

## Teachers' Encounter of Online Learning: Challenges and Support System

Gartika Pandu Bhuana

IKIP Siliwangi, Indonesia

[gartika@ikipsiliwangi.ac.id](mailto:gartika@ikipsiliwangi.ac.id)

Dewi Listia Apriliyanti

IKIP Siliwangi, Indonesia

[apriyanti.dl@ikipsiliwangi.ac.id](mailto:apriyanti.dl@ikipsiliwangi.ac.id)

Corresponding email: [gartika@ikipsiliwangi.ac.id](mailto:gartika@ikipsiliwangi.ac.id)

### Abstract

The pandemic of COVID-19 has effected the teaching and learning activities. It converts the face-to-face interaction into a virtual learning. The situation becomes challenges for many parties, including teachers as the main agent in the classroom. This study is intended to find out the teachers' barriers and supports in conducting online learning. A descriptive qualitative method was used through an open-ended questionnaire. An observation and interview were also used to triangulate the data. Twenty-one teachers from sub-urban areas in Cimahi and Bandung were selected as the participants. The findings revealed three issues becoming teachers' challenges, namely, technology, course content, and students. The first issue was related to the Internet connectivity as the classical problem of online learning. The second problem was that the teachers had obstacles in making adjustments to design and to deliver the materials. Then, the last issue was the students' participation as well as technological access. Regarding the supports, the teachers had gained back up from the government, school, and parent in conducting online learning. Furthermore, this study recommended three optional solutions to help the teacher facing their barriers in virtual teaching, in terms of students' participation in online learning, learning materials, and facilities in supporting the learning activities.

Keywords: *challenges; online learning; support system; teachers.*

### Introduction

Recently, many countries, including Indonesia, are experiencing a pandemic phenomenon caused by the spread of the Covid-19 (BBC, 2020; Verdiana, n.d.). This has resulted in schools in Indonesia being required to learn from home. Teachers and students have been asked to carry out the learning process from home since March 16, 2020 (KEMDIKBUD, 2020). Blended learning, flipped learning, and online learning become inevitably familiarized by teachers as educators in the school so that the teaching and learning process keep on running.

Online learning is a process of learning form distance by using any Web or application as the medium of learning and student activities. The term refers to the

full meaning of learning, such as delivering learning materials, giving assignments, and tests carried out via the web or learning platforms in cyberspace. The creation and implementation of an online formative learning system, a web-based homework arrangement, is geared towards streamlining of standard processes by enabling teachers to discuss mandated curriculum topics and using homework tools to monitor students' performance against related standards (Cunningham, J. D., & Bradley, n.d.; Azwandi, et al. 2019; Syafryadin, et al. 2020; Febriani, et al. 2020; Anggitasari, et al. 2020; Septinawati, et al. 2020). In other words, all forms of learning are carried out virtually.

This sudden transformation forces teachers to get used to using the online platforms in their virtual classroom. As a result, problems arise as online learning is carried out. Hazzan (2002) revealed various concerns regarding the online learning process, including; (1) the lack of direct interaction between teachers and students; and (2) a change in the teacher's role in 'navigating, guiding, and connecting students' knowledge with English learning materials comprehensively. In addition, not all teachers at a certain level are ready to implement school from home (BBC, 2020). Aside the imbalance learning facilities available at teacher's home, the capacities owned by the students also becomes the problems (Alvarez-Trujillo, 2008). In other words, concerns must be addressed before conducting the successful implementation of virtual learning classroom.

The success of online learning is inseparable from strategy to maximize the learning itself. As suggested by Beaudoin, M. F., Kurtz, G., & Eden (2009), the major indication of successful online learners ultimately depends more on self-determination than on institutional support. In addition, there are several factors that have to be considered in the success of online learning (Anderson, 2008; Cassidy, 2004; Cunningham, J. D., & Bradley, n.d.; Kebritchi et al., 2017), namely technological factors, students' factor, course content, and support system in the learning process. In line with Kebritchi (2017), several studies (e.g: Lestiyawati & Widiantoro, 2020; Rapanta et al., 2020; Tamrin et al., 2017) revealed that Indonesian teachers faced problems in accessing technology, school facilities in supporting e-learning, the difficulties in explaining the material, students' limitation in accessing the internet, students' economically disadvantaged family background, and parents' support system.

The aforementioned studies have revealed certain factors and problems faced by the teachers and the students. Notwithstanding, they revealed only the external problems faced by both teachers and students using limited instrument such as, a close-ended questionnaire or interview only. Hence, the studies did not investigate in detail related to the internal factors experienced by the teachers during teaching online. On this basis, this study explores what obstacles are experienced by teachers in the online learning process and the support capacity that can minimize the obstacles. To investigate these two things, open ended questionnaire, interview, and observation from related teachers are the most basic and important things to do.

### **Research Methodology**

The researchers conducted a descriptive qualitative design to investigate the voice of English teachers in the middle and high school in sub-urban area of Cimahi and Bandung district regarding the activities of online learning. Descriptive qualitative study was used due to its capability in examining the questions of how participant see and interpret the phenomenon occurring around them (Crowl, 1996).

There were 21 English teachers selected as the participants. They were novice teacher with no more than 5 years teaching experiences. As their limited experience in teaching, they found some problems in adjusting traditional teaching strategies to online learning that was important to support the data of this study.

The observation and questionnaire were used to determine the teachers' barrier in conducting online learning. The barriers were related to the technology, course content, students, and support system in virtual learning (Anderson, 2008; Cassidy, 2004; Cunningham, J. D., & Bradley, n.d.; Kebritchi et al., 2017). The questionnaire consisted of open-ended questions. This type of question was selected as it enables to elaborate the participants' answers as the basis of designing the interview questions.

Further investigation was carried out through interviews with participant-observer who have observed the real implementation of online learning. This was to explore the extent of the challenges faced by the teacher and the support capacity in online learning.

After collecting all the data, it was then analyzed. The data gained from observation, questionnaire, and interview were transcribed. They were then categorized based on the teachers' barrier in applying virtual learning. All the data were then verified. The next process was triangulated and analyzed in order to investigate the similarities and differences. On the last stage, the conclusion remark was made. The procedure of the study is presented in Figure 1.

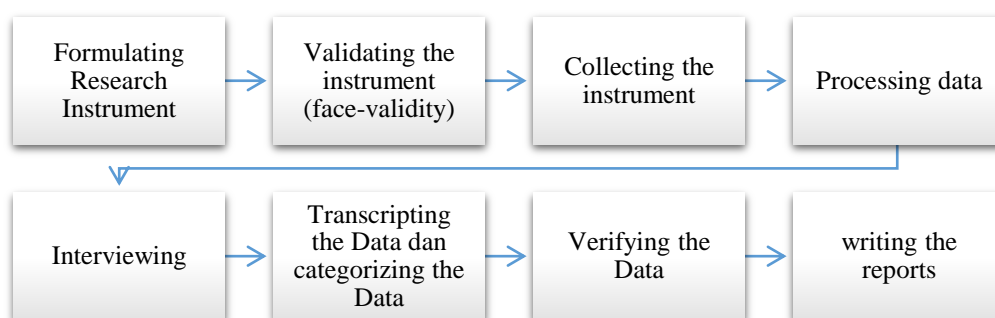


Figure 1: The procedure of the study

## Findings and Discussion

### Findings

The findings of this study are presented in the form of result description covering the teachers' challenges in conducting online learning. These challenges were classified into three aspects that are explained in the following.

#### a. Technology

Technology in online teaching becomes enabling and disabling factor (Siritongthaworn et al., 2006). It impacts the teachers to convey the learned material to the students. Regarding this issue, there are three points that need to be considered: infrastructure, access, and the used application. For the first point, the data show that the teachers dominantly had access to computer/laptop and smartphone. They were used to creating the material on their laptop. However, in the case of delivering the material to as well as communicating with their students, they mostly used their smartphone.

Smartphone became their preferences as its flexibility in which they can use it at any time and in anywhere (Casella et al., 2007; Hasan et al., n.d.).

The second point was access. The access here refers to internet connection and quota. All the teachers were basically facilitated with the internet access (Wi-Fi) at the school and internet quota by the government. Due to the pandemic condition, they were not allowed to go to school often. Thus, there was a shift. When they had to deliver the material in the school, they did not find any problem with the internet access. The main obstacle here was just the internet speed. Therefore, it was rarely for them to use video conference that required a lot of internet bandwidth. On the contrary, if they were at home, some of them had a problem on the internet access, such as bad internet signal/network or less internet quota.

The findings of the third point which is application that can be seen in the following figure:

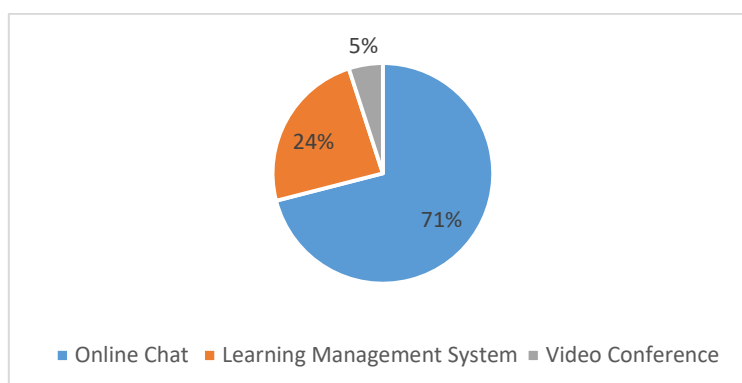


Figure 2. The Application Used by Teachers in Online Learning

The figure depicts that 71% teachers frequently used online chatting, such as WhatsApp, in delivering the material to the students. These teachers did not use video conference as the lack of internet access and less supporting devices that the students had (Lestyanawati & Widyanoro, 2020). Twenty four percent teachers used learning management system (LMS), such as school e-learning platform and Google Classroom. The interaction occurred in the stream or comment column. Meanwhile, 5% of teachers preferred to use online video conference, such as Zoom in explaining the material and having the interaction

with the students. As not all students having good internet access, the teachers recorded the material they were given on Zoom. Then, they sent the recording on WhatsApp Group to facilitate the students who could not join the conference.

#### b. Content

Content refers to the course material. In online teaching, Fein & Logan (2003) stated that the teachers can find the difficulty at three phases: the design, the delivery, and follow-up the material. In design, the teacher should provide a good lesson plan. They have to know how the students learn and what to include to prompt the students' interest and engagement. In delivery, the teachers had to be able to transfer the material into appropriate online medium. In follow-up stage, the teachers have to find a good medium to store the material so that it will be easy for the students to learn later.

The data show that many teachers had problems in designing, delivering, and following-up the material. In the case of designing, the teachers had difficulty in transferring the offline lesson plan to online lesson plan. They had to simplify the teaching procedure as well as lesson time. They also had to change their teaching strategies. In addition, they also had to design the activity that could engage the students' interest.

In delivering the material, the teachers experienced two barriers. First, it was about the comparability of the material they used. At this point, they had to make sure that the quality of the material they delivered to the students in online learning was the same as the quality of material in traditional class.

The other problem in delivering was related to the medium used. Seventy-six percent of teachers admitted that they were confused to deliver the material to the students. There was a mismatch between their ideology and the online teaching condition. In their opinion, the best method was by using video conference. In fact, the students' condition did not support it. Therefore, they tended to use PowerPoint and Voice Note that was sent via WhatsApp Group as the medium. Sometimes, they also sent the YouTube Video that was related to the discussed topic. The teacher here rarely used their own video. They never used the animation video maker application (e.g. Animaker, Ringmaster, or

PowToon) or screen recorder (e.g. Screencast-O-Matic). The reasons were the time, price, and complexity of the application. Basically, 81% teachers ever thought to use it. However, they were not familiar yet to several tools in those applications, so it would take a long time for them to create the material. They also should consider editing the material by using the back sound or animation. Besides, the price charged was too high for them. Thus, designing their own learning video was not an option.

Concerning follow-up activity, all the teachers made the module for the students. This module was the simplification of the material on the textbook used in offline learning. The module also provided some worksheet that should be done by the students. The obstacle in making this module was to make sure its quality was in line with the textbook used in offline learning. Fortunately, there was no obstacle in the submission process which was conducted offline. It was chosen as limited technological access that the students had.

### c. Students

The other challenge for the teacher in online teaching was students, particularly participation, internet access, technological access, and parents' support. Participation in an online environment is considered as students' interaction with peers and teachers by writing (Vonderwell & Zachariah, 2005). Regarding this, a total of 86% teachers implied that they had problem on the students' participation. They thought that no more than half of the total students in the classroom participate actively in answering the questions or responding the interaction. The situation sometimes made the teacher frustrated.

Another challenge was students' technological access. The total of 61% teacher admitted that the students find the difficulty in using technology such as computer or smartphone. Some of them came from the low-level income family that had lack of facilities. They did not have a laptop or computer. They even did not have a smartphone. Thus, when the online learning took place, they had to borrow their parent's or their relative's smartphone. This condition of course gave the impact to the effectiveness of online learning environment. Some good achievement students with the mentioned condition could not follow the lesson.

Next was the internet access. The students of investigated teacher (61%) stayed in a sub-urban area, in which they have limitation of internet access. The signal of phone provider was not always good, even though the government had given internet quota for them. This condition became the consideration for some teacher to not use video conference during online teaching.

The other challenge was the support from students' parent. Parent support plays a key role in online learning and teaching process. They became the control of students' learning. Only 33% of students who had supports from the parents in conducting online learning. At this point, the parents did not give enough attention to the students learning. Hence, the students rarely joined the online class and submitted the task. Luckily, most of the parents in the context of this study worked cooperatively with the teacher to support online learning. For example, the parents took the students to school to make sure that their children submit the worksheet. They also continually asked the teacher in case there was the material or worksheet that was skipped by their children.

## **Discussion**

The Covid-19 Pandemic condition shifted the teaching and learning process from offline classroom to online classroom. This sudden transformation creates challenges for the teacher to do online learning. Based on the finding of the study, the challenges dealt with technology, content, and students.

Regarding the technology, the findings reveal that basically teachers had good infrastructure and facilities to support their online teaching. The key problem here is not related to having a computer or smartphone, but internet connectivity. This supports the studies conducted by some experts (e.g: Andersson, 2008; Lestiyawanawati & Widyantoro, 2020; Joshi et al., 2020; Mustakim, 2020). As internet connectivity is the success of online e-learning instruction, school as the facilities provider should give concern on this problem. They are expected to upgrade the connection bandwidth. Thus, the connectivity will remain stable when there are so many teachers use it. The next issue was the internet access on the teachers' home. Here, the teachers had to independently manage their internet quota (Lestiyawanawati & Widyantoro, 2020). They might also find the best phone operator in the area that may have a stable internet connection.



The second challenge is content. Here, the teachers found the difficulty in designing and delivering the material. They have to generate new or adjust teaching strategies from direct interaction in the classroom to online learning setting (Eckstein et al., 2007). They also have to make sure that the quality of material given in online learning is in line with off-line learning. Then, they have to consider the appropriate platform in delivering the materials. When they choose WhatsApp Group as the medium, it does not mean that there is no barrier. Although there is written communication in this medium, the absence of visual and direct interaction with the students make the teachers have to fight with the material delivery and students' engagement or participation (Crawley et al., 2009). As a result, they feel less control over the online class, and they think that the online teaching is a heavy workload. The challenges posed by on the online learning here are similar to those mentioned by the experts (such as: Track, 2005; Guàrdia Ortiz et al., 2013; Jacobs, 2013; Nilson, L, B & Goodson, L, 2017).

In Indonesia, there are teacher' working groups (KKG) and teachers' communities (such as "Kelas Kreatif" group) which provide the opportunities for the teachers to share their difficulties in teaching and learning process. On this group, they can discuss and exchange the idea in teaching. They can share the teaching strategies or activities that can be effectively used in online learning. Moreover, these groups often share several applications or platforms for visual learning. They, for example, share attractive tools for presentation or material delivery. Thus, the teachers do not only use Power Point and voice note in every teaching. The teachers here should realize that the media have a huge impact in teaching. It can raise the students' motivation and participation as it offers variations and attracts students' attention. Tamrin et al. (2017) asserted that any type of media can be interesting when it is skillfully used. Therefore, the teachers have to be able to try and develop their skill in using a wide range of teaching media (Yulia, 2020; Jacobs, 2013). However, the teachers' effort definitely has to be supported by the school.

The other challenge is students. It is emphasized on participation, technological access, and internet access. In case of students' participation, the teachers still depended on the students' response in WhatsApp group. Concerning to this, Kebritchi et al. (2017) suggested that judging learning participation only by the quantity of their writing/response in online interaction is oversimplified approach.

The teacher can use both frequency and duration variables to identify students' participation (Morris et al., 2005). Moreover, Gilbert et al. (2015) and Gillett-Swan (2017) asserted that the teachers can arrange numerous activities that can prompt interaction between teachers and students or students and the other students. The activity can be done collaboratively or cooperatively, such as live debate, reflective journal entries, peer review, video project, storytelling, or presentation (Savenye, 2005; Williams et al., 2012).

The teachers' problem in students' technological and internet access is in line with what Lestiyawanawati & Widyantoro (2020) found in their study. Here, the economy always becomes the basis problem when it deals with technology and online learning. Therefore, to handle the situation, the school along with the teachers should provide various alternative options to support students' learning. They provide printed worksheets and modules that can be learned independently by students without using smartphones.

### **Conclusion and Suggestion**

The shift of face-to-face learning to virtual learning environment is not easy for several parties, including teachers. As the key facilitator of knowledge transfer in the classroom, they experienced several challenges to this transformation. The first challenge focuses on technology. The main concern is on having smartphone or laptop/computer, but unstable internet access. This barrier impacts a lot on online teaching and learning process. The teachers cannot use a range variety of applications or media. They have to use media or application with less minimum bandwidth in order to be able to be accessed by the students. Moreover, the teachers also had barrier in the process of designing and delivering the material. The convert offline instructional strategies into online practice cause the teacher to make a lot of changes in the lesson plan, time schedule, teaching procedure or strategies, learning activity, and the used material. The other challenge comes from the students. Students' access on the infrastructure, such as internet and smartphone, became the most challenging task for the teachers. This becomes the pinpoint in the successful of online learning. The next issue is students' participation.

In response to these issues, the teacher should organize the online learning situation appropriately to increase the students' interaction by providing a multitude

of engaging activities. Regarding the support, the government, schools, and parents have worked collaboratively with the teachers in the success of online learning. Government and schools have provided internet access (such as subsidized quota) as the supporting infrastructure in conducting online learning. Unfortunately, not all students have their own smartphones to facilitate their learning process. Thus, the teacher should seek other options to support the students' learning activities. Parents also should maximize helping the teachers in controlling, supporting, and monitoring their children during online learning. Therefore, the online learning process is expected to run smoothly and more optimally in the future.

## References

- Alvarez-Trujillo, H. (2008). *Benefits and Challenges for the Online Learner*.
- Anderson, T. (2008). *The Theory and Practice of Online Learning*. AU Press.
- Andersson, A. (2008). Seven Major Challenges for E-Learning in Developing Countries: Case Study eBIT , Sri Lanka Annika Andersson Örebro University , Sweden. *International Journal of Education and Development Using Informaton And Communicaton Technology*, 4(3), 45–62.
- Anggitasari, M., Tarwana, W., Febriani, R. B., & Syafryadin, S. (2020). Using Wattpad to Promote the Students' Responses to Literary Works: EFL College Students' Perspectives and Experiences of Enjoying Short Stories. *Jadila: Journal of Development and Innovation in Language and Literature Education*, 1(2), 182-192.
- Azwandi, A., Harahap, A., & Syafryadin, S. (2019). Penyuluhan dan pelatihan ict-enhanced teaching–learning sebagai model pengembangan profesional guru di kota Bengkulu. *Jurnal Pengabdian Masyarakat Ilmu Terapan (JPMIT)*, 1(1).
- BBC. (2020). *Virus Corona: Status Pandemi Global, Pemerintah "Harus Lebih Keras" Telusuri Pasien Covid-19*. <https://www.bbc.com/indonesia/indonesia-51830030>
- Beaudoin, M. F., Kurtz, G., & Eden, S. (2009). Experiences and Opinions of E-learners: What Works, What are the Challenges, and What Competencies Ensure Successful Online Learning. *Interdisciplinary Journal of E-Learning and Learning Objects*, 275–289.
- Casella, G., Costagliola, G., Ferrucci, F., Polese, G., & Scanniello, G. (2007). A SCORM thin client architecture for e-learning systems based on web services. *International Journal of Distance Education Technologies*, 5(1), 19–36. <https://doi.org/10.4018/jdet.2007010103>
- Cassidy, S. (2004). No Learning Styles: An overview of theories, models, and measures. *Educational Psychology*, 24(4), 419–444.
- Crawley, F., Fewell, M., & Sugar, W. (2009). Researcher and Researched: The Phenomenology of Change from Face-to-Face to Online Instruction. *Quarterly Review of Distance Education*, 10, 165–176.

- Crowl, T. . (1996). *Fundamentals of education research*. Brown and Benchmark Publisher.
- Cunningham, J. D., & Bradley, K. D. (n.d.). Teachers' Perceptions as an Integral Component in the Development of Online Learning Tools. *Running Head: Teacher Perceptions of Online Learning Tools*, 1–26.
- Eckstein, D., Irby, B., & Li, C.-S. (2007). An Overview of Online Education: Attractiveness, Benefits, Challenges, Concerns and Recommendations. In *College Student Journal* (Vol. 42).
- Fein, A. D., & Logan, M. C. (2003). Preparing instructors for online instruction. *New Directions for Adult and Continuing Education*, 2003(100), 45–55. <https://doi.org/10.1002/ace.118>
- Gilbert, B., John, S., & College, F. (2015). *Online Learning Revealing the Benefits and Challenges How has open access to Fisher Digital Publications benefited you ?*
- Gillett-Swan, J. (2017). The Challenges of Online Learning: Supporting and Engaging the Isolated Learner. *Journal of Learning Design*, 10(1), 20. <https://doi.org/10.5204/jld.v9i3.293>
- Guàrdia Ortiz, L., Sangrà Morer, A., & Maina, M. (2013). MOOC Design Principles. A Pedagogical Approach from the Learner's Perspective. *ELearning Papers*, 33
- Hasan, M., Muhammad, R., & Ahmed, L. (n.d.). *Imperialism , Colonialism and Racism in Joseph Conrad ' s Heart of Darkness : A Postcolonial Approach*.
- Hazzan, O. (2002). Prospective High School Mathematics Teachers' Attitudes toward Integrating Computers in their Future Teaching. *Journal of Research on Technology in Education*, 35(2), 213–225.
- Jacobs, P. (2013). The challenges of online courses for the instructor. *Research in Higher Education Journal*, 21, 1–19. [http://digitalcommons.sacredheart.edu/cj\\_fac/8/?utm\\_source=digitalcommons.sacredheart.edu/cj\\_fac/8&utm\\_medium=PDF&utm\\_campaign=PDFCoverPage](http://digitalcommons.sacredheart.edu/cj_fac/8/?utm_source=digitalcommons.sacredheart.edu/cj_fac/8&utm_medium=PDF&utm_campaign=PDFCoverPage)
- Joshi, A., Vinay, M., & Bhaskar, P. (2020). Impact of coronavirus Pandemic on the Indian Education Sector: Perspectives of Teachers on Online Teaching and Assessments. *Interactive Technology and Smart Education*, September. <https://doi.org/10.1108/ITSE-06-2020-0087>
- Kebritchi, M., Lipschuetz, A., & Santiago, L. (2017). Issues and Challenges for Teaching Successful Online Courses in Higher Education. *Journal of Educational Technology Systems*, 46(1), 4–29. <https://doi.org/10.1177/0047239516661713>
- KEMDIKBUD. (2020). *Pencegahan Penyebaran Covid-19 di Lingkungan Kemendikbud*. Retrieved from Kemdikbud. <https://www.kemdikbud.go.id/main/blog/2020/03/se-sesjen-pencegahan-penyebaran-covid19-di-lingkungan-kemendikbud>
- Lestyanawati, R., & Widyantoro, A. (2020). Strategies and Problems Faced by Indonesian Teachers in Conducting E- Learning System During COVID-19 Outbreak. *Journal of Culture, Literature, Linguistic and English Teaching*, 2(1), 71–82.
- Morris, L. V., Finnegan, C., & Wu, S. S. (2005). Tracking Student Behavior, Persistence, and Achievement in Online Courses. *Internet and Higher Education*, 8(3), 221–231. <https://doi.org/10.1016/j.iheduc.2005.06.009>
- Mustakim. (2020). Efektivitas Pembelajaran Daring Menggunakan Media Online Selama Pandemi Covid-19 pada Mata Pelajaran Matematika the Effectiveness

- of E-Learning Using Online Media During the Covid-19 Pandemic in Mathematics. *Al Asma: Journal of Islamic Education*, 2(1), 1–12.
- Nilson, L. B. & Goodson, L. A. (2017). *Online Teaching at Its Best: Merging Instructional Design with Teaching and Learning Research*. Jossey-Bass.
- Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L., & Koole, M. (2020). Online University Teaching During and After the Covid-19 Crisis: Refocusing Teacher Presence and Learning Activity. *Postdigital Science and Education*, 2(3), 923–945. <https://doi.org/10.1007/s42438-020-00155-y>
- Savenye, W. . (2005). Improving Online Courses: What Is Interaction and Why Use it? *Distance Learning*, 2(6), 22–28.
- Septinawati, S., Febriani, R.B., Tarwana, W., Syafryadin, S. (2020). Students' Perceptions Toward the Implementation of Quipper School as an E-Learning Platform in Teaching English. *Jadila: Journal of Development and Innovation in Language and Literature Education*. 1(2), 223-238.
- Syafryadin, S., Pratiwi, V. U., & Wardhana, D. E. C. (2021). Pre-service English teachers' experience with various CALL applications: Hindrances and reflection. *Studies in English Language and Education*, 8(1), 99-114.
- Siritongthaworn, S., Krairit, D., Dimmitt, N. J., & Paul, H. (2006). The study of E-Learning Technology Implementation: A Preliminary Investigation of Universities in Thailand. *Education and Information Technologies*, 11(2), 137–160. <https://doi.org/10.1007/s11134-006-7363-8>
- Tamrin, M., Azkiya, H., & Sari, S. G. (2017). Problems Faced by the Teacher in Maximizing the Use of Learning Media in Padang. *Al-Ta Lim Journal*, 24(1), 60–66. <https://doi.org/10.15548/jt.v24i1.262>
- Track, E. (2005). *Benefits and Challenges for the Online Learner*. Lewis.
- Verdiana, B. M. (n.d.). *Virus Corona COVID-19 Kian Mendunia, Kapan Akan Memuncak?*
- Vonderwell, S., & Zachariah, S. (2005). Factors that Influence Participation in Online Learning. *Journal of Research on Technology in Education*, 38(2), 213–230. <https://doi.org/10.1080/15391523.2005.10782457>
- Williams, K. C., Cameron, B. A., & Morgan, K. (2012). Supporting online group projects. *NACTA Journal*, 56(2), 15–20.
- Yulia, H. (2020). Online Learning to Prevent the Spread of Pandemic Corona Virus in Indonesia. *ETERNAL (English Teaching Journal)*, 11(1), 48–56. <https://doi.org/10.26877/eternal.v11i1.6068>