EXPLORING PRE-SERVICE TEACHERS' EXPERIENCES TOWARDS SYNCHRONOUS ONLINE LEARNING AMIDST THE COVID-19 PANDEMIC

Fitria Rahmawati

English Language Education Department, Faculty of Language Education,
Universitas Muhammadiyah Yogyakarta, Indonesia
E-mail: fitriarahmawati@umy.ac.id

Abstract: As a result of the COVID-19 pandemic, learning systems all around the world have shifted from traditional classrooms to online learning. Synchronous learning was developed to promote online learning interactions via audio, video, text chat, interactive whiteboards, and various app-sharing. This study examined the experiences of pre-service teachers enrolled in an English Language Education Department (ELED) as they engaged in synchronous online learning amidst the COVID-19 pandemic. The participants involved in this study were six ELED pre-service teachers. The research was carried out at an Indonesian Islamic private university. The research was carried out at an Indonesian Islamic private university, involving six ELED pre-service teachers. A descriptive qualitative was adopted with an in-depth interview as the data gathering technique to generate information from the participants. The findings from the interview revealed that there were various synchronous online learning activities experienced by the pre-service teachers, such as listening to lectures, doing a group discussion, doing an online presentation, and completing evaluations. In addition, various tools available made learning easier for them, such as screen sharing, recording, camera, and microphone features. Regarding the perceptions of the ELED pre-service teachers, this study identified positive and adverse effects resulted from a synchronous online learning. The perceived positive effects were flexibility in learning, various ways of learning, live interaction, and autonomous learning. Meanwhile, its adverse effects were missed opportunity to participate in learning, lack of interaction, undelivered messages, and feeling isolated.
Keywords: *covid-19 pandemic; EFL learning; online learning; pre-service English teachers; synchronous learning.*

INTRODUCTION

Information, communication, and technology (ICT) facilitate the learning process, especially in higher education. Mobile computing, social networking, and open-source software have opened up new opportunities for building a learning environment in which self-learning is characterized by personalized learning and flexible scheduling (Rahmawati, 2019). ICT offers a range of advantages and opportunities, including convenience, adaptability, and the capacity to engage in collaboration and interaction with instructors and fellow students situated in diverse geographical locations.

Due to the COVID-19 pandemic, students could not attend school. The only option was to switch from traditional education to online learning. According to Langford and Damşa (2020), academics, administrators, and ICT support staffs were working nationwide to implement full online learning quickly. Özüdoğru

(2021) admitted the necessity for educational institutions and teachers to enable effective teaching and learning experiences in synchronous online settings. Furthermore, Farkhani, Badiei, and Rostami (2022) highlighted the necessity of providing teachers with training and support in creating successful classroom management practices for online teaching.

A synchronous online learning is a suitable alternative to university classes. Synchronous learning is similar to a traditional face-to-face class, yet, in a virtual form. According to Bower et. al. (2017), images, audio, and video captured in the real world are projected like a mirror, and the virtual participant's avatar is projected into the virtual world's monitor screen. Debbag and Fiddan (2022) defined synchronous learning as an online learning environment by using new tools and approaches such as video conferencing platforms and digital resources. Consequently, synchronous learning sessions facilitate students

the opportunity to articulate their thoughts, actively participate, and contribute their ideas in a manner akin to that of a conventional physical classroom environment.

Several studies have been conducted to investigate the adoption of synchronous online learning. Wang et. al. (2018); Shukri et. al. (2020); Bower et. al. (2015) found that students could get benefit from the flexibility of blended synchronous learning environments, such as increased information accessibility, the convenience of attending lessons from remote locations via two-way video conferencing, and time savings. Through synchronous online learning, students can learn without needing to meet in person or have physical contact with friends or lecturers. In addition, Martin et. al. (2012), Rahayu (2020), and Zydney et. al. (2019) found that many elements, such as text chat and webcam facilitating interaction between the students and the instructor made online synchronous learning simple.

Despite its significances, eventually, teachers encountered a variety of obstacles in administering their synchronous learning sessions. Maintaining student involvement and discipline, developing effective communication, and assuring technical reliability were among the obstacles (Debbag & Fiddan, 2022). Teachers had to adjust their classroom management tactics to the online environment by using new tools and approaches such as video conferencing platforms and digital resources. In addition, a study conducted by Rinekso and Muslim (2020), Bower et. al. (2015), Romero-Hall and Vicentini (2017) discovered that poor internet access, auditory noise, and task confusion may have prevented the implementation of synchronous online learning. From pre-service teachers' view, according to a study conducted by Tarihoran, Syafuri, and Masykur (2021), pre-service teachers reported positive experiences and viewed online learning as flexible and convenient, others expressed concerns and difficulties. Participants cited technological issues, lack of face-to-face interaction, difficulties in gaining access to resources, and limited participation as some of the most significant obstacles. Meanwhile, Merisi, Emekako, Legg-Jack, Mpundu, and Lubombo (2022) argued that it promotes flexibility and convenience while addressing the challenges of restricted face-to-face connection and real-time feedback.

Those previous studies investigated synchronous online learning, such as the significances, the supporting features, and the drawbacks of synchronous online learning. This study aims to explore pre-service teachers' experiences with synchronous online learning, particularly regarding meaningful activity, positive impact, and negative impact that synchronous online learning has on language acquisition during the COVID-19 pandemic. Then, following research questions were formulated as follows to make this research focused: (1) What educational activities were undertaken by pre-service teachers specializing in the English Language Education during synchronous online learning sessions? (2) What are the perceived positive effects of synchronous online learning among ELED pre-service teachers? (3) What are the perceived adverse effects of synchronous online learning among ELED pre-service teachers?

METHOD

In this section, the researcher discusses the research methodology used in this study, including the research design, research participant, research instrument, data collection method, and data analysis.

A descriptive qualitative was applied to understand in-depth about pre-service teachers' experiences in participating in a synchronous online learning during the COVID-19 pandemic. According to Creswell (2012), descriptive qualitative is intended to investigate and comprehend the meaning attributed to individuals or groups in the context of social or human problems. As a result, it was appropriate for this study since it allows the researcher to collect data based on participants' experiences, allowing to obtain a more in-depth information.

Six pre-service teachers from the English Language Education Department of an Islamic private university in Indonesia voluntarily took part in this study. The researcher selected the pre-service teachers from three different batches, including batch of 2017, 2018, and 2019. By involving students from diverse batches, the researcher expected to gain more detail and in-depth information.

The data for this study were gathered through interviews. An interview is a conversation in which questions and answers are used to collect information from willing participants who unconsciously recognize that they already have the required information Creswell (2012). As a result, an interview was acceptable for this study since the participants were allowed to share their

experiences, and the researcher could collect data based on their perceptions.

The researcher conducted an open-ended and in-depth interview as how the research was planned. The researcher also asked follow-up questions to clarify the information provided with a limited number of questions to elicit the participants' ideas and opinions (Cohen et al., 2011). Open-ended questions can help the researcher collect data by allowing participants to give their opinions or viewpoints in response to the research inquiries. The researcher collected in-depth information regarding the experience of pre-service teachers engaged in a synchronous online learning during the COVID-19 pandemic. The interview was performed utilizing synchronous applications, such as Ms. Teams and Zoom, and also over the phone.

After obtaining the data, the final stage was to analyze it. Transcribing, member checking, and coding were the processes to analyze the data in this study. The explanation of each process is explained as follows.

Transcribing. Transcribing is the initial step in the data analysis process. According to Creswell (2012), the transcription process converts audio recordings or field notes into text data. All of the information from the previous interview was transcribed by the researcher.

Member checking. Through member checking, the interview transcripts were clarified to determine the legitimacy of the interview. Member checking was a procedure that allowed respondents to rectify factual inaccuracies, add extra information, or record interview data information (Cohen et al., 2011). The researcher gave the participants the transcript and requested them to review it.

Coding. "Coding" is defined as "the process of arranging data by bracketing pieces (or text or image segments) and adding a word in the margins that represent a category" (Creswell, 2012, p. 219). The first step in coding was open coding. Information was developed using open coding based on categories (Creswell, 2012). The researcher generated conclusions from the responses of the participants to each question. The next was detailed analysis which was performed on a short textual segment but in a larger extract of the entire text. According to Creswell (2012), axial coding picks one category and places it in a theoretical model. The researcher classified each statement item with the same meaning for all participants. The researcher then discovered and classified the key text data types that only answer study questions. The researcher used selective coding to tell stories about the connections between those categories (Creswell, 2012). It was a procedure in which just the "key" categories and those that needed additional clarification were chosen, with the rest of the categories being filled in with descriptive information and addressing the research questions.

RESULTS AND DISCUSSION

This study looked into the experiences of ELED pre-service teachers who participated in synchronous online learning sessions. The research findings were revealed from interviewing six participants. Relevant findings from previous studies and experts' statements were also presented to discuss the findings. The first part discusses the pre-service teachers' experiences in joining a synchronous learning mode during the Covid-19 pandemic. The second part discusses their assessment on the perceived positive and negative effects of synchronous online learning.

Pre-service teachers' experiences towards synchronous online learning

Based on the data collected, the researcher discovered information related to pre-service teachers' experiences participating in a synchronous online learning. The findings on the experiences cover the educational activities the pre-service teachers engaged in and the features of the synchronous learning they found meaningful.

Educational activity engaged in synchronous learning sessions

Listening to the lecture. The finding revealed that the teachers designed an interactive presentation to be transmitted through video conferencing during the session. During the interview, Jett and Reyna stated that during the synchronous online learning session, the teachers presented and explained the learning materials being discussed. As in the face-to-face meeting, slide is used to explain the materials, during the synchronous session, interactive presentation slide was also prepared and used by the teachers. In addition to slide, short video was also used to deliver the materials.

The pre-service teachers engaged in listening to lectures about the learning materials during the synchronous sessions. The teachers would lead the session by offering some notes while describing the topic and highlighting the major points by underlining the issue (Pujasari, 2021).

As a result, even though the students and the teacher were separated, the implementation of synchronous learning mode facilitates the teachers to assist their students' learning by explaining the topic and providing direction, like in a traditional classroom.

Having a group discussion. After the lecturer explained the topic, a group discussion was held based on the data collected. Jett noted that the instructors used technologies like MS Team, Zoom, Google Meet, and others. Activities like discussions were conducted via the Zoom/Ms. Team during lectures. Sky added that it might be between friends or students with the lecturer. Raze also added that she discussed the content presented by the lecturer with friends. They discussed in the breakout room to discuss the tasks assigned, or the lecturer would ask them to discuss the material learned. Furthermore, Özüdoğru (2021) argued that the importance of a lecturer in online learning includes establishing rapport with learners in synchronous situations and creating a feeling of community, which means guiding and facilitating meaningful discussions and critical thinking.

Doing a presentation. After the pre-service teachers finished their group discussion, they did a group presentation. After hearing the lecturer's perspective, the pre-service teachers were requested to share their thoughts on the subject. Reyna stated, "Sometimes I get assignments to do a presentation". Then the first participant, Jett, also agreed to this idea. He mentioned, "Through synchronous online learning tool, we can use sharing screens with each other with audiences, when there is a presentation task, we can immediately show our presentation". Raze explained, "We make media presentations in the form of videos, and it explains the material that would be taught or studied at the next meeting." Accordingly, the pre-service teachers were supposed to present their ideas in this activity. The activity undertaken by the participants in this study were similar with the study conducted by Rapanta, et al., (2020). Their study identified the activity in which the teacher asked each group to discuss significant questions, after which the replies from each student were gathered and organized, and lastly, each group must present the results of their discussion.

Doing an evaluation. Quizzes or questions and answers at the end of the course might be used to assess the students. Sky and Reyna mentioned an evaluation at the end of the lesson. During the interview, Sky explained, "There is a quiz every week". Furthermore, conducting quizzes might provide learning variety, ensuring it was not monotonous. Sky said, "The rest of the activities are like quizzes using Kahoot! or Mentimeter or something like that. It's more like an assignment, so students don't get bored." Omen added, "The lecturer also gives questions and quizzes so that we don't fall asleep".

Doing a task through quizzes and questions and answers will give variety to learning and keep it from becoming monotonous. It also offers an assessment as an indicator of learning performance. ICT can improve the assessment process by providing immediate feedback, generating self, peer, and group assessments, and using learning analytics to notify teachers and students about the learning process (Rapanta et al., 2020). Moreover, Dada, Alkali, and Oyewola (2019) argued that synchronous online learning, which includes real-time interaction and immediate feedback, may contribute to improved learning outcomes.

Synchronous learning features that ease pre-service teachers

The findings revealed that various features that supported learning and made the process easier, such as sharing screen, recording, camera, and audio, were discovered to facilitate pre-service teachers learning and make the process easier. Each characteristic will be discussed in detail in the following paragraph.

Share screen. Omen, Raze and Reyna said that the most helpful tool, in their opinion, was the share screen, which is similar to a whiteboard and clarifies the material in better detail. Based on the prior statement, the share screen performed the same function as a whiteboard for displaying all learning materials. According to Park and Bonk (2007), the shared screen feature allows users to upload various electronic materials to share a visual display during the presentation, while the Breeze voice conference feature lets participants converse audibly.

Recording. The recording feature allows any activity in synchronous learning. Raze said, "We can record any material in the course that day". In addition, Jett added, "The most useful feature is the video recorder, so all activities carried out in learning can be recorded so if we forget or miss a class, we can replay the material from its stored recording." Therefore, recording can help pre-service teachers understand the subject by allowing them to replay it. Carrington et al. (2010) found that students can use the recording

to make up for missed classes or to study and strengthen their knowledge of the content.

Camera and microphone. Synchronous online learning includes built-in video and audio for real-time communication. Yoru explained, "With these features, I can interact in two directions, either by video call or voice." Camera and audio facilitate communication for asking and answering questions. According to Mougiakou et al. (2020), the student could use the microphone or camera to ask the instructor questions or answer exercises.

Some participants also mentioned features that eased their synchronous learning process. Raze mentioned, "The features that are commonly used in the application are share screen, chat, breakout rooms, and cloud memory to save material". Jett and Omen also said they could use screen sharing and recorder, PowerPoint, and microphone features. In addition, Yoru said, "The features used during the learning process are video, green screen or backdrop and recording video, webcam, and others."

Even though they were far apart, the qualities of online synchronous learning made it easier for them to communicate and learn. According to Martin et al. (2012), students loved the direct response from instructors, the public and private chat options for interaction, the screen sharing tool, videos, and the ability to examine archived material.

The positive effects of synchronous learning
The second research question is regarding the positive effects of synchronous learning. Pre-service teachers benefit from the change from traditional face-to-face to online synchronous teaching methods because they have more flexibility in their learning, a greater variety of learning methodologies, live interaction, and more autonomy. Each impact is explained in detail below.

Flexibility in learning
Synchronous online learning can be implemented in a variety of ways and can promote the emergence of independent learning. During the interview, Jett and Omen preferred online synchronous learning because they could use a laptop and the internet anywhere, so they did not have to go to campus. Reyna also agreed with online synchronous learning's convenience. Sky also added, "For the positive effects so that we can complete all of our activities, so what is like college activities and my activities are also running well". Raze also mentioned, "With this

synchronous learning, it can help me study with my lecturers and friends even though I don't meet in person".

Thus, online synchronous learning affected the lecturers' flexibility for pre-service teachers, allowing them to continue their learning activities during the COVID-19 pandemic. Atmojo (2021) stated that the flexibility and convenience of online professional development allows them to participate in learning activities at their own pace and on their own timetable. Merisi et al. (2022) stated the importance of flexibility, adaptation, and support to provide excellent learning experiences and promote the positive features of flexibility and convenience. Meanwhile, Mustopa and Hidayat (2020) mentioned that students might communicate readily with synchronous learning applications regardless of distance, location, or time constraints.

Variety of ways of learning
In various ways, synchronous learning provides wider access to more inclusive learning. Jett and Reyna mentioned previously that synchronous online learning applications eased their online learning. When pre-service teachers miss the material, students can review it again from the recording, even make presentations and discuss it with friends. Synchronous learning is also linked to the internet, allowing pre-service teachers to access additional resources during the learning process. Sky said, "If the teacher is explaining, we don't know. We can search first through the internet." In addition, Omen and Reyna said, "Then the material delivered is also usually sent, so it is easier for us to get the source."

This statement implies that synchronous online learning provides more opportunities than face-to-face learning. With more learning methods, such as live interaction, online learning resources, and sharing content, pre-service teachers can learn most conveniently. According to Irvine and Richards (2013), broad access learning empowers students to customize how they interact with their instructor and peers in a course.

Live interaction
The lecturer could provide a direct explanation of the material to pre-service teachers. Sky said, "Then there are those who think the course is interesting because it looks like the explanation is only ten and fifteen minutes long". It also included a camera so that everyone could see each other. Reyna also mentioned, "Usually when studying online; the students are told to go on cam

by the lecturer". Reyna and Raze also said synchronous learning helped pre-service teachers learn so that during a pandemic, they could ask direct questions to lecturers, making it easier for them to ask questions about the material.

Pre-service teachers could interact directly with teachers and their friends using cameras and audio connected to the internet. It enables them to stay connected and engage in activities similar to traditional face-to-face learning. According to Tarihoran, Syafuri, and Masykur (2021) online learning boosts technological readiness, designing effective online courses, and encouraging interaction and engagement. A study conducted by D'Angelo et al.(2021) In the context of online teaching, the essential competencies of pedagogical skills are designing and facilitating online learning activities that foster engagement and interaction. Furthermore, Bondi et al. (2016) stated that synchronous learning allows for multifaceted collaboration, and it is simple to integrate into a learning management system.

More autonomous learning
Pre-service teachers can benefit from synchronous learning since it allows for more personalized learning and a flexible involvement structure, making them feel more autonomous. Yoru said, "Online synchronous learning is more independent and more individual learning. The advantage is more self-study. This means that I am more able to explore knowledge independently."

Thus, online synchronous learning allowed pre-service teachers to be more autonomous and explore learning knowledge. When it comes to synchronous learning, autonomous learning is crucial. Pre-service teachers are needed to plan, organize, and analyze their learning while maintaining their learning motivation. According to Learner autonomy is a less visible feature of all teaching and learning, but it is an important component of transactional distance theory and student engagement in distant education (Mcbrien et al., 2021). Meanwhile, Phelps and Dimitrios (2020) revealed the increasing significance of synchronous learning in remote education, particularly as communication technologies that permit live interactions between facilitators and learners become more widely available.

The adverse effects of synchronous learning
Though its significant contributions to foreign language learning, especially during the pandemic, the findings also revealed that synchronous learning had its adverse effects. All of the participants felt that during its early implementation, synchronous learning was difficult for them. Every challenge perceived by pre-service teachers would eventually affect their learning. Each effect is described in detail below.

Missing the learning activity
When participating in an online synchronous learning, pre-service teachers' major issue is on network connection. Omen and Raze admitted that the signal was sometimes lost while using Wi-Fi, not to mention when the power went out. They would not hear the explanation and could not keep up with the teachings. Reyna stated, "The impact on me was that sometimes I'm confused about how to take online classes. As usually the Wi-Fi doesn't work, then I would run out of the internet quota. So, not rarely, I must join the online lectures at a friend's place."

Furthermore, inadequate connections frequently result in application failures, which impact pre-service teachers' learning. Jett stated, "The bad thing about virtual classes was too hard to understand the material, it makes me sleepy too then sometimes the signal was lost, and the internet quota was also wasteful, so sometimes I go in and out of the learning room, so I sometimes miss material". Raze also added, "Sometimes when we take a synchronous class, we are standby at home and listening to the lecturer's explanation, but suddenly we are thrown out, whether it is before the signal or whatever, it became one of the problems so sometimes because of that we couldn't keep up with the lessons that day."

Therefore, pre-service teachers sometimes did not participate in learning because they must leave or could not enter due to internet interference. Mustopa and Hidayat (2020) revealed that students struggled to follow the lesson since not all locations had a good cellular connection. Furthermore, according to Atmojo (2021) students encounter challenges in online learning are gaining access to reliable internet connections and resources. As a result, they were less than optimum when online learning, acquiring lecture information and collecting college tasks.

Lack of interaction
The findings revealed that synchronous learning's lack of communication was a severe issue. Sky said, "From the communication aspect, the

obstacle I experienced was more when the lecturer explained that there was less communication between the lecturer and the student, for example, there was interaction in the learning, it was like explaining, the lecturer asked whether the students had understood the material or not, but no one answered." Reyna and Yoru agreed that synchronous online was less interesting, but that was alright because of the situation; usually, not all students engaged, so teaching and learning activities were passive.

Pre-service teachers' learning experience could be affected by a lack of interaction. Less attractive learning materials may be one of the reasons, but technological restrictions may also be a factor. There was limited student interaction, and some expressed dissatisfaction with technology issues that affected their study (Mcbrien et al., 2021). According to Çamlÿbel and Eveyik (2022) concerns have been raised about the absence of face-to-face engagement and the restrictions imposed by online platforms.

Undelivered message
A considerable detrimental influence on learning in online synchronous learning, where audio was one of the supporting elements for two-way communication, also became an issue. Raze said, "Sometimes the lecturers can't listen to the questions we ask so that what we want to ask was not answered."

Since the message was not transmitted adequately, the phrase implied that low audio quality hurt communication. Noise happens because of sound leakage from devices that do not support it or from not using headphones or a microphone. Furthermore, Huang and Hsiao claimed that low audio quality could cause delays and interrupt a conversation and the transmission of learning content (as cited in Chen et al., 2020).

Feeling isolated
Pre-service instructors were negatively affected by feelings of isolation. In addition, a lack of enthusiasm and laziness in participating in learning activities may result in poor teaching and learning outcomes. Sky said, "Online synchronous learning was less effective, not all students seem to pay attention to their lecturers, sometimes there are also lecturers on camera themselves, I mean, the students are even off camera, some even lie down or do other activities." Omen declared, "It was more boring because you just listen to people talking without meeting them and sometimes the material

presented was not very clear." Sky stated, "Online classes seem to be less effective for classroom learning; if we go online, we only see the laptop screen, and we have to be forced like we have to know and understand." Raze added, "Others even like to fall asleep." Due to the long distance, the feelings of isolation also reduced pre-service teachers' participation in online synchronous learning. Yoru said that pre-service teachers could not apply and use their information directly, either in a practical way or through classroom teaching and learning activities.

Based on the findings, pre-service teachers who felt isolated were less likely to pay attention in class. According to Romero-Hall and Vicentini (2017), pre-service teachers feel unable to network and form relationships because of the distance.

CONCLUSION
The findings of this study revealed synchronous learning processes during the COVID-19 outbreak. During synchronous online learning, the pre-service instructors used videoconferencing to listen to their PowerPoint presentations. Video and other assets used in videoconferencing were included in the materials. After listening to the material, the pre-service teacher participated in a group discussion session using MS Teams, Zoom, or Google Meet. Pre-service teachers typically presented the results of group discussions either in a group or individually after conducting them. The pre-service teacher then completed an evaluation of the lecture before the class ended.

During the COVID-19 epidemic, the research found that pre-service English teachers positively influenced synchronous learning. Participants believed synchronous learning could be done anywhere with an adequate internet connection. The participants stated that they still had live interactions with the professor and their peers during synchronous learning. Synchronous learning involves both autonomous learnings.

On the other hand, the researcher discovered a detrimental influence on pre-service English teachers. The participants mentioned several unfavorable impacts. A difficulty arose for several people who did not have stable internet connections. Due to their unreliable internet connection, the participants did not participate in synchronous learning. The findings also indicated synchronous learning's lack of communication. Several students were unresponsive to what was going on in the classroom. Hardware support affected synchronous learning as well. Not every

participant had proper devices. Audio noise, for example, could disrupt the teaching and learning process by preventing the message from being heard clearly.

REFERENCES

Atmojo, A. E. P. (2021). EFL teachers' online teacher professional development experiences amidst the COVID-19 pandemic: Practices and perceptions. *Englisia: Journal of Language, Education, and Humanities*, *9*(1), 1-18.

Bondi, S., Daher, T., Holland, A., Smith, A. R., & Dam, S. (2016). Learning through personal connections: Cogenerative dialogues in synchronous virtual spaces. *Teaching in Higher Education*, *21*(3), 301–312. https://doi.org/10.1080/13562517.2016.114128 8

Bower, M., Dalgarno, B., Kennedy, G. E., Lee, M. J. W., & Kenney, J. (2015). Design and implementation factors in blended synchronous learning environments: Outcomes from a cross-case analysis. *Computers and Education*, *86*, 1–17. https://doi.org/10.1016/j.compedu.2015.03.006

Bower, M., Lee, M. J. W., & Dalgarno, B. (2017). Collaborative learning across physical and virtual worlds: Factors supporting and constraining learners in a blended reality environment. *British Journal of Educational Technology*, *48*(2), 407–430. https://doi.org/10.1111/bjet.12435

Çamlÿbel-Acar, Z., & Eveyik-Aydın, E. (2022). Perspectives of EFL teacher trainers and pre-service teachers on continued mandatory distance education during the pandemic. *Teaching and Teacher Education*, *112*, 103635.

Carrington, D., Kim, S. K., & Strooper, P. (2010). An experience report on using collaboration technologies for distance and on-campus learning. *Conferences in Research and Practice in Information Technology Series*, *103*(Ace), 45–51.

Chen, J. C. C., Dobinson, T., & Kent, S. (2020). Students' perspectives on the impact of blackboard collaborate on Open University Australia (OUA) online learning. Journal of Educators Online, 17(1).

Chen, N. S., Ko, H. C., Kinshuk, & Lin, T. (2005). A model for synchronous learning using the Internet. *Innovations in Education and Teaching International, 42*(2), 181–194. https://doi.org/10.1080/14703290500062599

Cohen, L., Manion, L., & Morrison, K. R. (2011). *Research method in education.* Routledge.

Creswell, J. (2012). Design: Choosing among five approaches. in *Design: Choosing Among Five Approaches* (Vol. 3, Issue June).

Dada, E. G., Alkali, A. H., & Oyewola, D. O. (2019). An investigation into the effectiveness of asynchronous and synchronous E-learning mode on students' academic performance in national open university (NOUN), maiduguri centre. *International Journal of Modern Education and Computer Science, 13*(5), 54. https://doi.org/10.5815/ijmecs.2019.05.06

D'Angelo, I., Paviotti, G., Giaconi, C., & Rodrigues, M. B. (2021). Professional competences of pre-service teachers: From the F2F to the online learning programme. [Le competenze professionali del docente in formazione: dal corso in presenza al corso online] *Form@re, 21*(1), 106-121. https://doi.org/10.13128/form-10429

Debbag, M., & Fidan, M. (2022). Examining pre-service teachers' perceptions about virtual classrooms in online learning. *International Review of Research in Open and Distributed Learning, 23*(3), 171-190. https://doi.org/10.19173/irrodl.v23i3.5925

Farkhani, Z. A., Badiei, G., & Rostami, F. (2022). Investigating the teacher's perceptions of classroom management and teaching self-efficacy during covid-19 pandemic in the online EFL courses. *Asian-Pacific Journal of Second and Foreign Language Education, 7*(1) https://doi.org/10.1186/s40862-022-00152-7

Irvine, V., & Richards, L. (2013). Realigning higher education for the 21st-century learner through multi-access learning. *MERLOT Journal of Online Learning and Teaching*, *9*(2), 172–186.

Langford, M., & Damşa, C. (2020). Online teaching in the time of COVID-19: Academic teachers' experiences in Norway. *Center of Experiential Legal Learning (CELL), University of Oslo*, *2*(April), 1–35. https://www.jus.uio.no/cell/ressurser/evaluering /rapporter/report-university-teachers-160420-with-annex.pdf

Martin, F., Parker, M. A., & Deale, D. F. (2012). Examining interactivity in synchronous virtual classrooms. The international review of research in open and distance learning. *The International Review of Research in Open and Distance Learning*, *13*(3), 227– 260.

Mcbrien, J. L., Cheng, R., & Jones, P. (2021). View of virtual spaces: employing a synchronous online classroom to facilitate student engagement in online learning. *The International Review of Research in Open and Distributed Learning*. http://www.irrodl.org/index.php/irrodl/article/view/605/1264

Merisi, P. O., Emekako, R., Legg-Jack, D., Mpundu, M., & Lubombo, M. (2022). Asynchronous pre-service teaching practicum and work-integrated learning amid COVID-19 pandemic. *International Journal of Social Sciences & Educational Studies, 9*(1), 190-206. https://doi.org/10.23918/ijsses.v9i1p190

Mougiakou, E., Papadimitriou, S., & Virvou, M. (2020). Synchronous and asynchronous learning methods under the light of general data protection regulation. *11th International Conference on Information, Intelligence, Systems and Applications, IISA 2020, May*. https://doi.org/10.1109/IISA50023.2020.9284341

Mustopa, A. J., & Hidayat, D. (2020). Pengalaman mahasiswa saat kelas online menggunakan aplikasi zoom cloud meeting selama covid-19. *Digital Media & Relationship*, 2(2), 75–84.

Özüdoğru, M. (2021). Pre-service teachers' perceptions related to the distance teacher education learning environment and community of inquiry. *Journal of Pedagogical Research, 5*(4). https://www.proquest.com/scholarly-journals/pre-service-teachers-perceptions-related-distance/docview/2712880336/se-2

Park, Y., & Bonk, C. (2007). Is online life a breeze? A case study for promoting synchronous learning in a blended graduate course. *Journal of Online Learning and Teaching*, 3(3), 307–323. http://jolt.merlot.org/vol3no3/park.htm

Phelps, A., & Dimitrios, V. (2020). Successful transition to synchronous learning environments in distance education: A research on entry-level synchronous facilitator competencies. *Education and Information Technologies, 25*(3), 1511-1527. https://doi.org/10.1007/s10639-019-09989-x

Pujasari, R. S. (2021). Video conferencing on canvas for distance learning during covid-19 in indonesian context. *Proceedings of the UNNES-TEFLIN National Seminar*, 4(1), 9–16. https://utns.proceedings.id/index.php/utns

Rahayu, D. (2020). Synchronous zoom web conference system: an exploratory study on students' e-learning experience. 5(1), 80–93. https://doi.org/10.22236/JER

Rahmawati, F. (2019). Blended learning in an English listening and speaking course: Freshmen's voice and choice. *353*(IcoSIHESS), 56–62. https://doi.org/10.2991/icosihess-19.2019.9

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

Rinekso, A. B., & Muslim, A. B. (2020). Synchronous online discussion: teaching English in higher education amidst the covid-19 pandemic. *JEES (Journal of English Educators Society)*, 5(2), 155–162. https://doi.org/10.21070/jees.v5i2.646

Romero-Hall, E., & Vicentini, C. (2017). Examining distance learners in hybrid synchronous instruction: Successes and challenges. *Online Learning Journal*, 21(4), 141–157. https://doi.org/10.24059/olj.v21i4.1258

Shukri, A., Nordin, L., Salleh, F. I. M., Raidzwan, S. N. M., & Ahmad, R. (2020). UniKL students' perception on synchronous learning using ICT as learning tools to learn english. *Journal of Critical Reviews*, 7(8), 793–796. https://doi.org/10.31838/jcr.07.08.170

Tarihoran, N., Syafuri, B., & Masykur. (2021). Pre-service teachers' perception of online learning in islamic university during a coronavirus (covic-19) pandemic. *Turkish Journal of Computer and Mathematics Education, 12*(3), 4181-4189.

Wang, Q., Huang, C., & Quek, C. L. (2018). Students' perspectives on the design and implementation of a blended synchronous learning environment. *Australasian Journal of Educational Technology*, 34(1), 1–13. https://doi.org/10.14742/ajet.3404

Zydney, J. M., McKimmy, P., Lindberg, R., & Schmidt, M. (2019). Here or there instruction: Lessons learned in implementing innovative approaches to blended synchronous learning. *Lessons Learned in Implementing Innovative Approaches to Blended Synchronous Learning. TechTrends, 63*(2), 123-132.