



AL-TA'LIM JOURNAL, 28 (2), 2021, (180-190)

(Print ISSN 1410-7546 Online ISSN 2355-7893)

Available online at <http://journal.tarbiyahainib.ac.id/index.php/attalim>

Education Post Covid-19 Pandemic: Teachers and Learners Construction

Received: 07th June 2021; Revised: 27th July 2021; Accepted: 31th Juli 2021

Permalink/DOI: <http://dx.doi.org/10.15548/jt.v28i2.699>

Agung Dwi Bahtiar El Rizaq

Institut Agama Islam Negeri Madura, Jawa Timur, Indonesia

E-mail: elrizaq@iainmadura.ac.id

Abstract: The Covid-19 pandemic consequences in all of human aspect. Education is one of the main aspect that have to adapt from classical learning into virtual model. This condition that already happens at least 2 years bring various responses from both teachers and learners' perspectives. This study reveals teachers and learner's construction regarding education post Covid-19 pandemic. This research is qualitative by descriptive method. Furthermore, this study was conducted by distributing online questionnaires from 5 provinces respondents in Indonesia involving 40 teachers and 28 learners. The results of this study show that commonly, teacher get lack of technology and prefer to implement blended learning than pure virtual learning. From the students side, can be found that; e-learning has not fully accommodated some educational values that can transmitted through classical learning process only and blended learning is the suitable learning model for future education. Furthermore, this study recommend to identify the suitable blended learning model for sustainability of future education in every level education.

Keywords: Blended learning; E-Learning; future of education.

How to Cite: El Rizaq, A. (2021). Education Post Covid-19 Pandemic: Teachers and Learners Construction. *Al-Ta lim Journal*, 28(2), 180-190. doi:<https://doi.org/10.15548/jt.v28i2.699>

INTRODUCTION

WHO declared the 2019 coronavirus disease (COVID-19) as an international health disaster at the end of January 2020 and declared as global pandemic in March 2020 (Lewis et al., 2020). In the first half of 2020, the disease has infected 10 million people around the world and killed about half a million (Yong, 2020). Globally, totally half of these cases (48%) and deaths (55%) were reported from the United States, Brazil and Argentina Region. Meanwhile, the most active increasing affected region compared around the world as accounting for 25% of

new cases and 20% of deaths are from Southeast Asia (WHO, 2020).

In real terms, a pandemic does not only cause illness or death but also has consequences for changes in psychological, social, economic and educational aspects (Niemi & Kousa, 2020). The impact of the COVID-19 virus, which is so astonishing, has forced governments around the world to quickly evaluate, analyze and adjust policies in all sectors, related to health, economic and social conditions (Nesteruk, 2020). In global conditions, the government policy to hold the spread of this pandemic have to consider on social activities which have a domino effect

on lack economic conditions and the decrease of human development index (Zaremba et al., 2021).

On the broader side, all government policies including economic, social, and political levels are oriented towards ending the spread of the pandemic (Vallejo & Ong, 2020). Policies for maintaining social distance, self-isolation and travel restrictions are the main policies implemented worldwide, but have implications for disrupting economic stability, increasing the need for medical personnel and health services significantly, and changing face-to-face habits in educational practices to become virtual (Nicola et al., 2020).

Social distancing policies have caused most educational institutions in various side of the world change the paradigm of direct learning into virtual learning and teaching since March 2020 as an effort to contain the spread of COVID-19 (Di Pietro et al., 2020; Junaidah et al., 2020). Absolute learning innovation is carried out amid these conditions including the conversion of all face-to-face learning to online, both through synchronous and asynchronous learning to maintain the sustainability of the education process during a pandemic (Ionescu et al., 2020; Scull et al., 2020).

Generally, the success of sustainability of education process is determined by several factors, are; local and global collaboration; maximize digital technology; organizing national cultural differences; and use of the resources as good as possible (Caniglia et al., 2017). The key of sustainability of learning is adjusting the teaching methods, leadership models, and interaction techniques applied, using digital as the basis technology (Antyukhova & Kasatkin, 2021; Sá & Serpa, 2020). Sustainability of learning should lead learners to have a critical thinking in driving social change and instill a new vision and paradigm to make this world a better place for all its inhabitants (Wolff, 2020).

Distance learning using online media is one of the effective steps and forced the availability of reliable communication tools,

digitization of high-quality learning resources, academic experiences, and the promotion of learning in technology-supported networks are the main implications that must be adjusted to face social restriction policies (Basilaia & Kvavadze, 2020; Hebebcı et al., 2020; Mishra et al., 2020). Another step taken is the implementation of experiential learning (DeFilippis et al., 2020).

One of the easiest steps in implementing virtual learning is carried out by the Zambian government by utilizing television as an Education Channel (Mulenga & Marbán, 2020). In India, fundamental changes in the learning process were carried out by educators by utilizing the EdTech Start-up (Dhawan, 2020). Meanwhile, some African countries choose to apply blended learning in the extraordinary conditions of current education (Okebukola et al., 2020). On the other hand, current technological advances have shown that the majority of learners prefer virtual learning or virtual classes and are proven to support conventional learning in class (Sohibun & Ade, 2017).

Various studies have described Teachers responses in the face of learning in the current pandemic era, for example teachers experienced in the Netherlands, online learning reduces interaction intensity and increases workload and pressure to improve the quality of learning (van der Spoel et al., 2020). For expatriate teachers in Southeast Asia, social restriction policies during the pandemic have disrupted financial conditions that can cause them to leave the country (Hoang, 2020). In America, the teaching process at this uncertain time experiences make high disparity between “real practice” and “ideal practice” (Quezada et al., 2020).

Whereas in Italy, digital learning habits have provided comfort and will be maintained even though the pandemic has passed (Giovannella et al., 2020). In line with this, teachers in Germany feel that digital learning is an intrapersonal responsibility in familiarizing their learners to get used to maximizing digital technology as a provision

for future work (Delcker & Ifenthaler, 2020). The majority of educators in Malaysia improve competence by studying various digital learning platforms and compiling a good implementation e-learning plan (Marek et al., 2020).

The WhatsApp platform is a favorite media for learners to carry out online learning because it is easier, simpler, and does not require large data quotas than another learning platform such as Zoom (Wargadinata et al., 2020). According to learners in America, distance learning using social media such as twitter (Duong et al., 2020) and Facebook (Sari, 2014) improves their quality of learning. Next, Google Classroom platform can be used not only for educational purposes but also to maintain bonds between teachers and learners (Al-Maroofo et al., 2020).

On the other hand, learners' creativity in finding solutions and innovations in adapting learning styles to audio-visuals and establishing good communication with teachers is a determinant of the success of distance learning (Octaberlina & Muslimin, 2020). In Indonesia itself, the majority of learners prefer blended learning with the use of appropriate technology and supported by good Teachers performance (Amir et al., 2020). Continuously, blended learning guide students to enhance their information processing skills and increased motivation, participation and give several advantages (Rahmi & Darmawan, 2018).

It cannot be denied that the success of e-learning depends on the strength of the interaction between teachers and learners (Arghode et al., 2018). In line with this, the willingness and activeness of learners in carrying out online learning is directly proportional to the willingness and innovation of teachers in providing variety in e-learning (Dwivedi et al., 2019). The enthusiasm for learning of learners is determined by the ease of supporting software and the Teachers competence in mastering the teaching platform (Riley et al., 2017).

On the other hand, the characteristics and needs of learners in the learning process

remain the main things that must be considered in order to create a good atmosphere of interaction during the teaching and learning process (Rahmawati et al., 2020). There are two ways to create good atmosphere both physically and psychologically in learning; collaborative communication and good class room condition (Aminah, 2018). Maintain the good communication between teacher and students is the best way to make good online learning condition (Rizaq & Sarmini, 2021).

During this pandemic, distance learning in Indonesia has been implemented through various methods and approaches, namely; (i) implementation of school closure policies during emergencies and alerts; (ii) blended learning can be implemented in areas categorized as green or yellow zones according to local government policies; (iii) implementation of the Distance Learning program supported by national television stations and several free learning platforms; and (iv) providing quota assistance to learners and teachers to support e-learning. According to this various implementation of policies, it is important to conduct a study of teachers and learners' perspective in implementing online learning policy that has been running for almost a year as the basis to prepare steps for future education.

Studies about the students and teachers' responses after undergoing virtual learning during this pandemic have done by several countries. From England learners perspective, they feel increasing academic achievement significantly when taught by blended learning models than traditional teaching methods (Ehrlich et al., 2020). In United States, learners' fatigue and boredom is a common problems during virtual learning that need innovative teachers in maximize virtual learning media and methods (Almarzooq et al., 2020).

That is totally different with Indonesian condition because of different social condition and policy. Here, online learning teacher management and communication is the main problem during pandemic (Hidayat et al., 2020). Then, in a

good management institution, the lack of interaction and students infrastructure is the problems that could disrupt learning condition (Giatman et al., 2020).

Various studies that have been carried out have not emphasized the study of student and teacher perspectives regarding virtual learning during Indonesian government policy about virtual learning program. It is important to examine student and teacher perspectives on learning in a pandemic period is important as a basis consideration in developing future education.

METHOD

This study analyzed the secondary school Teachers and Learners perspective in Indonesia that have implemented online learning for almost a year in during the Covid-19 pandemic as well as to meet sustainable of future education. This study conducted by purposive sampling that design based on the judgment of the researcher as to who will provide good information to succeed for the objectives study (Etikan, 2017). The data gained through descriptive survey by online questionnaire through google form research instrument that was analyzed from two perspectives: learners and teachers. The demographic of respondents in this paper as following table below;

Table 1. Demographic of Teacher Respondents

No.	Variable	Category	f	%
1	Educational stage	Bachelor	31	77.5
		Master	9	22.5
2	Educator Certificate	Have	10	25
		Do not have	30	75
3	Educational institutions	Country	6	15
		Private	34	85
		East Java	33	82.5
		Central Java	3	7.5
4	Province	DI Yogyakarta	1	2.5
		DKI Jakarta	2	5
		Banten	1	2.5
Total			40	100

Those table shows that the teacher's respondents are 40 persons. Commonly came from Bachelor than Master degree. Here,

educator certificate is the most important recognition as good teacher. Most of the teacher of this respondents don't have that certificate.

Table 2. Demographic of Students Respondents

No.	Variable	Category	f	%
1	Educational institutions	Country	18	64.3
		Private	10	35.7
		East Java	18	73
		Central Java	4	15
2	Province	DI Yogyakarta	2	4
		DKI Jakarta	2	4
		Banten	2	4
Total			28	100

Distribution and data collection was carried out between January to February 2021. This paper used descriptive method by qualitative approach that usually used for provision of descriptive knowledge and understandings of the phenomenon under study (Assarroudi et al., 2018). The data from respondents analyzed in Google Sheet. The responses are evaluated in detail as the basis to make codes based on respondent's answer.

RESULTS AND DISCUSSIONS

The teachers and learners perspectives regarding learning conditions during the pandemic and the challenges of education in the future are grouped into the following 7 (seven) themes, namely;

E-Learning before Pandemic

Table 3. E-Learning before Pandemic Teachers Perspective

No.	Category	f	%
1	Yes	13	32.5
2	Not	27	67.5
Total		40	100

We can see that the experience of teachers in implementing e-learning before the pandemic was classified as low (n=13; 32.5%). The findings show that maximizing e-learning in the learning process is not teacher habitual. Even though this pandemic forced teacher to be able to maximize technology during e-learning.

Table 4. E-Learning before Pandemic Students Perspective

No.	Category	f	%
1	Yes	24	85.7
2	Not	4	14.3
	Total	28	100

Teacher condition is contrast to learners who were accustomed to implementing e-learning (n=24; 85%) before the pandemic. We can observe this from the habit of accessing the internet to gain new knowledge and taking online tutoring classes to support his knowledge. These results are in line with research which shows that not all teachers are ready to adopt e-learning, especially in public schools in developing countries (Shraim & Khlaif, 2010). In this case, the big challenge is the teachers have to improve their competence in maximizing e-learning to fill the learner's needs who are more capable to using e-learning.

Improved E-learning Maximization Skills

Table 5. Improved E-Learning Maximization Skills Teachers Perspective

No.	Category	f	%
1	Yes	32	80
2	Not	8	20
	Total	40	100

In meeting the challenges and learning conditions during the pandemic, research findings show that the majority of teachers (n=32; 80%) have improved their proficiency in implementing e-learning. That is good findings that teacher doing actualization to maximize competence in e-learning.

Table 6. Improved E-Learning Maximization Skills Students Perspective

No.	Category	f	%
1	Yes	26	92.9
2	Not	2	7.1
	Total	28	100

From learners' perspective, they also improved their e-learning to maximization skills (n=26; 92%). The increased activity of e-learning can also be in line with studies showing that e-learning is unprecedented cases for most teachers and learners; as a result, they began to improve their e-learning proficiency to close previous limitations (Mailizar et al., 2020). E-learning

maximization skills are absolutely necessary for both teachers and learners to follow the development and learning conditions which currently refer to online learning.

E-learning as a Classical Learning Substitute

Table 7. E-learning as a Substitute for Classical Teachers Perspective

No.	Category	f	%
1	Yes	20	50
2	Not	12	30
3	As a distraction	8	20
	Total	40	100

It cannot be denied that the current conditions of the Covid-19 pandemic require each region to limit direct interaction, so learning practices become virtual not classical. The interesting thing from this study shows that half of teacher's agree about e-learning as substitute classical learning (n=20; 50%).

Table 8. E-learning as a Substitute for Classical Students Perspective

No.	Category	f	%
1	Yes	14	50
2	Not	10	35.7
3	As a distraction	4	14.3
	Total	28	100

From the learner perspective, half of them also agree (n=14; 50%) towards e-learning statements as a substitute for classical learning. Learning in an e-learning environment occurs differently than in traditional classrooms and can present new challenges for teachers and learners participating in these online learning environments.

Not much different from these findings, not all of the educational values such as peace education, consumer education, equality education, road awareness education, health education, moral and civic education and sex education conveyed in virtual learning can be implemented properly (Pérez-Jorge et al., 2017). There are several sections that can be implemented collaboratively both by teacher-learners classically, but there are sections that allow it to be carried out online and learners still feel learning satisfaction and

higher cognitive understanding (Tîrziu & Vrabie, 2015). These findings provide an understanding that e-learning has not fully accommodated some educational values that can only be transmitted in the classical learning process.

Challenges of E-learning

Table 9. E-learning as a Substitute for Classical Teachers Perspective

No.	Category	f	%
1	Less Interaction	21	52.5
2	Decreased Absorption	11	27.5
3	Innovative Demands	8	20
	Total	40	100

The challenge of implementing e-learning is particular concern in the context e-learning succession in the pandemic era. From the teacher's point of view, the reduction in interaction was a major highlight (n=21; 52%).

Table 10. E-learning as a Substitute for Classical Students Perspective

No.	Category	f	%
1	Teachers Innovations	14	50
2	Lack of Understanding	10	35.7
3	More Tasks	4	14.3
	Total	28	100

It cannot be denied that the changing habit from face to face by virtual learning even reduces direct interaction between teacher-learners and learners-learners, they still have bond interaction if the communicate frequently. As the studies found that e-learning has a significant effect on social capital bond, but does not produce quality learning (Diep et al., 2017). Meanwhile, according to learners, Teacher's innovation is the main aspect that must be considered (n=14; 50%) so that e-learning runs according to plans and goals.

More thoroughly, the taxonomy of e-learning challenges during the pandemic is consistent with the findings of this study (Aini et al., 2020). Distance learning as social restriction policy in educational institutions which play a central role in make social activities and interaction effect on the disruption of activity-based social needed

for growth and learning of learners. In this case, the innovation of the Teachers as an education facilitator is not only a material provider, but also deeper in maintaining the rhythm of education and learning that is contextual or real life based.

Post-Pandemic and E-Learning Sustainability

Table 11. E-learning Sustainability Teachers Perspective

No.	Category	f	%
1	Neutral	19	47.5
2	Yes	11	27.5
3	Not	10	25
	Total	40	100

In Reality, E-learning has become a popular learning method in various regions of the world, especially since lockdown due to pandemic COVID-19 shows the impact and good performance in order to continue the learning process.

Table 12. E-learning Sustainability Students Perspective

No.	Category	f	%
1	Neutral	20	71.4
2	Yes	2	7.1
3	Not	6	21.4
	Total	28	100

However, both teachers and learners agreed to choose neutral (n=19; 47% and n=20; 71%) in the aspect of continuity of post-pandemic e-learning. This response is more than the choice to continue e-learning. Even from the learner's point of view, the sustainability of the e-learning method is in the minority (n=2; 7.1%).

On the other hand, sustainability of e-learning requires several fundamental readiness matters; (1) technology, (2) quality of e-learning systems, (3) cultural aspects, (4) self- efficacy and (5) trust (Almaiah et al., 2020). In line with this, the readiness of resources and infrastructure is important to note. It is important to take advantage of technological advances, but the ideology of education that is based on human values must be prioritized without eliminating human nature as social beings that require direct interaction.

Post-pandemic Learning Model

Table 13. Post-pandemic E-learning Model Teachers Perspective

No.	Category	f	%
1	Blended Learning	19	47.5
2	Traditional (face to face)	17	42.5
3	On line	4	10
	Total	40	100

Most of teacher's perspective agree to implement blended learning in post pandemic (n=19; 47%). From another side, several of them says that face to face learning models still exist for post pandemic learning.

Table 14. Post-pandemic E-learning Model Perspective

No.	Category	f	%
1	Blended Learning	12	42.9
2	Traditional (face to face)	10	35.7
3	On line	6	21.4
	Total	28	100

Studies show that the blended learning model is suitable demand by learners (n=12; 42%). Blended learning is an approach that combines the benefits of face-to-face and online learning components (Rasheed et al., 2020). In line with these results, blended learning is the best solution as an approach in future learning with distance-efficient in terms of learners' learning experiences, feelings that arise as a result of each learners and teacher-learners interaction and as a model of primary education in the future of the e-learning purely (Tayebnik & Puteh, 2013).

Not much different from those findings, from various learning models that exist, blended learning is the suitable learning system could be practiced both days of the pandemic as well as for the sustainability of learning in the future with the support of infrastructure such as internet, gadget and E-learning platform is adequate (Alqahtani & Rajkhan, 2020). Blended learning is not only a solution in responding the challenges in the midst of technological advances and pandemic condition, but it still

provides space for direct interaction to give the real example and education value which should be used as a reference for future education.

CONCLUSIONS AND RECOMMENDATION

This study found several results; commonly, teacher get lack of technology and prefer to implement blended learning. From the students' side, can be found that; e-learning has not fully accommodated some educational values that can transmitted through classical learning process only and blended learning is the suitable learning model for future education. And the end, this research recommends to identify the suitable blended learning model for sustainability of future education.

REFERENCES

- Aini, Q., Budianto, M., Putra, P. O. H., & Rahardja, U. (2020). Exploring E-learning Challenges During the Global COVID-19 Pandemic: A Review. *Journal of Information System*, 16(2), 57–65.
<https://doi.org/10.1504/IJMIE.2020.105407>
- Al-Marroof, R. S., Salloum, S. A., Hassanien, A. E., & Shaalan, K. (2020). Fear from COVID-19 and technology adoption: the impact of Google Meet during Coronavirus pandemic. *Interactive Learning Environments*, 1–16.
<https://doi.org/10.1080/10494820.2020.1830121>
- Almaiah, M. A., Al-Khasawneh, A., & Althunibat, A. (2020). Exploring the critical challenges and factors influencing the E-learning system usage during COVID-19 pandemic. *Education and Information Technologies*, 25(6), 5261–5280.
<https://doi.org/10.1007/s10639-020-10219-y>
- Almarzooq, Z. I., Lopes, M., & Kochar, A. (2020). Virtual Learning During the COVID-19 Pandemic. *Jornal of the*

American Cardiology, 75(20), 2635–2638.

Alqahtani, A. Y., & Rajkhan, A. A. (2020). E-Learning Critical Success Factors during the COVID-19 Pandemic: A Comprehensive Analysis of E-Learning Managerial Perspectives. *Education Sciences*, 10(9), 216. <https://doi.org/10.3390/educsci10090216>

Aminah, A. (2018). Bridging the students' ability gap to create a conducive atmosphere in learning English through various communication activities. *International Journal of Humanities and Innovation (IJHI)*, 1(4), 1–10. <https://doi.org/10.33750/ijhi.v1i4.24>

Amir, L. R., Tanti, I., Maharani, D. A., Wimardhani, Y. S., Julia, V., Sulijaya, B., & Puspitawati, R. (2020). Student perspective of classroom and distance learning during COVID-19 pandemic in the undergraduate dental study program Universitas Indonesia. *BMC Medical Education*, 20(1), 1–8. <https://doi.org/10.1186/s12909-020-02312-0>

Antyukhova, E., & Kasatkin, P. (2021). Pandemic Testing of the Sustainability of Emerging Trends in Higher Education. *World Economy and International Relations*, 65(2), 125–133. <https://doi.org/10.20542/0131-2227-2021-65-2-125-133>

Arghode, V., Brieger, E., & Wang, J. (2018). Engaging instructional design and instructor role in online learning environment. *European Journal of Training and Development*, 42(7–8), 366–380. <https://doi.org/10.1108/EJTD-12-2017-0110>

Assarroudi, A., Heshmati Nabavi, F., Armat, M. R., Ebadi, A., & Vaismoradi, M. (2018). Directed qualitative content analysis: the description and elaboration of its underpinning methods and data analysis process. *Journal of Research in Nursing*, 23(1), 42–55. <https://doi.org/10.1177/17449871177416>

67

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). <https://doi.org/10.29333/pr/7937>

Caniglia, G., Luederitz, C., Groß, M., Muhr, M., John, B., Withycombe Keeler, L., von Wehrden, H., Laubichler, M., Wiek, A., & Lang, D. (2017). Transnational collaboration for sustainability in higher education: Lessons from a systematic review. In *Journal of Cleaner Production* (Vol. 168, pp. 764–779). Elsevier Ltd. <https://doi.org/10.1016/j.jclepro.2017.07.256>

DeFilippis, E. M., Stefanescu, A. C., & Reza, N. (2020). Adapting the Educational Environment. *J Am Coll Cardiol*, 75(20), 2630–2634.

Delcker, J., & Ifenthaler, D. (2020). Teachers' perspective on school development at German vocational schools during the Covid-19 pandemic. *Technology, Pedagogy and Education*, 1–15. <https://doi.org/10.1080/1475939x.2020.1857826>

Dhawan, S. (2020). Online Learning: A Panacea in the Time of COVID-19 Crisis. *Journal of Educational Technology Systems*, 49(1), 5–22. <https://doi.org/10.1177/0047239520934018>

Di Pietro, G., Biagi, F., Costa, P., Karpiński, Z., & Mazza, J. (2020). The Likely Impact of COVID-19 on Education: Reflections based on the Existing Literature and Recent International Datasets. In *Publications Office of the European Union, Luxembourg: Vol. EUR 30275* (Issue JRC121071). <https://doi.org/10.2760/126686>

Diep, N. A., Cocquyt, C., Zhu, C., Vanwing, T., & de Greef, M. (2017). Effects of core self-evaluation and online

- interaction quality on adults' learning performance and bonding and bridging social capital. *Internet and Higher Education*, 34, 41–55. <https://doi.org/10.1016/j.iheduc.2017.05.002>
- Duong, V., Luo, J., Pham, P., Yang, T., & Wang, Y. (2020). The ivory tower lost: How college students respond differently than the general public to the COVID-19 pandemic. *ArXiv*.
- Dwivedi, A., Dwivedi, P., Bobek, S., & Sternad Zabukovšek, S. (2019). Factors affecting students' engagement with online content in blended learning. *Kybernetes*, 48(7), 1500–1515.
- Ehrlich, H., McKenney, M., & Elkbuli, A. (2020). We Asked the Experts: Virtual Learning in Surgical Education During the COVID-19 Pandemic—Shaping the Future of Surgical Education and Training. *World Journal of Surgery*, 44(7), 2053–2055.
- Etikan, I. (2017). Sampling and Sampling Methods. *Biometrics & Biostatistics International Journal*, 5(6), 215–217. <https://doi.org/10.15406/bbij.2017.05.00149>
- Giatman, M., Siswati, S., & Basri, I. Y. (2020). Online Learning Quality Control in the Pandemic Covid-19 Era in Indonesia. *Journal of Nonformal Education*, 6(2), 168–175.
- Giovannella, C., Passarelli, M., & Persico, D. (2020). The Effects of the Covid-19 Pandemic on Italian Learning Ecosystems: the School Teachers' Perspective at the steady state. *Interaction Design and Architectures*, 45, SI, 264–286.
- Hebebcı, M. T., Bertiz, Y., & Alan, S. (2020). Investigation of Views of Students and Teachers on Distance Education Practices during the Coronavirus (COVID-19) Pandemic. *International Journal of Technology in Education and Science*, 4(4), 267–282.
- Hidayat, D., Anisti, Purwadhi, & Wibawa, D. (2020). Crisis management and communication experience in education during the covid – 19 pandemic in indonesia. *Jurnal Komunikasi: Malaysian Journal of Communication*, 36(3), 67–82.
- Hoang, A. D. (2020). Pandemic and teacher retention: empirical evidence from expat teachers in Southeast Asia during COVID-19. *International Journal of Sociology and Social Policy*, 40(9–10), 1141–1166.
- Ionescu, C. A., Paschia, L., Nicolau, N. L. G., Stanescu, S. G., Stancescu, V. M. N., Coman, M. D., & Uzla, M. C. (2020). Sustainability analysis of the e-learning education system during pandemic period—covid-19 in Romania. *Sustainability (Switzerland)*, 12(21), 1–22.
- Junaidah, J., Basyar, S., Pahrudin, A., & Fauzan, A. (2020). Strategic Management Roadmap: Formulation, Implementation, and Evaluation to Develop Islamic Higher Education Institution. *Tadris: Jurnal Keguruan Dan Ilmu Tarbiyah*, 5(2), 335–347. <https://doi.org/10.24042/tadris.v5i2.7301>
- Lewis, C. T., Zeineddine, H. A., & Esquenazi, Y. (2020). Challenges of Neurosurgery Education During the Coronavirus Disease 2019 (COVID-19) Pandemic: A U.S. Perspective. *World Neurosurgery*, 138, 545–547.
- Mailizar, Almanthari, A., Maulina, S., & Bruce, S. (2020). Secondary school mathematics teachers' views on e-learning implementation barriers during the COVID-19 pandemic: The case of Indonesia. *Eurasia Journal of Mathematics, Science and Technology Education*, 16(7).
- Marek, M. W., Chew, C. S., & Wu, W. V. (2020). Teacher Experiences in Converting Classes to Distance Learning in the COVID-19 Pandemic. *International Journal of Distance*

Education Technologies, 19(1), 40–60.

- Mishra, L., Gupta, T., & Shree, A. (2020). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *International Journal of Educational Research Open*, 1(June), 100012. <https://doi.org/10.1016/j.ijedro.2020.100012>
- Mulenga, E. M., & Marbán, J. M. (2020). Prospective teachers' online learning mathematics activities in the age of COVID-19: A cluster analysis approach. *Eurasia Journal of Mathematics, Science and Technology Education*, 16(9). <https://doi.org/10.29333/EJMSTE/8345>
- Nesteruk, I. (2020). Comparison of the coronavirus pandemic dynamics in Europe, USA and South Korea. *Journal of Chemical Information and Modeling*, 01(01), 1689–1699.
- Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., Al-Jabir, A., Iosifidis, C., Agha, M., & Agha, R. (2020). The socio-economic implications of the coronavirus pandemic (COVID-19): A review. *International Journal of Surgery*, 78(March), 185–193. <https://doi.org/10.1016/j.ijssu.2020.04.018>
- Niemi, H. M., & Kousa, P. (2020). A Case Study of Students' and Teachers' Perceptions in a Finnish High School during the COVID Pandemic. *International Journal of Technology in Education and Science*, 4(4), 352–369. <https://doi.org/10.46328/ijtes.v4i4.167>
- Octaberlina, L. R., & Muslimin, A. I. (2020). Efl students perspective towards online learning barriers and alternatives using moodle/google classroom during covid-19 pandemic. *International Journal of Higher Education*, 9(6), 1–9. <https://doi.org/10.5430/ijhe.v9n6p1>
- Okebukola, P. A., Suwadu, B., Oladejo, A., Nyandwi, R., Ademola, I., Okorie, H., & Awaah, F. (2020). Delivering high school chemistry during covid-19 lockdown: Voices from africa. *Journal of Chemical Education*, 97(9), 3285–3289. <https://doi.org/10.1021/acs.jchemed.0c00725>
- Pérez-Jorge, D., Barragán Medero, F., & Molina-Fernández, E. (2017). A Study of Educational Programmes that Promote Attitude Change and Values Education in Spain. *Asian Social Science*, 13(7), 112. <https://doi.org/10.5539/ass.v13n7p112>
- Quezada, R. L., Talbot, C., & Quezada-Parker, K. B. (2020). From Bricks and Mortar to Remote Teaching: A Teacher Education Program's Response to COVID-19. *Journal of Education for Teaching*, 46(4), 472–483. <https://doi.org/10.1080/02607476.2020.1801330>
- Rahmawati, N. K., Kusuma, A. P., Widyawati, S., & Putra, F. G. (2020). Google-Based Learning and Learning Motivation: The Impact and Interaction on Students' Mathematical Communication. *Tadris: Jurnal Keguruan Dan Ilmu Tarbiyah*, 5(2), 215–223. <https://doi.org/10.24042/tadris.v5i2.7163>
- Rahmi, U., & Darmawan, D. (2018). Blog Folio in Blended Learning: a Development of Students' Information Processing Skills in Digital Age. *Al-Ta Lim Journal*, 25(2), 128–134. <https://doi.org/10.15548/jt.v25i2.369>
- Rasheed, R. A., Kamsin, A., & Abdullah, N. A. (2020). Challenges in the online component of blended learning: A systematic review. *Computers and Education*, 144, 103701.
- Riley, J. M., Ellegood, W. A., Solomon, S., & Baker, J. (2017). How Mode of Delivery Affects Comprehension of an Operations Management Simulation: Online vs. Face-to-Face Classrooms. *Journal of International Education in Business*, 5(2), 1.

- Tîrziu, A.-M., & Vrabie, C. (2015). Education 2.0: E-Learning Methods. *Procedia - Social and Behavioral Sciences*, 186, 376–380.
<https://doi.org/10.1016/j.sbspro.2015.04.213>
- Vallejo, B. M., & Ong, R. A. C. (2020). Policy responses and government science advice for the COVID 19 pandemic in the Philippines: January to April 2020. *Progress in Disaster Science*, 7, 100115.
- van der Spoel, I., Noroozi, O., Schuurink, E., & van Ginkel, S. (2020). Teachers' online teaching expectations and experiences during the Covid19-pandemic in the Netherlands. *European Journal of Teacher Education*, 43(4), 623–638.
- Wargadinata, W., Maimunah, I., Dewi, E., & Rofiq, Z. (2020). Student's Responses on Learning in the Early COVID-19 Pandemic. *Tadris: Jurnal Keguruan Dan Ilmu Tarbiyah*, 5(1), 141–153.
<https://doi.org/10.24042/tadris.v5i1.6153>
- WHO. (2020). Coronavirus Disease (COVID-19). *World Health Organization*, October.
- Wolff, L.-A. (2020). Sustainability Education in Risks and Crises: Lessons from Covid-19. *Sustainability*, 12(12), 5205.
- Yong, E. (2020). How the Pandemic Defeated America. *The Atlantic*, 1–28.
- Zaremba, A., Aharon, D. Y., Demir, E., Kizys, R., & Zawadka, D. (2021). COVID-19, government policy responses, and stock market liquidity around the world: A note. *Research in International Business and Finance*, 56, 101359.