

Qwerty Journal

ONLINE FIRST

Teaching Practice in a Shifting to Post-Covid 19 Era: A Study from Indonesian Higher Institution

Abd. Haling^a, Siti Nurul Ilmi HL^b, Ani Dyah Astuty^c

Abstract

Returning to face-to-face classroom after Covid-19 pandemic does not entail reverting to pre-pandemic teaching practices. This research explores how lecturers adapted their teaching practice in post-pandemic era. The study involved 50 lecturers from 6 departments at the State Islamic Institute of Bone Indonesia, who completed an online survey. Sematic analysis reveals that the pandemic-induced shift to online learning has influenced teaching practices. While indirect delivery methods like video conferencing continue to be used, certain instructional activities that emerged during the pandemic remain relevant in face-to-face teaching. The results show that digital tools are still being used, indicating long-term acceptability of ICT in higher institution.

Keywords: Post-pandemic teaching, Teaching practice, Educational shift

a State University of Makassar, Indonesia, ORCID: <https://orcid.org/0009-0003-3169-6012>

b State Islamic Institute of Bone, Indonesia, ORCID: <https://orcid.org/0000-0001-9524-6123>

c University: State Polytechnic of Ujung Pandang, Indonesia, ORCID: <https://orcid.org/0000-0002-5534-8472>

Corresponding author: abd.haling@unm.ac.id

Introduction

The disruptive impact of COVID-19 pandemic on the educational system, including pedagogical practice, has contributed to the shift of educational delivery into online modalities. As adjustment must be considered, a shift from face-to-face instruction to virtual was instituted. Many new tendencies in learning and teaching have emerged due to the COVID-19 pandemic. Traditional learning has evolved into distance learning, with various rules, strategies, techniques, implementations, and proposals reshaping and restructuring the new learning culture. This condition affect teachers' behavioral intention to accept technology utilization (Mukminin et al., 2022; Riady et al., 2022).

As the pandemic outbreak began to disappear and cases due to COVID-19 declined, the regulations to implement fully online learning also shifted back to face-to-face classroom. However, the educational process is different from the previous one, and, likely, it will never return to the form it had before the COVID-19 pandemic (Reimers, 2022). The teaching-learning process has been revamped through educational innovations with extensive integration of Information and Communication Technology (ICT) resources and digital technologies (Wehmeyer & Zhao, 2020).

At the point where teaching and learning process transitioned from virtual to face-to-face mode, there were multiple existing influences on teaching practice. The aim of this study is to examine the teaching practices of lecturers in high education institution in response to the shifting from online to face-to-face and blended learning. Moreover, this study would affirm the technology acceptance of Indonesian lecturers by looking at the sustainability of ICT in education in post COVID-19 era. Therefore, this research is trying to seek out the answer from the research question; How did lecturers restructure their teaching strategy during the shifting after pandemic COVID-19? By examining the teaching practice in post-pandemic era, researchers intend to identify whether individuals willingly persist in utilizing ICT for educational purposes or revert to traditional methods once the constraints imposed by the pandemic are lifted.

Theoretical Framework

Changes in Teaching Practice

In the post-COVID-19 era, Indonesia proceeds with blended learning, which combines face-to-face and online learning, then it may be possible to implement an educational strategy that is wholly based on online modalities, but the policy for post-COVID-19 education allows educators to deliver the teaching practice in a full face-to-face classroom. Some educational institutions have made the decision to keep face-to-face instruction but to complement it with additional online resources, such as recorded lectures, while still adhering to the necessary social-distance norms (Stoian et al., 2022). It shows that the integration of technology into instruction is maintained after the crisis of COVID-19.

Several scholars investigated teachers' intention to integrate and utilize technology in their instruction. Dolenc et al. (2022) studied teachers' intentions to utilize Forced Online Distance Teaching resources once institutions reopened and the usage of ICT programs and apps before and during the pandemic. Most teachers defined asynchronous teaching as offering resources and instruction outside of class hours. Synchronous teaching follows the opposite pattern. Lecturers utilized email and Moodle throughout the lockdown and will continue to do so. Hussein and colleagues (2020) reported that teachers had continued intention to reuse Google Classroom in higher education institutes. Besides, there is a tendency for teachers to continue using videoconferencing systems for teaching, such as Zoom, Skype, MS Teams, and WebEx. Teachers who had limited or no prior experience with videoconferencing were strongly encouraged to make use of this technology by way of the proper technological infrastructure and the supporting institutional culture (Nikou, 2021). Furthermore, several studies have been also conducted to support the implementation of online

learning in the post-COVID era, with some improvements including the enhancement of supporting facilities such as hardware and software, an internet network, and the development of Learning Management Systems (LMS), virtual classes, and other supporting applications to create a pleasant online learning environment (Betoncu et al., 2021; Huang et al., 2021; Ibrahim & Hidayat-Ur-Rehman, 2021; Korkmaz & Toraman, 2020)

Teachers' Acceptance of Technology in COVID-19 Pandemic

Technology acceptance is the term which refers to the readiness of an individual to adopt the use of technology to assist the execution of tasks based on the support that it is supposed to give (Teo, 2011). It describes the causal linkages that exist between perceived utility, perceived ease of use, attitude toward computer usage, and behavioral intention to utilize technology (Teo & Zhou, 2017). According to this concept, the actual use of technology by an individual is based on his or her behavioral intention to utilize technology, and the individual's attitude toward the utilization of technology is a factor that influences the individual's behavioral intention.

As the educational landscape evolves, the role of educators in incorporating technology becomes increasingly important. Understanding technology's distinctive contribution to the teaching and learning process, notably ICT, is not only necessary for successful instruction, but also for tackling the problems given by the expanding landscape of educational technology. Teo (2011) emphasizes the necessity for educators to comprehend the distinct role of technology, including ICT, in education. This comprehension becomes even more crucial as technological advancements persist and educators navigate the evolving demands of the educational environment.

The COVID-19 pandemic has significantly accelerated the use of technology in education, particularly ICT, resulting in an unprecedented dependence on digital technologies for online instruction. The majority of educators have accepted the reality that technology has become one of the methods in which they may continue to maintain their instruction progress (Huang et al., 2021; Lukas & Yunus, 2021; Mukminin et al., 2022). It considers psychological factors to be key indicators of teachers' technology adoption, presuming that their intentions impact their actual usage of technology (Li, 2021).

Method

This mixed methods research is part of a broader project to investigate lecturers' reaction to the shifting from online to offline or blended learning system after COVID-19 pandemic. Because of the adaptability of our study approach, we were able to gather numerous lecturers' thoughts on a complicated point in time. This study was approved by ethics committee at the authors' workplace.

Context and Setting

Since March 2020, when the WHO classified COVID-19 a global pandemic, the Indonesian government has declared an emergency. Indonesian government had prioritized the integration of online platforms into the higher education system and the integration of ICT. The Ministry of Education and Culture (Kemendikbud) issued Circular Letter Number 4 of 2020 regarding the Implementation of Education Policies during the Emergency Period of the Spread of the Coronavirus on March 24. A nationwide lockdown was enforced for 14 days, starting on April 24 2020, followed by other phases over the next three months. The second began on April 24, 2020, for 28 days; the third on May 23, 2020, for 14 days; the fourth on June 05, 2020, for 14 days; and the fifth on July 05, 2020, for 28 days (Atmojo & Nugroho, 2020; Cahaya et al., 2022). Later, the term 'New Normal' on September 13, 2021, Kemendikbud issued a Circular Letter regarding the implementation of face-to-face learning. Through this circular letter, it was conveyed that face-to-face learning at higher

education institutions for the first semester of the academic year 2021/2022 would be conducted in a limited condition integrating online learning while still adhering to health protocols.

The return of face-to-face learning policy is not necessarily marked by learning process which is 100% conducted offline. Especially in higher education, the lecturers are still given opportunity to adapt their teaching strategy, materials, and media into offline mode. Therefore, blended learning becomes an option during the even Semester of 2021/2022 academic year. The proportion of blended learning can be determined 60% online and 40% offline, or it can be 70% online and 30% offline, according to the needs and considerations of existing conditions.

This study was conducted at State Islamic Institute of Bone in South Sulawesi, Indonesia. This research was carried out at the end of the second semester for the 2021/2022 academic year, exactly in August 2022. Lectures of the second semester for the 2021/2022 academic year are the return of the offline classical learning model after nearly two years or four semesters of being conducted online as a result of the COVID-19 virus outbreak. The decision on this learning system was based on a joint decision of ministers concerning guidelines for implementing learning in the COVID-19 Pandemic.

Instruments

This study used online survey that includes five multiple-option questions, two multiple-selection matrix questions, and two open-ended response questions. The multiple-option questions are to collect information about gender, age, major, length of teaching experience, and class size. Two multiple-selection matrix questions are to collect information about lecturers' ways in delivering teaching materials. Two open-ended response instructions are to obtain data more specifically about teaching practices adopted during and after pandemic, including teaching mode, instructional activities, etc. The questions are completed with little example to help the lecturers generate more specific responses.

The two multiple-selection matrix questions are:

1. At the first semester of academic year 2021/2022, during Covid restriction, what was your strategy for delivering teaching materials?
2. At the second semester of academic year 2022/2023, during Covid restriction, what was your strategy for delivering teaching materials?

(The Options: direct explanation (face-to-face), virtual meeting, sharing video instruction, sharing audio instruction, sharing reading materials)

The two open-ended response instructions are:

1. At the first semester of academic year 2021/2022, during Covid restriction, describe your teaching practice! e.g. teaching mode, material delivery, instructional activities.
2. At the second semester of academic year 2022/2023, as the cancellation of Covid restriction, describe how your teaching practice changed! e.g. teaching mode, material delivery, instructional activities.

Participants

This study was addressed to lecturers who are categorized as permanent lecturers with minimum five years teaching experience. The lecturers must also have teaching experiences during the first semester of academic year 2021/2022 and the second semester of academic year 2022/2023. Among the 81 lecturers who met the criteria, 56 agreed to participate and successfully accessed the survey. After incomplete surveys were filtered out, the study contained 50 participants in total.

Technique of Data Analysis

After filtering for consent and completion, data from two multiple-selection matrix questions were analyzed by using descriptive statistics. Further, the open-ended response items that collected qualitative data were analyzed using Leximancer semantic analysis. It is a machine learning-based, semantic analysis tool which was used to complete a priori thematic coding and relational analysis of qualitative data collected in open response items in the survey. The Texts obtained from the survey were searched to identify recurrence and co-occurrence of words generating themes that are represented as bubbles; the relative size of each indicates the strength of the theme. Concepts are displayed as dots and their associations are represented by interconnecting lines, again the relative size of the concept dot indicates the relative prominence.

Results

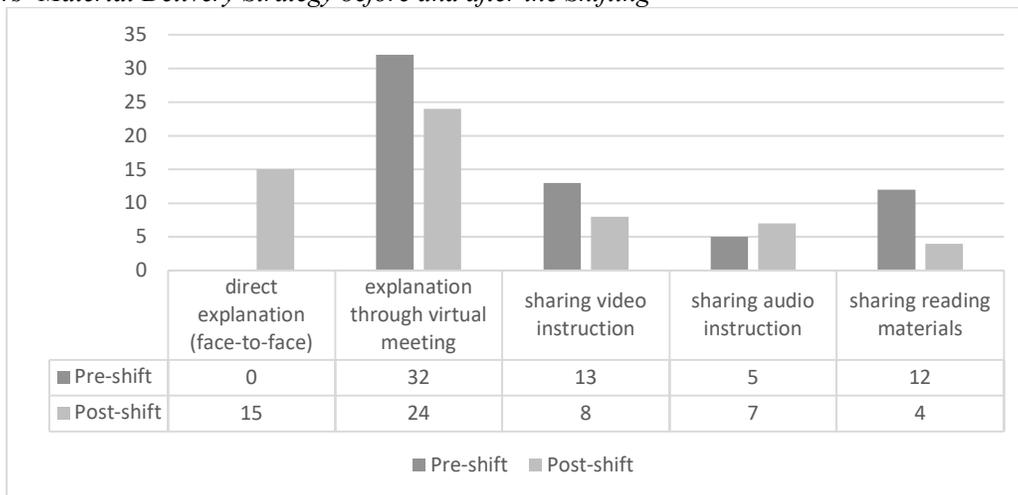
The triangulation of quantitative and qualitative data acquired via the online survey offered several insights on lecturers' teaching strategy in response to shifting of learning system from online to offline after pandemic COVID-19.

RQ: How did lecturers restructure their teaching strategy during the shifting after pandemic COVID-19?

The participants responded two multiple-selection matrix questions related to materials delivery strategy the lecturers used during and after pandemic (Figure 1). It confirmed that during the pandemic, all lecturers avoided direct interaction by eliminating face to face presentation, and prioritized video conference as the medium to deliver teaching materials. Besides, some lecturers simply shared teaching materials to their students in the form of video (26%), audio (10%), and reading materials (24%). Surprisingly, during the shifting after pandemic COVID-19, the lecturers did not automatically shift to face-to-face presentation. Almost half of the participants still opted indirect delivery, particularly via video conference (48%).

Figure 1.

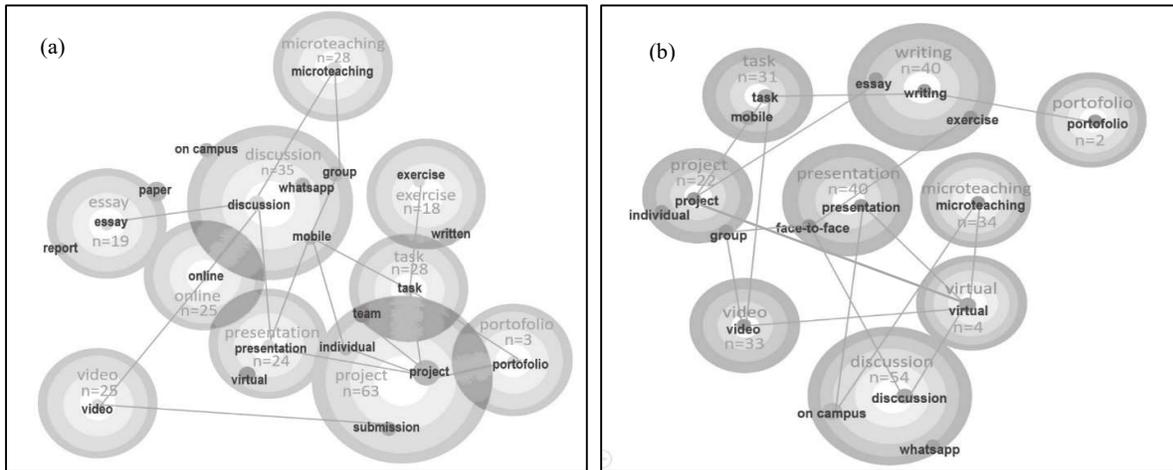
Lecturers' Material Delivery Strategy before and after the Shifting



Further, data obtained from two open-ended response questions were analyzed by using semantic analysis, particularly by utilizing Leximancer semantic analysis. The result of the tool is displayed in the following pictures (Figure 2)

Figure 2.

Leximancer concept maps



The Leximancer analysis of During-Covid produced 21 concepts clustered as 10 themes and the concept map (Figure 2a) displays nodes representing instructional activities including discussion, presentation, project, microteaching, writing, task, video, and portfolio. On the other hand, the instructional activities the lecturers adopted after COVID pandemic are categorized in 17 concepts clustered 9 themes (Figure 2b). More specific data about lecturers' instructional activities during and post COVID pandemic are displayed in Figure 3

Figure 3.
Instructional Activities before and after the Shifting

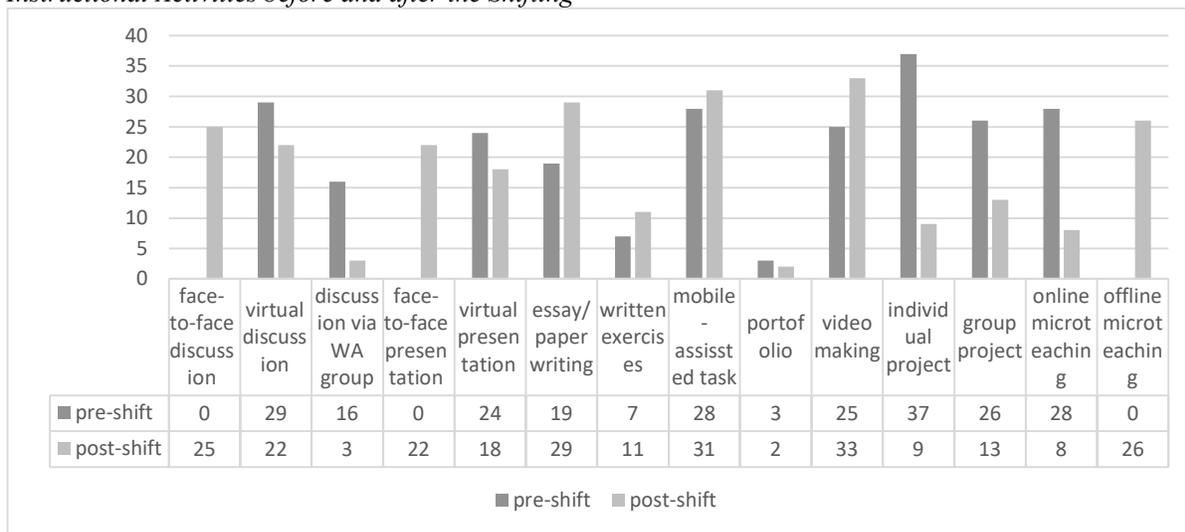


Figure 3 shows how lecturers manage instructional activities before and after the shifting. Online learning system during pandemic made lecturers conducted group and classroom discussion in indirect ways (virtual discussion and via Whatsapp Group). Further, when it turns to the current situation of offline and blended learning systems, most of the lecturers returned to traditional way of discussion which was conducted face-to-face. Similar trend occurred in presentation and microteaching activities. However, moving to face-to-face mode does not make the lecturers automatically leave the online instructional activities. The frequency of virtual discussion and presentation are still relatively high even after the pandemic.

Some instructional activities developed during the pandemic, such as mobile-assisted tasking and video making, have proven useful even after the pandemic. These activities have increased in frequency during the transition to offline or blended learning. However, written tasks like answering

questions and multiple-choice exercises have been neglected both during and after the pandemic. Lecturers have instead converted these tasks into technology-based exercises, preserving the essence and content of the written tasks but presenting them in a different format. This suggests that lecturers had already become accustomed to digitizing their instructional activities, regardless of the changes in the learning system.

Lecturers' responses presented in the survey result were also analyzed to obtain the main concepts and how they are related to each other. The result of the semantic analysis generated four classifications of teaching strategies that the lecturers have applied during the shifting period. The four teaching strategies below are listed from the most applied one:

Direct – Indirect

This teaching strategy has meaning that the teacher delivers materials directly in face-to-face meeting, then followed by indirect (outside classroom) instructional activities, such as virtual discussion, and presentation, as well as mobile-assisted task and video making. This is illustrated in the following teacher's response:

“This semester I conducted my teaching offline. I presented the learning materials face-to-face with my students in the classroom as scheduled. However, for the exercises and practice, I chose to use mobile-assisted task so the students can do it online outside the classroom. Based on my experience in the previous semesters, these technology-based exercises are more effective and interesting for students”

Mixed Strategy

Some teachers just did not have consistent teaching strategy. In some meetings they taught in Direct-Direct strategy (see description below), and in other occasion they taught in Direct-Indirect strategy, or others. In fact, this teaching strategy is the most applied one after direct indirect strategy. This is reflected in the teacher's response below:

“Different from the previous semester that I taught in online mode, this semester, I taught in offline mode. However, in some meetings that I could not make offline meeting, I shared instructional video as the way to deliver the lecture, so my students can learn independently. Following this, I instructed the students to write essay or paper related to the topic taught”

Direct-Direct

By this Direct-Direct teaching strategy, the teachers completely implement offline learning. Teachers with this teaching strategy tended to bring back their teaching habit prior Covid pandemic, such as explaining materials then conducting group or classroom discussion face-to face in the campus environment.

Indirect-Direct

Some teachers presented materials indirectly through virtual meeting, followed by direct (face-to-face) instructional activities. The instructional activities meant here are for the following meeting (generally in the next week), or as the continue at the same day but in separated time allocation. This is illustrated in the following teachers' responses regarding the teaching strategy they used during the shifting.

“.... Even though I explain my teaching materials through virtual meeting, I always try to make the learning activities in direct meeting. So, after giving explanation through Zoom meeting in the morning, I informed my students about the next learning activity along with time and place to meet. Particularly this semester, I tend to use group presentation and group project as the learning activities”

“.... The instructional activities that I use this semester are microteaching and portfolio, but in offline mode. I think it is more effective for students to practice microteaching directly in the

classroom rather than through zoom meeting. So, Zoom is only for delivering materials because it does not need much time and students do not need to go to campus until the practice schedule”

Indirect-indirect

By this Indirect-Indirect teaching strategy, the teachers completely implement online learning. Teachers with this teaching strategy did the same teaching strategy prior and during the shifting. The shifting to offline or blended learning system did not make any change in their teaching. However, this is the least applied strategy as it actually violated the institution policy.

Discussion

The research findings reveal that despite the shift to the "new normal" following the COVID-19 outbreak, an unexpected 48% of lecturers persistently use virtual meetings, and 38% who use other ICT media into their teaching practices. The remarkable aspect is in the wide range of ICT-related activities being integrated, demonstrating a comprehensive strategy that includes both online and face-to-face modalities.

The continued use of ICT tools after the pandemic highlights a significant shift in teaching methods. It is interesting to note that the initial increase in online learning during the pandemic was mostly a reaction to an urgent circumstance (Cahaya et al., 2022; Moorhouse, 2020; Pace et al., 2020; Utami, 2021). However, the continued use of technology in teaching practice suggests a genuine acceptance among lecturers. The distinguishing factor of this post-pandemic era is the lack of external pressure or obligation to adopt online learning. Outside of a crisis scenario, lecturers are not just returning to conventional techniques, but are deliberately opting to adopt and incorporate ICT into their instruction.

This discovery carries special significance within the Indonesian environment, where the study took place. Despite the disruptive changes brought about by the pandemic, the results confirm that the use of ICT is not just a transient occurrence but a firmly entrenched and deeply rooted element of existing educational methods. Essentially, the research enhances and strengthens the comprehension of educators' adoption of ICT by presenting data that transcends the first deployment motivated by the emergency circumstances of the pandemic. This study extends the previous research (Asghar et al., 2021; Kusumadewi et al., 2021; Li, 2021; Utami, 2021) by affirming teachers' technology acceptance in spite of the emergency condition triggered by covid 19 pandemic. The use of ICT by lecturers in Indonesia is not only a reaction to a crisis, but rather a true and enduring shift that continues to thrive without external pressure.

Conclusions

The COVID-19 pandemic has irreversibly changed education, promoting flexible teaching approaches post-pandemic. This shift emphasises technology and digital tools, broadening educational material distribution possibilities. Lecturers return to conventional or blended instruction with technology after the outbreak. After the policy on online learning was relaxed, study participants continued online teaching. Video conferencing was used by nearly half, and certain internet activity continued post-pandemic. The pandemic likely changed views towards virtual learning. New practices make returning to offline education more than reverting to pre-pandemic techniques.

The findings of this study give persuasive evidence that the increased usage of ICT in the post-pandemic era in Indonesia represents a genuine and durable shift in teaching practices, rather than a circumstantial response. The findings show that the use of digital technologies in education continues beyond the immediate constraints given by the pandemic, indicating long-term acceptability of ICT in education.

References

- Asghar, M. Z., Barberà, E., & Younas, I. (2021). Mobile learning technology readiness and acceptance among pre-service teachers in Pakistan during the COVID-19 pandemic. *Knowledge Management and E-Learning*, 13(1), 83–101. <https://doi.org/10.34105/j.kmel.2021.13.005>
- Atmojo, A. E. P., & Nugroho, A. (2020). EFL Classes Must Go Online! Teaching Activities and Challenges during COVID-19 Pandemic in Indonesia. *Register Journal*, 13(1), 49–76. <https://doi.org/10.18326/rgt.v13i1.49-76>
- Betoncu, O., Faslı, F. G., & Ozdamli, F. (2021). Designing an Effective Learning Environment for Language Learning During the Covid-19 Pandemic. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.752083>
- Cahaya, A., Yusriadi, Y., & Gheisari, A. (2022). Transformation of the Education Sector during the COVID-19 Pandemic in Indonesia. *Education Research International*, 2022, Article 8561759. <https://doi.org/10.1155/2022/8561759>
- Dolenc, K., Šorgo, A., & Virtič, M. P. (2022). Perspectives on lessons from the covid-19 outbreak for post-pandemic higher education: Continuance intention model of forced online distance teaching. *European Journal of Educational Research*, 11(1), 163–177. <https://doi.org/10.12973/eu-jer.11.1.163>
- Huang, R., Tlili, A., Wang, H., Shi, Y., Bonk, C. J., Yang, J., & Burgos, D. (2021). Emergence of the online-merge-offline (OMO) learning wave in the post-COVID-19 era: A pilot study. *Sustainability (Switzerland)*, 13(6), Article 3512. <https://doi.org/10.3390/su13063512>
- Hussein, N., Naqid, I., Jacksi, K., & Abdi, B. (2020). Assessment of knowledge, attitudes, and practices toward COVID-19 virus among university students in Kurdistan region, Iraq: Online cross-sectional study. *Journal of Family Medicine and Primary Care*, 9(9), 4809-4814. https://doi.org/10.4103/jfmpe.jfmpe_870_20
- Ibrahim, Y., & Hidayat-Ur-Rehman, I. (2021). COVID-19 crisis and the continuous use of virtual classes. *International Journal of Advanced and Applied Sciences*, 8(4), 117–129. <https://doi.org/10.21833/ijaas.2021.04.014>
- Korkmaz, G., & Toraman, Ç. (2020). Are We Ready for the Post-COVID-19 Educational Practice? An Investigation into What Educators Think as to Online Learning. *International Journal of Technology in Education and Science*, 4(4), 293–309. <https://doi.org/10.46328/ijtes.v4i4.110>
- Kusumadewi, A. N., Lubis, N. A., Prastiyo, R., & Tamara, D. (2021). Technology Acceptance Model (TAM) in the Use of Online Learning Applications During the Covid-19 Pandemic for Parents of Elementary School Students. *Edunesia*, 2(1), 272–292. <https://doi.org/10.51276/edu.v2i1.120>
- Li, B. (2021). Ready for Online? Exploring EFL Teachers' ICT Acceptance and ICT Literacy During COVID-19 in Mainland China. *Journal of Educational Computing Research*, 60(1), 196–219. <https://doi.org/10.1177/073563312111028934>
- Lukas, B. A., & Yunus, M. M. (2021). ESL teachers' challenges in implementing e-learning during COVID-19. *International Journal of Learning, Teaching and Educational Research*, 20(2), 330–348. <https://doi.org/10.26803/IJLTER.20.2.18>
- Moorhouse, B. L. (2020). Adaptations to a face-to-face initial teacher education course 'forced' online due to the COVID-19 pandemic. *Journal of Education for Teaching*, 46(4), 609–611. <https://doi.org/10.1080/02607476.2020.1755205>
- Mukminin, A., Muhaimin, M., Prasajo, L. D., Khaeruddin, K., Habibi, A., Marzulina, L., & Harto, K. (2022). Analyzing Social Media Use in Tefl Via the Technology Acceptance Model in Indonesian Higher Education During the Covid-19 Pandemic. *Teaching English with Technology*, 22(1), 3–22.
- Nikou, S. A. (2021). Web-based videoconferencing in online teaching during the COVID-19 pandemic: University students' perspectives. *Proceedings of the 2021 International*

- Conference on Advanced Learning Technologies (ICALT)*, Estonia, 431–435.
<https://doi.org/10.1109/ICALT52272.2021.00137>
- Pace, C., Pettit, S., & Barker, K. (2020). Best Practices in Middle Level Quaranteaching: Strategies, Tips and Resources Amidst COVID-19. *Becoming: Journal of the Georgia Middle School Association*, 31(1), Article 2. <https://doi.org/10.20429/becoming.2020.310102>
- Reimers, F. (2022). *Learning from a pandemic. The impact of COVID-19 on education in the world*. In F. Reimers (Ed.) *Primary and Secondary Education During Covid-19* (pp. 1-37). Springer International Publishing. <https://doi.org/10.1007/978-3-030-81500-4>
- Riady, Y., Alqahtany, T. M., Habibi, A., Sofyan, S., & Albelbisi, N. A. (2022). Factors affecting teachers' social media use during covid-19. *Cogent Social Sciences*, 8(1), Article 2115658. <https://doi.org/10.1080/23311886.2022.2115658>
- Stoian, C. E., Fărcașiu, M. A., Dragomir, G. M., & Gherheș, V. (2022). Transition from Online to Face-to-Face Education after COVID-19: The Benefits of Online Education from Students' Perspective. *Sustainability*, 14(19), Article 12812. <https://doi.org/10.3390/su141912812>
- Teo, T. (2011). Technology Acceptance Research in Education. In T. Teo (Ed.) *Technology Acceptance in Education*. Sense Publishers. https://doi.org/10.1007/978-94-6091-487-4_1
- Teo, T., & Zhou, M. (2017). The influence of teachers' conceptions of teaching and learning on their technology acceptance. *Interactive Learning Environments*, 25(4), 513–527. <https://doi.org/10.1080/10494820.2016.1143844>
- Utami, T. L. W. (2021). Technology adoption on online learning during Covid-19 pandemic: implementation of technology acceptance model (TAM). *Diponegoro International Journal of Business*, 4(1), 8–19, Article ED604929. <https://doi.org/10.14710/dijb.4.1.2021.8-19>
- Wehmeyer, M., & Zhao, Y. (2020). *Teaching Students to Become Self-Determined Learners*. ASDC.