ABSTRACT

Integration of technology in the teaching and learning process brings innovation where a learning process can be conducted virtually despite time and place boundaries. Online learning as the integration of learning and technology is used as the primary strategy to continue the teaching and learning process due to the Covid-19 outbreak. This study aims to analyze student perceptions of online learning before and during the COVID-19 pandemic. This research is a descriptive research with a qualitative approach. The results showed that the students had negative and positive perceptions of online learning before and during the pandemic. Before the pandemic, the students emphasized exploring the materials, while the students emphasized flexibility in learning during the pandemic. Meanwhile, negative perceptions are shown through the loss of direct communication between teachers and students. During the pandemic, students emphasized the flexibility aspect of the online learning mode. However, negative perceptions also emerged, namely the abundance of online tasks and the difficulties of using e-learning. Various challenges of online learning were also found during the pandemic compared to before the outbreak. For example in addition to inadequate internet connections and gadgets, anxiety problems due to the workload and less appropriate learning plan also arose. It can be seen that online learning before and during the outbreak experienced dynamics, so teachers and students must be encouraged to be more adaptive in dealing with changes in their learning.

1. INTRODUCTION

Technology is readily incorporated into daily life, and it significantly affects the improvement of education (Trilling & Fadel, 2009; Murniati & Sanjaya, 2017; Al Arif, 2019; Kawinkoolasate, 2019; Arthana et al., 2018; Suwastini et al., 2020; Kalpokaite & Radivojevic, 2020; Puspawati et al., 2021; Listianti et al., 2021; Citrawati et al., 2021; Ariantini et al., 2021; Suwastini, Marantika, et al., 2021; Suwastini, Ersani, et al., 2021; Dwiyantri et al., 2021). The use of technology has advanced beyond its functions as learning media and support
systems, into platforms for online learning (Dantes et al., 2017; Barclay et al., 2018; Dantes et al., 2020; Utami et al., 2021). However, many studies have reported the challenges faced by educators while implementing online learning (Harsasi, 2015; Mali, 2016; Gustilo & Calingasan, 2019; Handayani, 2017; Al Arif, 2019; Kinimu et al., 2017; Puspitasari et al., 2021). These challenges have led to the negative perceptions of teachers and students toward online learning (Murniati & Sanjaya, 2017; Woods et al., 2019; Pratiwi et al., 2020).

With the outbreak of the COVID-19 Pandemic, radical changes happened in the world, including in education. Face-to-face learning was reverted into online learning to prevent the spread of pandemics (Nadeak, 2020; Azhari & Fajri, 2021), despite the challenges and negative perceptions. In Indonesia, online learning is required by the Ministry of Education and Culture through circular number 15 of 2020 (Kemdikbud, 2020), and it is enforced for all education levels, including the university level. Previous studies have identified students’ negative perceptions toward the implementation of online learning (Murniati & Sanjaya, 2017; Octoberlina & Mushimin, 2020; Yuliana et al., 2020; Wahyuni et al., 2021), although many of them also identify the positive perception toward the implementation of online learning. At the university level, these divided perceptions are also identified (Amin & Sundari, 2020; Mali, 2016; Pratiwi et al., 2020; Rahiem, 2021; Giatman et al., 2020).

Online learning requires learning autonomy as its characteristics; therefore, the students are more likely to implement online learning, especially in the pandemic era (Dinh & Nguyen, 2020; Khalili, 2020; Adedoyin & Soykan, 2020). However, do the students’ negative perceptions persist during the pandemic, or have they developed a more positive perception than before? What about the challenges, are the old challenges persisted, or have new challenges been identified? This study will compare Indonesian college students’ perceptions of online learning that previous studies have reported for answering the questions posed in the present study. This research also compares the challenges in implementing online learning before and during the outbreak. This study is essential to give a clear picture of the students’ perception of online learning when it was still an optional learning strategy before the pandemic and when online learning became mandatory during the outbreak. The present study will show whether this pandemic has led to changes in students’ perceptions and whether the perceptions have changed. It also happens toward the challenges that Indonesian college students face. The present study will show whether the students face the same or different challenges, which may provide insights for stakeholders in their decision-making about rapid shift in learning activities mode.

2. METHOD

The present study used descriptive qualitative approach shown in Figure 1. It was started by identifying the topic to be researched, namely perception on online learning before and after the COVID-19 pandemic. In the second step, two research questions were proposed: what are the perceptions of online learning before the pandemic of COVID-19 and the perceptions of online learning during the COVID-19 pandemic. The third step was determining the research plan where related information from books, articles, and websites was browsed and skimmed. After that, the databases for selecting the data source were determined, namely Education Research Information Center (ERIC), Google Scholar, and Science and Technology Index (SINTA). Meanwhile, articles related to the perceptions of online learning were used as data sources. They are supported with relevant information from websites. The collection of articles was limited to open-source articles due to the independent funding nature of the present study.

The fifth step was determining the criteria for the data sources from various related articles. The criteria for screening articles (Shadiev & Yang, 2020), namely 1) previous researches are published between 2015 and 2021, 2) studies are focused on the use of technology for language teaching and learning and perception or beliefs toward the use of online learning environment for language learning, 3) the previous studies are published in English, 4) the researches are published in the full text in the accreditation journal of SINTA 1 - 3 and also indexed Scopus and 5) the previous studies give high impact on the present study. During the article retrievals, several keywords were used, such as "perceptions on online learning," "online learning in higher education," "online learning during COVID-19 pandemic", “perceptions on online learning during COVID-19 pandemic”, and “benefits of online learning in higher education.” With these criteria, 35 articles were selected as the source of data in the present study, with eight articles published in a reputable international journal indexed by Scopus, 25 articles published in an accredited national journal indexed by SINTA, and 1 article published in a journal indexed by Copernicus. Among these 35 articles, thirteen were studies on students’ perception of online learning before the COVID-19 pandemic, while 21 were conducted to reveal students’ perception of online learning during the pandemic.
After all related articles were collected, as the seventh step, they were read to find the data that answered the present study's purpose. The information on the perceptions and beliefs of teachers and students toward online learning in higher education and the advantages of online learning on students' English language proficiency were synthesized. These results helped answer the research questions. Then, the theses were...
developed into an article to provide a comprehensive elaboration on the study results. The article was then revised according to suggestions from colleagues and reviewers.

3. RESULT AND DISCUSSION

Result

The students’ perception toward online learning

Perception is linked to the impact of something (Benson & Lor, 1999). Therefore, students' experiences, background knowledge, and personality will affect their perception of success in learning (Suratno & Aydawati, 2017). Two perceptions were identified from previous literature toward online learning before and during the outbreak, as illustrated in Figure 2.

![Figure 2. Perceptions on online learning](image)

Figure 2 shows that between two situations, online learning as the way to improve language skills and learning engagement were still perceived positively by the students. The students felt that online learning gave them much chance to explore materials and flexibility in learning (Hidayati & Saputra, 2020; Prihandoko, 2021), such as ease in generating questions and opinions and extensive sources on the internet (Nadeak, 2020). It is because online learning is known as learning strategy that increases collecting sources for learning activities (Chen et al., 2020). Therefore, the students tend to develop their skills even in online group activities (Gómez-Rey et al., 2016). In addition, it was found that before the pandemic, the activities of online learning in the studies were mainly conducted to gather materials and submit assignments. Online learning gives equal opportunities to engage students to participate in various online teaching and learning activities (Pleines, 2020). Therefore, the students have more chances to contribute to online discussions. The other reason the students have a positive perception is flexibility in learning. There is no limitation on time or places to access learning platforms to do assignments (Hidayati & Saputra, 2020; Arifiati et al., 2020). It is also found that online learning gives students and teachers high flexibility (Davis et al., 2019).

Different factors between the two situations above caused negative perceptions toward online learning. Before the students were forced to do online learning, they preferred to interact directly in learning activities. It was because they viewed that the technology just as a bridge in developing their knowledge. Therefore, a decision to take an online course is not easy, and they end up with onsite learning activities (Murniati & Sanjaya, 2017; Alhamami, 2019; Ngampronchai & Adams, 2016; Eichelberger & Leong, 2019; Li et al., 2015). It was different when they experienced complete online learning. They tended to see the challenges and its implication. It was supported by previous study, who found that negative perception toward online learning might also be caused by students' expectations, not in line with teachers' management in the online learning process (Syauqi et al., 2020). Another study revealed that even though the students highly participated in the learning process, they were not enthusiastic because they could not stand the number of assignments the teachers gave (Agung &
Surtikanti, 2020). Related to that case, students’ emotional, cognitive, and behavior affect students' engagement in online learning (Dewan et al., 2019). Thus, well-prepared online learning activities will improve students' enthusiasm in teaching and learning activities.

Students mostly had similar reasons for perceiving the positive side of the implementation of online learning before and during the outbreak. A positive sense that the students most felt during the pandemic was learning flexibility. At the same time, it was a different finding found in negative perceptions of the students. Negative factors were mainly found during the pandemic era. The students considered the sheer number of assignments included in the e-learning design was challenging. Therefore, it can be concluded that negative perception was mainly found during pandemic outbreaks. In response to that case, education stakeholders need to consider many things in online learning. Several suggestions can help face these problems, such as providing family support, using social media as a learning platform to reduce students’ anxiety, developing extension applications that are friendly for all students’ devices, cooperation between formal education and internet provider, and providing the educators with guidelines and training to support students' online activities (Simamora, 2020; Ariyanti, 2020; Rahardjo et al., 2016; Abidah et al., 2020).

The advantages of online learning

Online learning environment brings advantages for university students during learning activities, as illustrated in Figure 3. Several previous research found advantages through comparison studies, reviewing related literature, experimental and observation.

![Figure 3. The advantages of online learning](image)

Online learning activities are mostly perceived as a modern strategy in improving students’ language skills, exploring materials, and assessing students with clear feedback (Murniati & Sanjaya, 2017; Cakrawati, 2017; Fithriani et al., 2019). It is supported by previous study, who state that online learning provides significant quantities of information, manages, and provides the member of the virtual learning environment with a guarantee of quality and validity (Alves et al., 2017). Research on online learning before pandemic situations is more likely to see the chance in learning improvement. However, it was also a factor for the students in perceiving online learning positively during the pandemic. Nevertheless, the perspective of online learning during pandemic has been moved to the broader point of view. The next advantage that felt before and during the outbreak was flexibility. Online learning is known to give a high quality in communication that can be done anywhere and anytime to fulfill students’ satisfaction (Landrum et al., 2020). It is supported by study who reveal that the adult learners in higher education emphasizes on the importance of flexibility study option for the students, for example is online course program (Brunton et al., 2018). Moreover, the students revealed that they have no time limitation when they wanted to access materials or check the feedback from their teachers. Relating to the online feedback that was viewed as motivation for students from their teachers, two kinds of feedback in their study namely epistemic feedback and suggestive feedback (Guasch et al., 2013). Epistemic feedback refers to request of critical explanation and suggestive feedback refers to an advice on the progress, expansion, and improvement in the ideas. Moreover, online learning activities give many advantages, but it depends on students' willingness to explore materials and use them to support their development (Kotera et al., 2019). During the
pandemic, the main goal of online learning activities was to reduce the spread of the virus (Rahiem, 2021; Yulia, 2020). Online learning provides the students with the flexibility of attendance which is the primary goal of online learning during this situation (Davis et al., 2019). The students cannot attend face-to-face classes because of health issues.

The other new thing that the students learned during pandemic situations was various learning platforms and applications. Using various applications for college students gives them a chance to develop their digital literacy (Lambton-Howard et al., 2020). Further, technology drives learners in computer-mediated communication in second language teaching, especially on how university students learn in an online environment (Such, 2019). However, it is essential for students that the effectiveness of an application in education depends on the students' attitude toward their learning, willingness, and motivation to learn new experiences through the applications (Yang, 2012). Online learning still gave advantages for the students even more during the outbreak. It was found that online learning helped prevent the virus and allowed them to develop their digital literacy through learning various learning applications. Online learning gives a chance for students to interact with some variables such as application, retrieving information, understanding, analyzing, and computational knowledge (Abuhassna et al., 2020). However, reinforcing students with technology will give them a broader experience in learning.

**The challenges in online learning activities**

The studies about online learning have been conducted before the pandemic, and it is not new in language teaching (Amin & Sundari, 2020). However, due to the present situation, the learning activities are forced to change the learning activities to be online (Iswati, 2021). Therefore, online learning brings some challenges for the students. It was found that the challenges of online learning activities were found from both situations, as presented in Figure 4.

![Figure 4. The challenges of online learning activities](image)

**Discussion**

Internet connection was the main problem of online learning before and during pandemic outbreaks based on the data results above. This challenge was emphasized by, that the lack of access to stable internet was still a famous issue at many schools in Indonesia. A study reveals that Indonesia's geographic location and low purchasing power to pay internet fees might be the reasons for accessibility before the pandemic (Luschei et al., 2008). Moreover, two factors of limited internet connection: internal and external factors (Rahardjo et al., 2016). The internal factor is students' willingness to find better internet access, while the external factor is the limited internet facilities. The other challenge for the students in following online classes was the support of facilities, but it mainly occurred before the pandemic. During the pandemic, the students faced a broader challenge: economic issues that will support their facilities. Before the pandemic situation, schools facilities were
emphasized in supporting students’ online learning. It was supported by previous study who argue that in supporting online activities, educators stakeholders can support students and teachers in conducting the online learning process (Lawrence & Tar, 2018; Trust, 2016). However, economic issues significantly impacted the internet quota, handphone support, laptops, and other devices needed to follow online learning during the pandemic. Pandemic changes global economic recession that gives depression, anxiety, and challenge for those whose parents have lost their jobs (Khalili, 2020). Moreover, Khalili adds that due to the pandemic situation, the poverty level increased while the need for internet access was also higher than before.

The new challenge of online learning during pandemic situations was health issues. From Figure 3, health issues that felt were dizzy and eyes strain. No one can control this challenge because this is about students’ behavior and health (Octoberlina & Muslimin, 2020). The eyes work hard to focus on the screen during online learning activities. Therefore it is suggested that the students take enough rest and decrease the use of phones or social media (Octoberlina & Muslimin, 2020). The consequence of the current situation, offices, schools, universities, and workplaces have to close to control physical contact (Amin & Sundari, 2020). Therefore, all activities, mainly the learning process was conducted at home. As a result, the students got anxious because they spent much time learning and doing their tasks at home. The students’ anxiety was caused by minimal direct communication with their friends for discussion, boredom, frustration with the condition, and understanding of the materials. Students’ age affects their anxiety, which is one of the factors caused by mental health (Richards & Tangney, 2008). Further, they emphasize that students aged 16–25 years have not reached not stable in managing their emotions. Moreover, the anxiety and students’ preference in online learning was not linear (Arribathi et al., 2021). They prefer online learning because of the quick preparation, such as not taking a bath, no make-up, and having a meal while learning. The most significant point of their anxiety was no concrete interaction and lots of assignments.

The last challenge was the variation of online learning strategy and materials planning. It was primarily found in the teaching and learning process during the pandemic. The problems in online learning mostly were choosing learning materials and technical support to create a well-planned learning environment to meet students’ needs (De Vries et al., 2005). On the other hand, the students still cannot understand the materials, mostly reading materials (Nadeak, 2020). They felt that the materials were complex. At the same time, the learning strategy was the teachers’ responsibility to make students engage with online learning activities. Further, in responding to the learning strategy, the teacher must be adaptive, creative, and open to the dynamic change in the current situation. The challenges of online learning were mainly found during the outbreak. In addition, the biggest challenges that the students felt before and during the pandemic were internet connection and facilities support. It was clear that the existing challenges before the pandemic were still the issues during the pandemic and even new challenges that the students faced during the outbreak. Further, the educators might find out learning strategies to prepare online learning activities and reduce students’ anxiety during the teaching and learning process.

4. CONCLUSION

This research intended to gain students’ perception on online learning before and during the Covid-19 pandemic. The study also explored the benefits and challenges gained from online learning. The results show that the students have positive and negative perceptions of online learning before and during pandemic. Most positive perceptions are found before the pandemic, namely improved engagement and language skills caused by students’ perception that online learning is an innovation that gives them a chance to explore learning further. During the pandemic, the positive perception was added with the learning flexibility suitable for learning from home. Although the students forfeit missing direct communication due to online interaction before the time of the pandemic, during the pandemic students perceived online learning negatively based on abundance task and difficulties in following complete online learning mode. Flexibility and improved achievement are the advantages of online learning before the pandemic. During the pandemic, the advantages were added in form of reduced virus spread and opportunity to learn various learning application. Online learning also poses various challenges, such as problems with internet connection and insufficient facilities. During the pandemic, other than the challenges mentioned previously, students also got anxious and suffered from insufficient material planning and learning strategy. There is a need for the students and teachers to quickly adapt their learning, seen from the dynamic in online learning before and after the pandemic hit. Furthermore, a quick response from the stakeholders is very much needed. However, this study only begins to reveal the changes in online learning. Strategies and assistance offered to close the gap of possible learning loss during the pandemic may be explored further for the future research endeavor.
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