



Do The English Lecturers Using Technology for Teaching Online Class?

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ABSTRAK

Teknologi merupakan hal yang sangat penting untuk mendukung proses pembelajaran. Penggunaannya membuat guru dan siswa lebih mudah diakses dalam proses pembelajaran dan menciptakan suasana yang menyenangkan di kelas, terutama di masa pandemi covid 19 ini. Secara praktis, meskipun teknologi berdampak positif pada pembelajaran, tidak semua guru memiliki keterampilan teknis yang memadai untuk mengoperasikan aplikasi pembelajaran daring. Oleh karena itu penelitian ini bertujuan untuk menganalisis dosen bahasa Inggris yang menggunakan teknologi untuk mengajar kelas online. Penelitian ini menggunakan penelitian kualitatif dengan desain naratif. Pengumpulan data penggunaan teknologi dalam kelas online yang melibatkan kesulitan dan solusinya dinarasikan berdasarkan pengalaman dua dosen Bahasa Inggris. Subyek penelitian ini adalah dua dosen bahasa Inggris yang mengeksplorasi pengalaman mereka menggunakan teknologi untuk mengajar kelas online selama situasi genting covid 19 ini. Semua data dianalisis secara tematis dengan menyusunnya berdasarkan pertanyaan wawancara. Temuan tersebut menyajikan kelebihan dan kekurangan teknologi dalam pembelajaran daring, serta cara mengatasi masalah penggunaan teknologi.

ABSTRACT

Technology is an essential thing to support the learning process. Its use makes the teachers and students more accessible in the learning process and creates a pleasant atmosphere in the class, particularly during this covid 19 pandemic. Practically, even though technology positively impacts learning, not all teachers have sufficient technical skills to operate the learning application of online teaching. Therefore this study aims to analyze the english lecturers using technology for teaching online class. This study is using qualitative with narrative design research. Data collection of using technology in online classes involving difficulty and its solutions are narrated based on two English lecturer's experience. The subject of this study is two English lecturers in for exploring their experiences of using technology for teaching online class during this crucial situation of covid 19. All the data is analyzed thematically by organizing it based on the questions of interview. The findings present the strengths and the weaknesses of technology in online learning, and the way of overcoming the problem of using technology.

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1. INTRODUCTION

A pleasant learning activity is closely connected to technology. The lecturers are required modifying a learning process by adapting the learning system development (Almeida & Simoes, 2019; Cahyono & Rahayu, 2020; Hardiyana, 2016). For this reason, they must master the technology. In addition previous study proved that the use of digital media and sophisticated applications are the effort and innovations of teacher applying technology in learning (Cubukcu et al., 2020; Papadakis et al., 2020). Students will be more enthusiastic and interested to learn, particularly during a pandemic which requires learning and teaching activities to be carried out virtually or called online learning (Goeltz & Cuevas, 2021; Putra, 2021).

Online learning assists lecturers to recognize and to use appropriate and advanced technology-based approaches on learning process. Thus, the lecturers possess excellent skill on teaching theoretically and practically. Online learning utilizes synchronous and asynchrononous (Palupi, 2022; Pratiwi et al., 2021; Sipatu & Silitonga, 2022). However, using those approaches should be accordanced to the need of pedagogical objective. Synchronous

is applied for presenting the material directly through the appropriate application (Çoban & Göksu, 2022; Perveen, 2016), whereas the asynchronous is played since the lecturer deliver the materials indirectly through current application (Pambudi & Fauzi, 2022; Sari et al., 2022). Then the students replay the material later. The point is both of the approaches offer a different way of communication between lecturers and students, but the goal actually is similar.

Furthermore previous studies prove that although the teaching and learning process is held remotely, lecturers and students are able to interact and communicate through synchronous and asynchronous tools (Cahyani et al., 2021; Lapitan et al., 2021; Setiadi et al., 2021). In this case, the creativity of the teacher, the students' learning motivation and effort are essential point to support the output acquisition. On the synchronous approach, the lecturers and the students conduct a class in a real time from a separated spot (Ogbonna et al., 2019; Sipatu & Silitonga, 2022). The lecture is conducted by using some relevant tools, such as instant messaging, zoom meetings, google meet, video conference on whatsapp, facebook or other social media. Other studies proved the synchronous approach provides a space of interaction directly for lecturers and students (Elshami et al., 2021; Perveen, 2016). Hence, the lecturers control the students movements easily.

However, in asynchronous classes they are not simultaneously interacting. This class runs on more relaxed schedule. Therefore, the students will be considerably flexible accessing the materials during different hours and from different locations. Email, google classroom, google form and edmodo are the appropriate media that can be used by the lecturer on the asynchronous approach. Previous studies proved that since the lecturers apply a learning mode based on an asynchronous approach, students read the material longer and change the response before submitting an assignment to the lecturer (Islam et al., 2022; Lestari et al., 2021; Logan et al., 2020). Moreover, the students have extended time catching the point of materials and answering the questions. The point is, the asynchronous approach presents a wider range of motion for students.

The American Council on Foreign Languages reported that technology is an important element in teaching. Therefore, teachers should be regarded technology by utilizing synchronous and asynchronous communication tools during the teaching and learning process. Online learning activity the educator's ability and their skill of using appropriate and inovatif digital media are important (Rizal et al., 2022; Singh. & Prasad Singh, 2021; C. Williams & Beam, 2019). The fact is not all lecturers consider the online learning media easy to be used because they unpossess skill of using it as well the poor internet connection. Previous study reported that they who does not posses the good skill in using digital media will be more difficult delivering the materials (Castillo-Cuesta, 2022; Kurniawati et al., 2018). Therefore, they should prepare everything needed.

There are several researchs regards to the topic discuss. There are four important points of building presence in a video conference course: Higher presences is influenced by the teachers' confidence and experience, teaching videoconference and face-to-face classes simultaneously led to challenges with developing presence; immediacy behaviors correlated with higher presence; and, students' learning preference related to perceived teacher presence (U. J. Williams & Dries, 2022; Wu & Nian, 2021). Previous study proved that the learning based mobile technology and pedagogical innovation are not challenging for teachers (Lampropoulos et al., 2019; M. K. Williams et al., 2009). Instead, psychological anxiety, extended pedagogical roles, and learning flflexibility are the challenging issues.

Here, the topic will be deeply explored based on the different design and number of participant. Narrative design is applied to interview two lecturers of English related to the technology in online class, their difficulty of teaching based the technolgy used and their solution to solve the problems faced. This research aims to analyze the english lecturers using technology for teaching online class. This research is expected provide an information and literature.

2. METHOD

This study is using qualitative with narrative design research (Ade-Ojo et al., 2022). Data collection of using technology in online classes involving difficulty and its solutions are narrated based on two English lecturer's experiences . The lecturers are chosen because they have five years of teaching experience and use technology in their online class activities. They were interviewed to gain the appropriate research topic data through Whatsapp chat. All the data is analyzed thematically by organizing it based on the questions of interview. The participant's perception about applying technology in online learning, delivering the materials through email or offline chat such as Facebook chat, line chat or WhatsApp chat, explaining the materials through video conferences such as zoom meeting or google meet, the difficulty and the offered solution of using digital media in the online class. Furthermore, the data is read back carefully and given a current color as the initial codes from each interview. Moreover, the similar codes would be merged by developing themes for each round of interviews. The process of data coding is show in Figure 1.

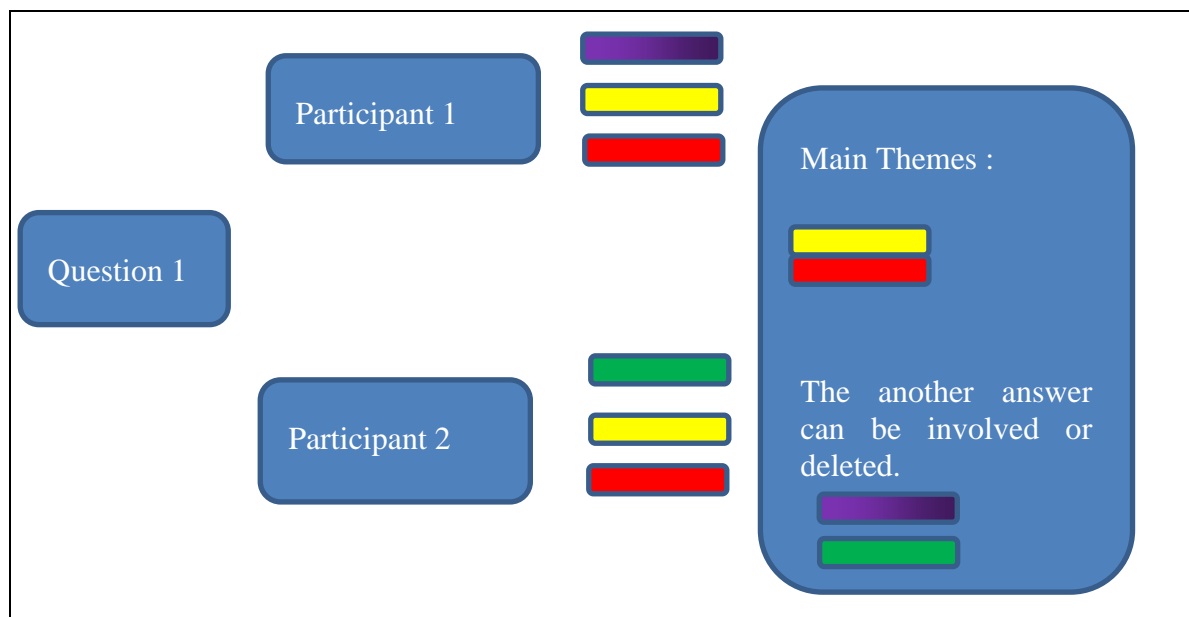


Figure 1. The Process of Coding

3. RESULT AND DISCUSSION

Result

The two participants in this research narrated the experience of teaching online. They consider that technology is essential for supporting online teaching and learning. However, they also perceived that using technology in online teaching and learning is challenging. All the experience elaborated on those main points.

The Strengths and Weaknesses of Technology in the Online Class

Online learning provides different learning environments for the instructor and the student. One of them is about inserting technology for supporting online learning activities. According to the two lecturers who teach at a university in Banjarmasin, technology dramatically supports the online learning process because technology provides many tools and applications that make it easier for teachers and students to deliver materials and collect assignments. Email and Whatsapp are learning applications that can be used in online classes. The learning process through these applications do not require teachers and students to interact directly in the classroom to minimize connection problems, and students also have more free time to read and understand the material and do assignments. In online classes that require face-to-face learning activities, lecturers can use zoom meetings and google meet because these applications are equipped with a virtual whiteboard that assists the lecturers to explain the material and conducting discussions through the breakout room.

The Solution of the Teaching Problem in Online Class

Most teachers have similar teaching problems online through media digital and sophisticated applications. The teacher then tries to solve their problems by doing many things. According to the participants, to overcome their problems above, they apply the following points: related to the inability to operate digital media and sophisticated applications, the lecturers learn through tutorials available on the youtube platform, ask friends who have the expertise or who have experience using it, read the appropriate book use to gain knowledge about the use of these media and applications. As for the problem of internet interference, they discuss with students about media and learning applications that will be used and support online learning activities before starting learning. Regarding quota constraints and cellphone and laptop batteries, the lecturer regularly checks and replenishes quota supplies and cellphone/laptop batteries to anticipate power outages and suddenly running out of quota.

Furthermore, to overcome the problem of premium packages on the zoom application, which is quite expensive, one of the lecturers tried to apply another alternative by teaching using Whatsapp group discussions. He sends material to students via Whatsapp group. Furthermore, students are invited to ask questions about something not understood in the material. However, if the lecturer must use the Zoom meeting application, he chooses to use the free account for 40 minutes. After that, the learning process is carried out through the WhatsApp group application. One of the data is showed in Table 1.

Table 1. The Data Interview

How do you think about the difficulty of using digital media in online class?

Participant 1:

Of course there are difficulties or obstacles in using digital media in online learning, especially the first time online learning is carried out, I, as a lecturer who usually teaches face-to-face in class, certainly feel confused when suddenly learning activities have to be carried out online, from my point of view as a lecturer there are several obstacles/difficulties that I can underline: 1) Selection of the right digital media so that it can be easily used by both sides, both teachers and students, 2) The operation of digital media itself, because previously it was not very accustomed to using digital media in learning activities so I still feel awkward in using digital media, especially video conferencing media, applications such as Zoom and Google Meet are something new for me, 3) Technical constraints, namely supporting constraints in operating digital media for learning activities such as constraints on internet quota availability, unstable internet network so that I was thrown out of the Zoom room and had to go back and forth and the problem of long-term power outages.

Participant 2:

I actually encounter many difficulties when I first use zoom for online teaching learning process. At the time, zoom is something new for many teachers and we are not familiar with it. So we have to learn how to operate it from the beginning. Another issue related to the difficulties is that I have to buy premium account for zoom if I want to have full access to all available tools in the application. For me it hard to do if I have to spend specific amount of money just for buying zoom premium account, even though in reality I have to do it.

Main Theme : The Strengths of using technology in online learning

1. There are some lecturer who are not familiar with it. Therefore, they can not operate it.
2. The error connection of internet
3. There lecturer should prepare much money for buying the premium zoom meeting account
4. Power outages

Digital media and sophisticated learning applications are technologies that really support learning activities, especially during a pandemic covid 19 that requires distance learning. Through the use of technology, teachers and students can access all learning activities easily anytime and anywhere. For online learning activities that require face-to-face meetings to make it easier for lecturers to control students, video conferences such as zoom meetings and google meet are the appropriate applications. Meanwhile for learning activities that are not in real time lecturers and students can also use email, chat or message applications.

Based on Table 1 show narrative research which interviewed two lecturers at an university in Banjarmasin was conducted to obtain information about their experience of using technology online learning and their skills in using it. According to them, both digital media and sophisticated learning applications are very helpful in the online learning activity. It means that technology has strong positive impact in education, especially in the process of teaching and learning : such as the flexibility of teaching and the convenience to deliver the materials to the students. However, the online learning process also cannot run effectively without sufficient internet support, complete infrastructure and adequate skills of using these applications. It means that, the technology also could not run perfectly and automatically without another support : sufficient internet and skills. In addition, the expensive zoom premium application that offers complete features in learning but has a certain time limit is also a problem for lecturers who are just starting a career as an educator, although this can be circumvented by combining the use of a free zoom account and whatsapp group discussion.

Discussion

Online learning platform also helps lecturers to control students directly through camera activation. Thus, the process of delivering and receiving the material run successfully. Previous study reported that synchronous e-learning such as video conferences and webinars could be a powerful tool in an online learning activity (Lapitan et al., 2021). It is flexible and allows the students and teacher to get greater accessibility. Here, the students and the teacher interact in real-time. The students can ask the teacher and give feedback at the time.

Moreover, other study proved that the interaction between the pupil and the educators (distance learning) could occur synchronously via video-conferencing and online chats or emails, discussion boards, and other applications (Mpungose, 2021). Furthermore, it is supported with study who reported that when the students receive the materials or participate in task-oriented activities in the context of online learning, they can interact through a variety of pedagogical tools and assignments such as audio and video presentations, individual or group projects, links to other resources, online chats and discussion forums (Wu & Nian, 2021). However, the online learning process will not be carried out effectively if the internet does not support it. Network disruption causes both lecturers and students to suddenly leave the zoom room and have to go back and forth to re-enter (Lubis &

Dasopang, 2021; Onyema et al., 2020). Power outages also trigger problems in online learning. If the cellphone or laptop experiences a low battery, the learning activities will stop.

In addition, the use of digital media or sophisticated in learning activities is a new thing for teachers, so they have difficulty operating them. Previous study proved that some teachers are not ready to teach through technology because they lack technical skills (Dzo'ul Milal et al., 2020). In addition, other study reported that online learning provides a challenge for the instructor who can not deliver the materials effectively because of their lack of operating digital teaching media (Ramadani & Xhaferi, 2020). Another problem was also expressed by one of the lecturers who objected to spending some money to buy a premium account of zoom meeting to get full access or exclusive features that support the online learning process.

The implication of this research is that lecturers can utilize technological tools to improve teaching quality and provide a more interactive learning experience for students. Another implication is that colleges and educational institutions can provide the necessary training and resources for lecturers to make effective use of technology in online teaching. The use of technology can enable more varied teaching, more effective monitoring of learning progress, and greater integration of learning resources. The implication is that students can experience more engaging and effective teaching through the use of technology.

As the suggestion, it is important for the lecturer to provide another strategy for overcoming the internet connection problem in the teaching and learning process : Tryng to apply another application, such as google classroom or conducting blended learning, such as combining the two applications zoom meeting and whatsapp (Teaching online through zoom meeting for 30 minutes – 1 hours, the next session is discussion through whatsapp). Regarding the expensive Zoom Premium, lecturers can prepare its budget and then submit it to the campus authorities, as it falls under the facilities that need to be provided.

4. CONCLUSION

Base on the result of this study digital media and sophisticated learning applications are technologies that really support learning activities, especially during a pandemic covid 19 that requires distance learning. For online learning activities that require face-to-face meetings to make it easier for lecturers to control students, video conferences such as zoom meetings and google meet are the appropriate applications.

5. REFERENCES

- Ade-Ojo, G. O., Markowski, M., Essex, R., Stiell, M., & Jameson, J. (2022). A systematic scoping review and textual narrative synthesis of physical and mixed-reality simulation in pre-service teacher training. *Journal of Computer Assisted Learning*, 38(3), 861–874. <https://doi.org/10.1111/jcal.12653>.
- Almeida, F., & Simoes, J. (2019). The Role of Serious Games , Gamification and Industry 4 . 0 Tools in the Education 4 . 0 Paradigm. *Contemporary Educational Technology*, 10(2), 120–136. <https://doi.org/10.30935/cet.554469>.
- Cahyani, N. M. W. S., Suwastini, N. K. A., Dantes, G. R., Jayantini, I. G. A. S. R., & Susanthi, I. G. A. A. D. (2021). Blended Online Learning: Combining the Strengths of Synchronous and Asynchronous Online Learning in Efl Context. *Jurnal Pendidikan Teknologi Dan Kejuruan*, 18(2), 174. <https://doi.org/10.23887/jptk-undiksha.v18i2.34659>.
- Cahyono, B. Y., & Rahayu, T. (2020). Efl students' motivation in writing, writing proficiency, and gender. *Teflin Journal*, 31(2), 162–180. <https://doi.org/10.15639/teflinjournal.v31i2/162-180>.
- Castillo-Cuesta, L. (2022). Using Genially Games for Enhancing EFL Reading and Writing Skills in Online Education. *International Journal of Learning, Teaching and Educational Research*, 21(1), 340–354. <https://doi.org/10.26803/ijlter.21.1.19>.
- Çoban, M., & Göksu, İ. (2022). Using virtual reality learning environments to motivate and socialize undergraduates in distance learning. *Participatory Educational Research*, 9(2). <https://doi.org/10.17275/per.22.36.9.2>.
- Cubukcu, C., Murat, K. C., & Yigit, O. (2020). “Mobile Game Development for Children with Down Syndrome.” *International Journal of Interactive Mobile Technologies*, 14(20), 174–83. <https://doi.org/10.3991/IJIM.V14I20.16573>.
- Dzo'ul Milal, A., Rohmah, Z., Kusumajanti, W., Basthomi, Y., Sholihah, D. N., & Susilowati, M. (2020). Integrating character education in the english teaching at islamic junior high schools in Indonesia. *Teflin Journal*, 31(1). <https://doi.org/10.15639/teflinjournal.v31i1/88-107>.
- Elshami, W., Taha, M. H., Abuzaid, M., Saravanan, C., Al Kawas, S., & Abdalla, M. E. (2021). Satisfaction with online learning in the new normal: perspective of students and faculty at medical and health sciences colleges. *Medical Education Online*, 26(1). <https://doi.org/10.1080/10872981.2021.1920090>.
- Goeltz, J. C., & Cuevas, L. A. (2021). Guided inquiry activity for teaching titration through total titratable Acidity

- in a general chemistry laboratory course. *Journal of Chemical Education*, 98(3), 882–887. <https://doi.org/10.1021/acs.jchemed.0c01198>.
- Hardiyana, A. (2016). Optimalisasi Pemanfaatan Teknologi Informasi dan Komunikasi dalam Pembelajaran PAUD. *AWLADY: Jurnal Pendidikan Anak*, 2(1), 1–12. <https://doi.org/10.24235/awlady.v2i1>.
- Islam, M. K., Sarker, M. F. H., & Islam, M. S. (2022). Promoting student-centred blended learning in higher education: A model. *E-Learning and Digital Media*, 19(1), 36–54. <https://doi.org/10.1177/20427530211027721>.
- Kurniawati, N., Maolida, E. H., & Anjaniputra, A. G. (2018). The praxis of digital literacy in the EFL classroom: Digital-immigrant vs digital-native teacher. *Indonesian Journal of Applied Linguistics*, 8(1), 28–37. <https://doi.org/10.17509/ijal.v8i1.11459>.
- Lampropoulos, G., Siakas, K., & Anastasiadis, T. (2019). Internet of Things in the Context of Industry 4.0: An Overview. *International Journal of Entrepreneurial Knowledge*, 7(1), 4–19. <https://doi.org/10.2478/ijek-2019-0001>.
- Lapitan, L. D., Tiangco, C. E., Sumalinog, D. A. G., Sabarillo, N. S., & Diaz, J. M. (2021). An effective blended online teaching and learning strategy during the COVID-19 pandemic. *Education for Chemical Engineers*, 35, 116–131. <https://doi.org/10.1016/j.ece.2021.01.012>.
- Lestari, S., Hamsia, W., & Setiyawan, R. (2021). Learning adaptation during the COVID-19 pandemic in Muhammadiyah inclusion schools. *Journal of Education and Learning (EduLearn)*, 15(2), 320–328. <https://doi.org/10.11591/edulearn.v15i2.19863>.
- Logan, R. M., Johnson, C. E., & Worsham, J. W. (2020). Development of an E-learning Module to Facilitate Student Learning and Outcomes. *Teaching and Learning in Nursing*, 00, 139–142. <https://doi.org/10.1016/j.teln.2020.10.007>.
- Lubis, A. H., & Dasopang, M. D. (2021). Online Learning During the Covid-19 Pandemic: How is it Implemented in Elementary Schools? *Premiere Educandum : Jurnal Pendidikan Dasar Dan Pembelajaran*, 11(1), 120. <https://doi.org/10.25273/pe.v11i1.8618>.
- Mpungose, C. B. (2021). Lecturers' reflections on use of Zoom video conferencing technology for e-learning at a South African university in the context of coronavirus. *African Identities*, 00(00), 1–17. <https://doi.org/10.1080/14725843.2021.1902268>.
- Ogbonna, C. G., Ibezim, N. E., & Obi, C. A. (2019). Synchronous versus asynchronous e-learning in teaching word processing: An experimental approach. *South African Journal of Education*, 39(2), 1–15. <https://doi.org/10.15700/saje.v39n2a1383>.
- Onyema, E. M., Chika, E. N., Ayobamidele, O. F., Sen, S. S., Grace, A. F., Aabha, S., & Omar, A. A. (2020). Impact of Coronavirus Pandemic on Education. *Journal of Education and Practice*, 11(13), 108–121. <https://doi.org/10.7176/jep/11-13-12>.
- Palupi, M. E. (2022). the Difference Between Synchronous and Asynchronous Online Learning Communication During Covid-19 Pandemic. *Journal of English Language and Literature (JELL)*, 7(1), 11–18. <https://doi.org/10.37110/jell.v7i1.138>.
- Pambudi, S., & Fauzi, F. (2022). Synchronous & Asynchronous Learning Dalam Perkuliahan Fikih Wudu Masa Pandemi Covid-19 Di Unaic. *Jurnal Ilmiah Mandala Education*, 8(1), 950–957. <https://doi.org/10.36312/jime.v8i1.2920>.
- Papadakis, S., Vaiopoulou, J., Kalogiannakis, M., & Stamovlasis, D. (2020). Developing and Exploring an Evaluation Tool for Educational Apps (ETEA) Targeting Kindergarten Chil-dren. *Sustainability*, 12(10), 4201. <https://doi.org/10.3390/su12104201>.
- Perveen, A. (2016). Synchronous and asynchronous e-language learning: A case study of virtual University of Pakistan. *Open Praxis*, 8(1), 21–39. <https://doi.org/10.5944/openpraxis.8.1.212>.
- Pratiwi, J. A., Rosalina, N., Rodiah, N., Ervina, W., & Info, A. (2021). The Performances of Synchronous and Asynchronous Method in Teaching and Learning English. *ETDC: Indonesian Journal of Research and Educational Review*, 1(1), 46–57. <https://doi.org/10.51574/ijrer.v1i1.53>.
- Putra, R. W. P. (2021). Improving the Students' Motivation in Learning English through Google Meet during the Online Learning. *English Learning Innovation*, 2(1), 35–42. <https://doi.org/10.22219/englie.v2i1.14605>.
- Ramadani, A., & Xhaferi, B. (2020). Teachers' Experiences with Online Teaching Using the Zoom Platform with EFL Teachers in High Schools in Kumanova. *SEEU Review*, 15(1), 142–155. <https://doi.org/10.2478/seeur-2020-0009>.
- Rizal, R., Rusdiana, D., Setiawan, W., & Siahaan, P. (2022). Learning Management System Supported Smartphone (Lms3): Online Learning Application in Physics for School Course To Enhance Digital Literacy of Pre-Service Physics Teachers. *Journal of Technology and Science Education*, 12(1), 191–203. <https://doi.org/10.3926/JOTSE.1049>.
- Sari, D. I., Zayyadi, M., Osman, S., Milawati, M., & Kurniati, D. (2022). The Application of Synchronous and Asynchronous Learning using E-learning on Elementary Linear Algebra. *Jurnal Didaktik Matematika*,

- 9(1), 22–38. <https://doi.org/10.24815/jdm.v9i1.24759>.
- Setiadi, P. M., Alia, D., Sumardi, S., Respati, R., & Nur, L. (2021). Synchronous or asynchronous? Various online learning platforms studied in Indonesia 2015-2020. *Journal of Physics: Conference Series*, 1987(1). <https://doi.org/10.1088/1742-6596/1987/1/012016>.
- Singh., P., & Prasad Singh, M. (2021). The Role of Teachers in Motivating Students to Learn. *LEARN An International Journal of Educational Technology Techno*, 11(1), 2021. <https://doi.org/10.30954/2231-4105.01.2021.6>.
- Sipatu, Y. T., & Silitonga, B. N. (2022). Implementasi Metode Tanya Jawab Untuk Meningkatkan Keaktifan Siswa Sd Pada Pembelajaran Daring. *JIPD) Jurnal Inovasi Pendidikan Dasar*, 6(2), 89–96. <https://doi.org/10.36928/jipd.v6i2.1321>.
- Williams, C., & Beam, S. (2019). Technology and writing: Review of research. *Computers & Education*, 128, 227–242. <https://doi.org/10.1016/J.COMPEDU.2018.09.024>.
- Williams, M. K., Foulger, T. S., & Wetzel, K. (2009). Preparing Preservice Teachers for 21st Century Classrooms: Transforming Attitudes and Behaviors About Innovative Technology. *Journal of Technology and Teacher Education*, 17(3), 393–418. <https://www.learntechlib.org/primary/p/28216/>.
- Williams, U. J., & Dries, D. R. (2022). Supporting Fledgling Scientists: The Importance of Autonomy in a Guided-Inquiry Laboratory Course. *Journal of Chemical Education*, 99(2), 701–707. <https://doi.org/10.1021/acs.jchemed.1c00835>.
- Wu, J. Y., & Nian, M. W. (2021). The dynamics of an online learning community in a hybrid statistics classroom over time: Implications for the question-oriented problem-solving course design with the social network analysis approach. *Computers & Education*, 166, 104120. <https://doi.org/10.1016/j.compedu.2020.104120>.