them is not bound by time and space. Many studies have been conducted that examine the use of smartphone and laptop serpti devices in learning. The ability of smartphones and laptops to access the internet helps students to take part in online learning (Kay & Lauricella, 2011).

Student responses regarding facilities and infrastructure during online learning (n=105)

No.	Aspect	Respondent's response
1	The duration of accessing the Edlink / google classroom / zoom application is in one day	Conclusion: a. 59 respondents access the Edlink / google classroom / zoom application in a day for 1-5 hours b. 46 respondents accessed the Edlink / google classroom / zoom application in a day for 6-10 hours
2	The network used to access the Edlink / google classroom / zoom application in one day	Conclusion: a. 50 respondents used data packages to access the Edlink/google classroom/zoom application during the lesson b. 30 respondents used wifi to access the Edlink/google classroom/zoom application during the lesson c. 25 respondents used data package and wifi to access the Edlink/google classroom/zoom application during the lesson
3	The device used in accessing the Edlink / google classroom / zoom application	Conclusion: a. 58 respondents used smarhones to access learning applications b. 36 respondents used laptop/notebook to access learning applications c. 11 respondents used both of smartphones and lapotop to access learning applications
4	Difficulties experienced in accessing various learning applications	Conclusion: a. 50 respondents said that they experienced difficulties in accessing various online learning applications b. 23 respondents experienced difficulties with the internet network c. 32 respondents have financial difficulties to buy quotas
5	Applications that are easily accessible by students	Conclusion: a. 43 respondents admitted that it was easy to use the zoom application because respondents only needed to click the link address provided, besides that, zoom made the learning process in the virtual world almost the same as in class because it could meet face to face between students and lecturers and explain the material directly b. 39 respondents admitted that it was easy to use the google classroom and edlink application because they did not issue a large quota, but they could not face to face like being zoomed. c. 23 respondents admitted that all applications are easy and help learning

Before being taught how to use the edlink application, zoom, google classroom and so on, respondents found it difficult, plus the internet network constraints made respondents find it difficult to follow online learning. However, after being given written guidance on how to access online learning in these various applications, respondents did not find it difficult, but often, respondents reported signal problems.

Learning in various institutions throughout Indonesia starts in the morning until late in the evening, some even until the evening, during a pandemic like this, it is certain that learning is dominated by online learning, this affects the internet network used by all students and lecturer instructions that have been delivered. The constraints faced are due to regional conditions in Indonesia that not all areas are covered by internet services and the distribution of internet networks is slow at times (Rachmawati, Ma'arif, Fadhillah, Inayah, Ummah, Siregar et al, 2020; Astuti & Febrian, 2019).

The majority of respondents admitted that in a day, 1-5 hours of time are used to take part in online learning in various applications, such as: Zoom, edlink, google classroom. This should be of concern to the institution regarding the use of laptops or cell phones that are used as their learning infrastructure. Too long the human body is exposed to laptops, cell phones, it will have an impact on the health of students, besides that, using smartphones for too long will also cause addiction to its users and cause emotional problems (Pertiwi, Sanubari, & Putra, 2018). The use of zoom cloud meetings has the advantage of being able to interact directly between students and lecturers as well as teaching

materials, but it has the disadvantage of being wasteful and less effective if there are more than 20 students (Naserly, 2020).

The majority of respondents admitted that they used data packages to access learning media and taking online learning required them to spend more money to meet their learning needs. Respondents stated that every week they have to spend money to buy a data package of Rp. 100,000, - up to Rp 150,000. The data package needed by students during online learning is indeed large, especially if students access the zoom application. The use of online learning using video conferencing is quite expensive. Another obstacle that was found was the ability of parents to provide online educational facilities such as the use of the internet network which required money (Herliandry, Nurhasanah, Suban, & Kuswanto, 2020). Meanwhile, the obstacle felt by the lecturers at the Fatmawati Nursing Academy was that when using the zoom application, there were some students who did not turn on the camera, this had an impact on the assessment of student activeness during lectures.

Researchers assess that there has been an increase in stress levels in students during the application of online learning due to the Covid-19 pandemic. According to students, their stress increased due to an increase in the number of assignments given by lecturers, while the time for direct explanations by lecturers was felt to be lacking. What the researchers found is in line with the results of Argaheni's (2020) research which states that online learning has several impacts on students, namely: 1) online learning still confuses students, 2) students become passive, less creative and productive, 3) accumulation of information / concepts in

students are less useful, 4) students experience stress, 5) increase students' language literacy skills.

In a pandemic like this, lecturers are required to be creative in learning, in health institutions, it should not only hold online learning, but also face-to-face learning. The combination of online and face-to-face pursuit models is known as blended learning. One of the learning models that can be chosen during this pandemic is the blended learning model. Blended learning learning model is a learning model that is carried out by combining direct (face-to-face) learning in the classroom and indirect learning (outside the classroom). Face-to-face learning can be done with structured scheduling and by still implementing health protocols recommended by the government. In addition, face-to-face learning can be done where the subject has learning outcomes in the form of the ability to carry out nursing procedures.

Online learning also has the advantage of being able to foster self-regulated learning. The use of online applications can improve learning independence. Online learning is more student-centered which causes them to be able to create responsibility and autonomy in learning. Learning online requires students to prepare their own learning, evaluate, organize and simultaneously maintain motivation in learning and can increase the interest of students (Sun, 2014).

Online learning has special challenges, the location of separate students and lecturers when implementing it causes lecturers to not be able to directly supervise student activities during the learning process. There is no guarantee that students really listen to lecturers' reviews. Therefore, it is suggested that online learning should be held in a short time, considering that students find it difficult to maintain their concentration if online lectures are held for more than one hour (Firman & Rahman, 2020).

Hung, Chow, Chen, and Own (2010) said that there are several notes that must be considered so that online learning remains optimal, which is related to learning readiness, including self-confidence in computer / internet use, independent learning, student control, motivation to learn, and confidence in online communication. Problems or respondent responses like the one above certainly must be

evaluated in order to obtain better learning. The key is to carry out online learning according to local conditions (Zhang, Wang, Yang, & Wang., 2020). The most important thing is to create independence and learning skills for students in the midst of the COVID-19 pandemic.

CONCLUSION AND RECOMMENDATIONS

Based on the results of the survey above, it can be concluded that of the 10 statements related to student responses to online learning during the Covid-19 pandemic, it was found that 8 statements had a high percentage; 1 item of statement has a very high percentage (students download available material on online learning applications); and 1 item of statement has a moderate percentage (students have problems in internet connection). While a survey related to student responses to facilities and infrastructure during online learning, it was found that the majority of respondents had difficulty accessing applications used during online learning. Respondents disclosed these difficulties, including Internet network difficulties and financial difficulties in purchasing data packages.

Online learning during the Covid-19 pandemic was considered effective and could break the chain of Covid-19 spread, however, there are a number of notes that need to be considered for higher education institutions, especially in the health sector, namely: more mature preparation of learning materials and videos that include procedural skills nursing, an assessment system that adapts to pandemic conditions, a subsidized quota from universities. Meanwhile, students must prepare motivation in learning.

Declaration Of Conflicting Interests

The authors declared that no potential conflicts of interests with respect to the authorship and publication of this article.

REFERENCES

- Ahmed, R. (2018). Effects of online education on encoding and decoding process of students and teachers. *International Conference e-Learning 2018*. ISBN: 978-989-8533-78-4. Retrieve from <https://files.eric.ed.gov/fulltext/ED590288.pdf>.
- Almeida, F., & Simoes, J. (2019). The role of serious games, gamification and industry 4.0 tools in the education 4.0 paradigm. *Contemporary Educational Technology*, 10(2), 120-136. DOI: <https://doi.org/10.30935/cet.554469>. Retrieve from <https://www.cedtech.net/article/the-role-of-serious-games-gamification-and-industry-40-tools-in-the-education-40-paradigm-6239>.
- Anggrawan, A. (2019). Analisis deskriptif hasil belajar pembelajaran tatap muka dan pembelajaran online menurut gaya belajar mahasiswa. *MATRIK: Jurnal Manajemen, Teknik Informatika Dan Rekayasa Komputer*, 18(2), 339-346. DOI: <https://doi.org/10.30812/matrik.v18i2.411>. Retrieve from <https://journal.universitاسbumigora.ac.id/index.php/matrik/article/view/411>.
- Argaheni, N.B. (2020). Sistematis review: Dampak perkuliahan daring saat pandemi COVID-19 terhadap mahasiswa Indonesia. *PLACENTUM Jurnal Ilmiah Kesehatan dan Aplikasinya*, 8 (2), 99-108. ISSN: 2620-9969. Retrieve from <https://jurnal.uns.ac.id/placentum/article/download/43008/28002>.
- Astuti, P., & Febrian. (2019). Blended learning syarah: bagaimana penerapan dan persepsi mahasiswa. *Jurnal Gantang*, 4(2), 111-119. DOI: <https://doi.org/10.31629/jg.v4i2.1560>. Retrieve from <https://ojs.umrah.ac.id/index.php/gantang/article/download/1560/753/>.
- Bao, W. (2020). COVID-19 and online teaching in higher education: A case study of Peking University. *Human Behavior and Emerging Technologies*, 2(2), 113-115. DOI: <https://doi.org/10.1002/hbe2.191>. Retrieve from <https://onlinelibrary.wiley.com/doi/full/10.1002/hbe2.191>.
- Basilaia, G., & Kvavadze, D. (2020). Transition to online education in schools during a SARS-CoV-2 Coronavirus (COVID-19) pandemic in Georgia. *Pedagogical Research*, 5(4), 1-9. DOI: <https://doi.org/10.29333/pr/7937>. Retrieve from <https://www.pedagogicalresearch.com/article/transition-to-online-education-in-schools-during-a-sars-cov-2-coronavirus-covid-19-pandemic-in-7937>.

- Brolpito, A. (2018). *Digital skills and competence, and digital and online learning*. Turin: European Training Foundation. Retrieve from <https://www.etf.europa.eu/en/publications-and-resources/publications/digital-skills-and-competence-and-digital-and-online>.
- CNN Indonesia. (2020). *Warga Wuhan diminta tetap di rumah jelang pencabutan lockdown*. Retrieve from <https://www.cnnindonesia.com/internasional/20200403185744-113-490175/warga-wuhan-diminta-tetap-di-rumah-jelang-pencabutan-lockdown>.
- Crews, J., & Parker, J. (2017). The Cambodian experience: Exploring university students' perspectives for online learning. *Issues in Educational Research*, 27(4), 697-719. Retrieve from <http://www.iier.org.au/iier27/crews.pdf>.
- Denker, K.J. (2012). Student response systems and facilitating the large lecture basic communication course: Assessing engagement and learning. *Communication Teacher*, 27(1), 50-69. DOI: <https://doi.org/10.1080/17404622.2012.730622>. Retrieve from <https://www.tandfonline.com/doi/abs/10.1080/17404622.2012.730622>.
- Direktorat Jendral Pendidikan Tinggi Kementerian Pendidikan dan Kebudayaan Republik Indonesia. (2020). *Surat edaran No.1 Tahun 2020 tentang pencegahan penyebaran corona virus disease (COVID-19) di perguruan tinggi, kementerian pendidikan dan kebudayaan*. Retrieve from <http://lldikti3.kemdikbud.go.id/v6/wp-content/uploads/2020/04/Surat-Edaran-Direktorat-Jenderal-Pendidikan-Tinggi-Kemdikbud-Nomor-1-Tahun-2020-3.pdf>.
- Dhull, I., & Sakshi. (2017). Online learning. *International Education & Research Journal (IERJ)*, 3(8), 32-34. ISSN: 2454-9916. Retrieve from <https://issuu.com/thewriterspublication/docs/12-sakshi>.
- Firman., & Rahman, S.R. (2020). Pembelajaran online di tengah pandemi Covid-19. *Indonesian Journal of Educational Science (IJES)*, 2(2), 81-89. ISSN: 2622-6197. Retrieve from <https://core.ac.uk/download/pdf/322553916.pdf>.
- Gamar, M.M., Al Faruq, M.S., & Lina. (2018). Challenging the Indonesian primary education in industrial revolution 4.0 era. *Proceedings of the 3rd International Conference on Educational Management and Administration (CoEMA 2018)*. DOI: <https://doi.org/10.2991/coema-18.2018.12>. Retrieve from <https://www.atlantis-press.com/proceedings/coema-18/25903254>.
- Goldschmidt, K. (2020). The COVID-19 pandemic: Technology use to support the wellbeing of children. *Journal of Pediatric Nursing*, 53(2020), 88-90. DOI: <https://doi.org/10.1016/j.pedn.2020.04.013>. Retrieve from [https://www.pediatricnursing.org/article/S0882-5963\(20\)30269-4/fulltext](https://www.pediatricnursing.org/article/S0882-5963(20)30269-4/fulltext).
- Gunawan., Suranti, N.M.Y., & Fathoroni, F. (2020). Variations of models and learning platforms for prospective teachers during the COVID-19 pandemic period. *Indonesian Journal of Teacher Education*, 1(2), 61-70. ISSN: 2721-0081. Retrieve from <https://journal.publication-center.com/index.php/ijte/article/view/95>.
- Pangodian, R.A., Santosa, P.I., & Nugroho, E. (2019). Faktor - faktor yang mempengaruhi kesuksesan pembelajaran online dalam revolusi industri 4.0. *Seminar Nasional Teknologi Komputer & Sains (SAINTEKS)*, 56-60. ISBN: 978-602-52720-1-1. Retrieve from <https://www.prosiding.seminar-id.com/index.php/sainteks/article/download/122/122>.
- Pertiwi, M.S., Sanubari, T.P.E., & Putra, K.P (2018). Gambaran perilaku penggunaan gawai dan kesehatan mata pada anak usia 10-12 tahun. *Jurnal Keperawatan Muhammadiyah*, 3(1), Handayani, D., Hadi, D.R., Isbaniah, F., Burhan, E., & Agustin, H. (2020). Penyakit virus corona 2019. *Jurnal Respirologi Indonesia*, 4(2), 119-129. ISSN: 2620-3162. Retrieve from <https://jurnalrespirologi.org/index.php/jri/article/download/101/110>.
- Herliandry, L.D., Nurhasanah., Suban, M.E., & Kuswanto, H. (2020). Pembelajaran pada masa pandemi Covid-19. *Jurnal Teknologi Pendidikan*, 22(1), 65-70. DOI: <https://doi.org/10.21009/jtp.v22i1.15286>. Retrieve from <http://journal.unj.ac.id/unj/index.php/jtp/article/download/15286/8695>.
- Hung, M-L., Chou, C., Chen, C-H., & Own, Z-Y. (2010). Learner readiness for online learning: Scale development and student perceptions. *Computers & Education*, 55(2010), 1080-1090. DOI: 10.1016/j.compedu.2010.05.004. Retrieve from <http://anitacrawley.net/Resources/Articles/Hung.pdf>.
- Husaini, M. (2014). Pemanfaatan teknologi informasi dalam bidang pendidikan (E-education). *MIKROTIK: Jurnal Manajemen Informatika*, 2(1). Retrieve from <https://ojs.ummetro.ac.id/index.php/mikrotik/article/view/314>.
- Kay, R. H., & Lauricella, S. (2011). Exploring the benefits and challenges of using laptop computers in higher education classrooms: A formative analysis. *Canadian Journal of Learning and Technology /La Revue Canadienne de l'apprentissage et de La Technologie*. 37(1), 1-18, DOI: <https://doi.org/10.21432/t2s598>. Retrieve from <http://www.cjlt.ca/index.php/cjlt/article/view/26363>.
- Kementerian Kesehatan Republik Indonesia. (2020). *Keputusan Menteri Kesehatan tentang pedoman pencegahan dan pengendalian Coronavirus disease 2019 (COVID-19)*. Retrieve from <https://www.kemkes.go.id/resources/download/informasi/COVID-19%20dokumen%20resmi/KMK%20No.%20HK.01.07-MENKES-413-2020%20ttg%20Pedoman%20Pencegahan%20dan%20Pengendalian%20COVID-19.pdf>.
- Mather, M., & Sarkans, A. (2018). Student perceptions of online and face-to-face learning. *International Journal of Curriculum and Instruction (IJCI)*, 10(2), 61-67. ISSN: 1562-0506. Retrieve from <http://ijci.wccinternational.org/index.php/IJCI/article/view/178/72>.
- Mustofa, M.I., Chodzirin, M., Sayekti, L., & Fauzan, R. (2019). Formulasi model perkuliahan online sebagai upaya menekan disparitas kualitas perguruan tinggi. *Walisono Journal of Information Technology*, 1(2), 151-160. DOI: <http://dx.doi.org/10.21580/wjit.2019.1.2.4067>. Retrieve from <https://journal.walisono.ac.id/index.php/jit/article/view/4067>.
- Naserly, M.K. (2020). 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 sa. Aksara Public, 4(2), 155-165. ISSN: 2877-1516. Retrieved from <https://aksarapublic.com/index.php/home/article/view/417>.
- 28-34. ISSN: 2597-7539. Retrieve from <http://journal.um-surabaya.ac.id/index.php/JKM/article/view/1451>.
- Pilkington, O.A. (2018). Active learning for an online composition classroom: blogging as an enhancement of online curriculum. *Journal of Educational Technology Systems*, 47(2), 1-14. DOI: <https://doi.org/10.1177/0047239518788278>. Retrieve from <https://journals.sagepub.com/doi/10.1177/0047239518788278>.

- Rachmawati, Y., Ma'arif, M., Fadhilah, N., Inayah, N., Ummah, K., Siregar, M.N.F et al. (2020). Studi eksplorasi studi eksplorasi pembelajaran pendidikan ipa saat masa pandemi COVID-19 di UIN Sunan Ampel Surabaya. *Indonesian Journal Of Science Learning*, 1(1), 32-36. DOI: <https://doi.org/10.15642/ijsl.v1i1.633>. Retrieve from <http://jurnalftk.uinsby.ac.id/index.php/IJSL/article/view/633>.
- Putri, G.S. (2020). Update Corona 2 April: 938.565 kasus di 203 negara, 195.397 sembuh. *Kompas*. Retrieve from <https://www.kompas.com/sains/read/2020/04/02/092114023/update-corona-2-april-938565-kasus-di-203-negara-195397-sembuah?page=all>.
- Sahu P. (2020). Closure of universities due to coronavirus disease 2019 (COVID-19): Impact on education and mental health of students and academic staff. *Cureus*, 12(4), 1-5. DOI:10.7759/cureus.7541. Retrieve from <https://www.cureus.com/articles/30110-closure-of-universities-due-to-coronavirus-disease-2019-covid-19-impact-on-education-and-mental-health-of-students-and-academic-staff>.
- Singh, G., Sharma, P. K., Malviya, R., & Awasthi, R. (2020). Novel corona virus disease (COVID-19) and ophthalmic manifestations: Clinical evidences. *Dermatologic Therapy*, 33(6), 1-5. DOI: <https://doi.org/10.1111/dth.13814>. Retrieve from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7300514/pdf/DTH-9999-e13814.pdf>.
- Sugiyono. (2018). Metode penelitian kuantitatif, kualitatif dan R&D. Bandung: CV Alfabeta.
- Sun, S.Y.H. (2014). Learner perspectives on fully online language learning. *Distance Education*, 35(1), 18-42. DOI: <https://doi.org/10.1080/01587919.2014.891428>. Retrieve from <https://www.tandfonline.com/doi/abs/10.1080/01587919.2014.891428>.
- UNESCO. (2020). *Repon UNESCO terhadap pandemic COVID-19 dalam bidang Pendidikan*. Retrieve from <http://kwrii.kemdikbud.go.id/berita/respon-unesco-terhadap-pandemi-covid-19-dalam-bidang-pendidikan/>.
- Verawardina, U., Asnur, L., Lubis, A.L., Hendriyani, Y., Ramadhani, D., Dewi, I.P et al. (2020). Reviewing online learning facing the COVID-19 outbreak. *Journal of Talent Development and Excellence*, 12(3s). Retrieve from <https://www.iratde.com/index.php/jtde/article/view/281>.
- Zhang, W., Wang, Y., Yang, L., & Wang, C. Suspending classes without stopping learning: china's education emergency management policy in the Covid-19 outbreak. *Journal Risk Financial Management (JRFM)*, 13(3), 55. DOI: <https://doi.org/10.3390/jrfm13030055>. Retrieve from <https://www.mdpi.com/1911-8074/13/3/55>.