SYNCHRONOUS AND ASYNCHRONOUS ONLINE LEARNING IN ENGLISH LANGUAGE CLASSROOMS IN INDONESIA: A LITERATURE REVIEW

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ABSTRACT
As the whole learning ecosystem is changing because of covid-19 pandemic outbreak, education institutions and teachers are demanded to cope with technology for online learning and give the best learning experience to their students. The aim of this research is to identify synchronous and asynchronous online learning in English language classrooms in Indonesian schools and universities during covid-19 pandemic, focusing on technological applications used and challenges faced by both teachers and students. By implementing Systematic Literature Review (SLR) approach from Indonesian Science and Technology Index known as SINTA and SCOPUS database, 31 research papers published between 2020-2022 in the Indonesian context are selected. This research creates a table of synchronous and asynchronous online learning applications used in English language classrooms as well as activities done and challenges faced by both teachers and students during covid-19 pandemic in the Indonesian context. The results of this research can be used by relevant stakeholders to help incorporate a balanced synchronous and asynchronous online learning in their English language classrooms as well as anticipate and prepare for future learning in their respective schools and universities, especially after covid-19 pandemic.

KEYWORDS
Synchronous, Asynchronous, Online Learning, English Language Classrooms, Indonesia

1. INTRODUCTION
In early 2020, ministry of education in all counties required all levels of education to apply online learning as the main learning mode in all courses because of covid-19 pandemic outbreak. This caused tens of thousands of educational institutions close most of their classes. As a result, 1.5 billion students and 63 million teachers have transformed face-to-face learning into online learning mode using technology (UNESCO, 2020; World Bank, 2020). All counties required all levels of education to apply online learning as the main learning mode in all courses, including in English language classrooms in Indonesia (Ministry of Education Republic of Indonesia, 2020; Kompas, 2020).

English is important in Indonesia, a developing country in Southeast Asia with a population totaling around 260 million individuals, the fourth largest in the world. The growing importance of English in Indonesia have created new purposes and needs for learning English mainly by young Indonesians who have previously learned English as a foreign language (EFL) for communication and academic purposes. Nowadays, learning English is always associated with globalization where the nation needs to perform on the global stage for the sake of economy. (Rido, 2020a; Di Grapello, 2013).

During covid-19 pandemic, English language learning becomes more challenging (Ministry of Education Republic of Indonesia, 2020; Kompas, 2020). Teachers have difficulty to adapt with the situation, especially learning using technology for online learning as well as incorporate a balanced and effective online learning, determining the most appropriate applications, interesting and relevant learning media which make students engaged in learning and more productive, and learning resources that can be easily accessed. Meanwhile, students also face challenges in terms of coping with the latest technology and demotivation in learning (Kusumawati, 2020; Mandasari, 2020; Valverde-Berrocoso et al, 2020).
This research is initiated in line with those concerns and an effort to understand the situation of online learning in English language classrooms, looking at the common practice of synchronous and asynchronous online learning during covid-19 pandemic by reviewing the existing literatures in the Indonesian school and university context. It further tries to reveal the technological applications used as well as the activities and done and the challenges faced by English language teachers and students. At the end, this research will provide relevant stakeholders with tables of alternatives of synchronous and asynchronous online learning applications for school and university English language classrooms, including activities in their online classrooms and some potential challenges that can be anticipated to improve the quality of teaching, promote engagement, and make learning more productive in the future, particularly after covid-19 pandemic.

2. ONLINE LEARNING

Online learning has its own characteristics, including student-centered; built in a structured and organized manner; involving massive participants and participation; integrated, timely and authentic. Because of these characteristics, online learning is carried out in two platforms namely synchronous and asynchronous (Wilkins, 2018; Dron & Anderson, 2016; Salmon, 2013). In general, teachers and students incorporate both platforms for online teaching and learning process.

Synchronous learning is principally a type of real-time learning; interaction between teacher and student as well as between student and student are carried out simultaneously like regular face-to-face meetings, facilitated by a system, usually video-conferencing (O’Rourke & Strickler, 2017; Ziegler, 2016). Meanwhile, asynchronous online learning is not time bound and students can carry out electronic activities in their own way, independently according to their own time availability. Normally, students only interact with learning resource or material such as reading materials, learning videos that are related to the topic of discussion while teachers only supervise or check (Rido, 2021; Rido, et al, 2020).

3. METHODOLOGY

This research is conducted in three research steps. First, a protocol review based PICOC formula (Population, Intervention, Comparison, Results, Context) is done. Second, the research questions and criteria for the selection process, namely inclusion and exclusion which cover data extraction and data synthesis are formulated. Inclusion and exclusion criteria for this study means that the articles contain keywords ‘synchronous and asynchronous online learning’ and ‘English language classrooms in Indonesia’ and are indexed in Indonesian Science and Technology Index known as SINTA and SCOPUS database, published between 2020-2022 (during covid-19 pandemic outbreak), and written in English. The search process is conducted manually by going through specific journal papers in the database. At this stage, there are 198 articles found. Then, 64 papers are chosen due to excluding papers that do not directly discuss synchronous and asynchronous online learning in the Indonesian context with its challenges based on the titles and abstracts. Finally, 31 articles are selected for this research after conducting the quality assessment.

4. RESULTS AND DISCUSSION

The results of this research show that much study has been done focusing on the use of digital technology for synchronous and asynchronous online learning in English language classrooms both in schools and universities in Indonesia during Covid-19 pandemic. In this part, synchronous online learning will be firstly presented and discussed, followed by asynchronous online learning.
4.1 Synchronous Online Learning in English Language Classrooms in Indonesia

There are twelve papers on synchronous online learning during covid-19 pandemic in the Indonesian context that have been documented and reviewed. For synchronous online learning, the findings indicate a number of video conferencing applications used by both teachers and students, including the activities that they do and challenges that they experience. It can be seen in Table 1 below.

Table 1. Synchronous Online Learning in English Language Classrooms in Indonesia

<table>
<thead>
<tr>
<th>Synchronous Online Learning Applications</th>
<th>Activities</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zoom</td>
<td>Teachers display the materials on screen, mainly in reading, writing, and listening comprehension classes</td>
<td>Teachers and students experience poor internet connection</td>
</tr>
<tr>
<td>Google Meet</td>
<td></td>
<td>Teachers and students spend a lot of money to pay big internet data</td>
</tr>
<tr>
<td>Skype</td>
<td></td>
<td>Teachers and students have incompatible technological devices</td>
</tr>
<tr>
<td>Cisco WebEx</td>
<td>Students give respond to teachers and to other friends verbally, mainly in writing and speaking classes</td>
<td>Teachers lack of technology literacy</td>
</tr>
<tr>
<td>Discord</td>
<td>Students respond in the form of text in chat-box in writing and speaking classes</td>
<td>Teachers need more time to explain the materials</td>
</tr>
<tr>
<td>Microsoft Team</td>
<td>Students present their papers in speaking class</td>
<td>Students cannot focus because of other domestic tasks from parents</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Students are afraid to speak</td>
</tr>
</tbody>
</table>

From Table 1 above, it can be seen that video conferencing applications like Zoom, Google Meet, Skype, Cisco WebEx, Discord, and Microsoft Team are used for synchronous online learning in English language classrooms in Indonesian schools and universities. Principally, those video conferencing applications have similar function, facilitating a two-way communication between teachers and their students, in the same time, engaging students with their classmates in a real-time basis (Atmojo & Nugroho, 2020; Kusuma, et al, 2021; Lie & Prijambodo, 2021; Putri & Sari, 2022). Zoom, Google Meet, Skype, Cisco WebEx, Discord, and Microsoft Team applications provide teachers with various supporting features such as screen sharing where teachers could display the materials on the screen to aid understanding, mics feature where teacher and students can talk as well as respond to each other, chat box where students can respond in a form of writing text and upload files. Therefore, this promotes listening and speaking skills of the students (Rahayu, 2020; Fitria, 2021; Prasetya, 2021).

However, the use of those video conferencing applications for English language learning has several challenges for both teachers and students. First, they experience poor internet connection, especially those who live in rural areas. As a result, the voice of teachers become unclear so that they need to repeat the explanation many times. Besides, those applications cost big internet data which become a serious matter for both teachers and students. In addition, there are some other issues such as incompatible devices—smartphones with middle-low specification, limited number of laptops, and lack of technology literacy, and technical problems make it more difficult to operate and use the applications. Because of low quality of personal devices, they frequently install and re-install the applications. Teachers also mention that they have limited time to explain all the materials because of time reduction of teaching hours during covid-19 pandemic and some technical issues (Hermansyah & Aridah, 2021). Meanwhile, from students’ side, they become reluctant to speak during the class (Hamid, 2020; Mannong, 2020; Handayani, et al, 2021; Fitria, 2021; Hermansyah & Aridah, 2021; Septianingsih & Erliza, 2021). In addition, in many cases, students cannot focus because while attending the class via video conference, they are also helping their parents at home (Lie & Prijambodo, 2021).
4.2 Asynchronous Online Learning in English Language Classrooms in Indonesia

There are nineteen research articles on asynchronous online learning during covid-19 pandemic that have been identified and reviewed. For asynchronous online learning, the results show that some technological applications used and activities done by both teachers and students during teaching and learning process, including for students’ assessment. The findings also identify some challenges faced by them in their asynchronous online learning. Please refer Table 2.

Table 2. Asynchronous Online Learning in English Language Classrooms in Indonesia

<table>
<thead>
<tr>
<th>Asynchronous Online Learning Applications</th>
<th>Activities</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WhatsApp</strong></td>
<td>Teachers share learning materials</td>
<td>Teachers get difficulties to monitor students’ engagement and contribution as they cannot see them in person</td>
</tr>
<tr>
<td></td>
<td>Teachers check students’ attendance</td>
<td>Students need to scroll up to find the correct shared information or materials from their teachers because of overlapping talk</td>
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<tr>
<td></td>
<td>Teachers initiate discussion mainly in speaking and writing classes</td>
<td>Students do not get detailed explanation</td>
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<tr>
<td></td>
<td>Teachers give assignments</td>
<td>Students do not understand the tasks</td>
</tr>
<tr>
<td></td>
<td>Students submit assignments</td>
<td></td>
</tr>
<tr>
<td><strong>Screencast-O-Matic</strong></td>
<td>Teachers record their own teaching and set the learning materials (ppt slides) as the background</td>
<td>Students become passive learners as it is only one way interaction</td>
</tr>
<tr>
<td></td>
<td>Teachers share the recorded video to students</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Students listen/watch the video recording</td>
<td></td>
</tr>
<tr>
<td><strong>Google Classroom</strong></td>
<td>Teachers provide forum for discussion</td>
<td>Students do not get direct feedback from their teachers</td>
</tr>
<tr>
<td></td>
<td>Teachers give assignments</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Students share their thoughts on a particular topic</td>
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<tr>
<td></td>
<td>Students respond to their teacher’ and classmates’ statements</td>
<td></td>
</tr>
<tr>
<td><strong>SPADA and Moodle</strong></td>
<td>Teachers check attendance</td>
<td>Teachers face difficulties to prepare all activities and materials as it is time consuming</td>
</tr>
<tr>
<td></td>
<td>Teachers share learning materials</td>
<td>Students experience poor internet connection</td>
</tr>
<tr>
<td></td>
<td>Teachers provide discussion forum, especially in writing and speaking classes</td>
<td>Students face many compulsory tasks</td>
</tr>
<tr>
<td></td>
<td>Teachers give assignments online examination in reading and writing classes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Students access materials</td>
<td></td>
</tr>
</tbody>
</table>
Students give comments in speaking and writing classes
- Students submit assignments and sit for online examinations in reading and writing classes
- Students are demotivated for participation

- Teachers give instructions and tasks
- Teachers share learning materials
- Teachers upload their own teaching videos or other relevant videos
- Students post pictures with English captions
- Students give comments on their classmates’ posts
- Students watch videos
- Students give respond in comment box
- Students use a lot of data
- Students experience unstable internet connection

- Teachers create interactive and fun based-game assessment in many forms
- Students do the test and get the score directly on screen
- Teachers spend a lot of time to prepare the assessment
- Teachers get difficulty to check the originality of students’ answers or works

Table 2 above shows that in order to facilitate asynchronous online learning in English language classrooms, some applications are used such as WhatsApp, Screencast-O-Matic, Google Classroom, SPADA, Moodle, and Google Form. Teachers also use social media such as Facebook, Instagram and YouTube, including online assessment platform such as Kahoot and Quizziz for learning.

WhatsApp is used by English language teachers to share learning materials, check students’ attendance, start discussion, as well as give and submit assignments (Lie et al., 2020; Prasetio & Priyana, 2021). Even though WhatsApp is internet-friendly, some students still face difficulties such as overlapping chat as they always need to scroll up to find the correct shared information or materials from their teachers. In WhatsApp, teachers also do not give detailed explanations; they just simply share the materials, then ask students to do assignments even though students still do not fully understand the task. As for teachers, it is difficult to monitor students’ engagement and contribution because they cannot see them in person (Hariadi & Simanjuntak, 2020; Ariyanti, 2020; Rabbianty, et al, 2021; Putri, 2021).

In delivering materials through asynchronous platform, some teachers also use Screencast-O-Matic where they can record their own teaching and set the learning materials (power point slides) as the background, then, share the recorded video to their students. Students can watch the recording at home. However, it tends to be one way, only for material delivery and student only become passive recipient of knowledge (Basri, et al, 2021).

Besides, teachers utilize Google Classroom. Some studies focusing on the use Google Classroom in English language classrooms indicate that teachers and students express their positive responses due to its flexibility. Google Classroom provides many features like discussion forums where students can share their thoughts about the topics and respond to their teacher’ and classmates’ statements. In addition, teachers can easily share and students can also download the learning materials. Google Classroom also has a reminder feature when it comes to assignment or project deadlines, but it has no direct interaction feature as students need immediate feedback on their shared thoughts and responses (Hariadi & Simanjuntak, 2020; Rinekso, et al, 2021; Prasetya, 2021; Prasetio & Priyana, 2021).

Moreover, it is also revealed that many university English language classrooms in Indonesia are also mediated by an official learning management systems provided by the government namely SPADA, using Moodle as its platform, which provides various features in order to facilitate both administrative and learning
activities such as attendance, learning materials, chat box, discussion forum, assignment submission, and online examination which help improve the students’ reading and writing skills (Maulana & Lintangsari, 2021; Sari, 2020; Sari & Oktaviani, 2021). However, in the implementation, students argue that poor internet connection and too many compulsory tasks demotivate students’ participation (Sari, 2020). Meanwhile, teachers mention time management, admitting that it takes a huge amount of time and dedication to design and upload all materials in the system and prepare all devices before teaching and learning process (Lie et al., 2021; Suherman, et al, 2021).

This research also finds that teachers use social media such as such as Facebook and Instagram as well as streaming application like YouTube in their English language classrooms. In using Facebook, teachers create Facebook group, invite all students, post instructions, share learning materials, and let students discuss in the comment box. Meanwhile, in using Instagram, teachers ask students to post a picture with English captions and their classmates respond in the comment box (Nugroho & Mutiaraningrum, 2020). As for YouTube, teachers normally upload their teaching videos and students are asked to watch them, then, respond in comment box (Ariyanti, 2020; Hariadi & Simanjuntak, 2020; Lie at al., 2020; Meliala et al, 2021; Rinekso, et al, 2021). Teachers claim that the use of social media enhance students’ writing skills and improve both their grammar and vocabulary. However, students mention that these social media use a lot of data and while internet connection is unstable, learning becomes slower (Nugroho & Mutiaraningrum, 2020; Rabbianty, et al, 2021; Basri, et al, 2021).

Meanwhile, in assessing students’ knowledge, teachers use Google Form, Kahoot and Quizizz. Google Form is used by teachers to develop questions for quizzes or examinations in order to assess students’ knowledge (Putri, 2021; Rinekso, et al, 2021). Furthermore, allow teachers to create interactive and fun based-game examination in form of multiple choice, essay, and true-and-false questions. Students can get the results directly on scoreboard right after completing the test which is efficient and transparent. However, it takes time and energy to prepare those assessments, including marking students’ essays (Lie at al., 2020; Nugroho & Mutiaraningrum, 2020; Nugroho, et al, 2021; Atmojo & Nugroho, 2020). What lack is that these applications only have ‘one function’—for assessment, besides, it is difficult for teachers to check the originality of their students’ answers or works. (Basri, et al, 2021).

5. **CONCLUSION**

This research aims at revealing synchronous and asynchronous online learning in English language classrooms in Indonesian schools and universities by reviewing the existing literatures. The results indicate that Indonesian teachers employ synchronous and asynchronous online learning in their online classrooms. For synchronous online learning, video conferencing applications like Zoom, Google Meet, Skype, Microsoft Team as well as social media such as Discord are utilized. These applications are principally used to facilitate a two-way communication between students and teachers and among students in classes which promote listening and speaking skills. Meanwhile, for asynchronous online learning, applications such as WhatsApp, Google Classroom, Google Form, Screencast-O-Matic, SPADA and Moodle as well social media such as Facebook, Instagram and YouTube, including online assessment platform such as Kahoot and Quizizz are used. These applications are mostly used for self-directed learning in classes which emphasize listening, reading, and writing skills.

However, some challenges are also identified. From teachers’ side, both synchronous and asynchronous online learning platforms consume their times to arrange both schedules and materials and big internet data. Teachers also experience poor internet connection and difficulties to monitor students’ engagement. In the same vein, students face some issues such as poor internet connection, incompatible computer and smartphone, lack of technological literacy, lack of interpersonal connection with their teachers, failure in understanding the materials, demotivation, overload tasks, and lack of participation. In short, technical and personal issues are the most dominant challenges experienced by both teachers and students.

Interestingly, this research also finds a number benefits of online learning. Teachers and students have more flexibility in their teaching and learning activities and become more creative as there are more spaces and platforms for improvisation and sharing ideas. As there are so many materials to study, tasks to do, assignments to complete, and examinations to pass, the use of these applications also help improve speaking, listening, reading, and writing skills of students, especially during covid-19 pandemic. The implication of this research
will give contributions to policy makers and teachers in terms of providing alternatives and options for synchronous and asynchronous online learning during covid-19 pandemic and in the future learning.

This research has some limitations. The data gained from the existing literatures are contextual case studies with limited number of participants and do not cover all provinces in Indonesia. Thus, the results of this research cannot be generalized. This research must be follow-up with field research which includes direct observation, interview, and survey to get a holistic picture. This will significantly help relevant stakeholders to prepare for future learning in English language classrooms in Indonesian and neighboring countries, especially after covid-19 outbreak.

ACKNOWLEDGEMENT

We would like extend our highest appreciation to Directorate General of Research, Technology, and Community Services Ministry of Education, Culture, Research and Technology Republic of Indonesia for granting this research [Grant number 1421/LL2/PG/2022; 050/UTI/LPPM/E.1.1/VI/2022] and Universitas Teknokrat Indonesia for supporting this research.

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