POSTGRADUATE STUDENTS' PERCEPTIONS ON MOODLE AS LEARNING MANAGEMENT SYSTEM FOR ONLINE ENGLISH LANGUAGE LEARNING DURING COVID-19 PANDEMIC

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Abstract

In Indonesia, teaching learning process through Moodle as learning management system (LMS) has been implemented in education levels such as junior high schools, senior high school and universities. To find out the role of Moodle in learning English at a higher level, it is important to know whether students have different or the same perceptions about the use of Moodle in higher education, postgraduate level. The subject this research was postgraduate students from 3 different classes of English education department at University of Islam Malang. In this study, a qualitative method was used in the descriptive design, with an online questionnaire serving as the research instrument. Questionnaires are used to collect research data. There were 22 items in the questionnaires administered using Google Form that was purposed to know postgraduate students' perceptions on Moodle at University of Islam Malang with 3 aspects to analyze; Moodle implementation, Moodle practicality, and online learning environment. The results revealed that studying English through Moodle was preferred with 66,7% of respondents agreed with the statement. For Moodle practicality, it was easy to run with 20 respondents agreed the statement or 60,6% as percentage. Online learning environment made students easier to comprehend lecturers' explanation of materials given as 63,6% respondents agreed with the statement in the questionnaire. From those results, it could be concluded that Moodle was a preferred LMS. It was considered easy to use. Online learning environment also eased students to understand lecturers' materials in English education department.

Keywords: Moodle; Learning Management System; Students' Perceptions

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INTRODUCTION

Technology and education are two things that cannot be separated. Development of technology is growing fast as the need of it follows as well. People may apply it to the realm of education as more advanced facilities to help the learning process are supplied in this current era of globalization. The importance of technology is highlighted here, as is the need to keep track of its progress at all times. During Covid-19 pandemic that forces education held online, the role of technology in education is critical. As Indonesian government stop face-to-face teaching learning process, it is operated through e-learning. Rista (2021) stated that the use of information technology in web-based learning, such as

e-learning, will result in significant changes in the education system that will be developed, the material that will be presented, how the instructional and learning process will be carried out, and the obstacles that students, lecturers, and other education providers will face. Shahzad, Hasan, Aremu, Hussain and Lodhi (2021) stated that webpages, educational forums, telepresence, YouTube, mobile applications, and dozens of other types of online programs for mixed educational mechanism are all covered within e-learning. An implantation for learning online is crutial nowdays, but students' comprehension is also essential. Finanti and Marzuki (2021) stated that studying using online courses also raises questions about students' comprehension of the materials given by the teachers. All of those e-learning systems are available online. Some Learning Management Systems (LMS) are used in Indonesia to have online learning and one of those is Moodle.

Moodle is a computer system brand that allows users to create and share educational content through the internet. It means that it is a learning platform that allows instructors, administrators, and students to construct personalized learning environments using a simple, efficient, safe, and interconnected technology. In Indonesia, teaching through Moodle as LMS has been implemented in education levels such as junior high schools, senior high school and universities. In junior high school level, Budiharti, Ekawati, Pujayanto, Wahyuningsih and Fitria (2015) stated on their research that the implementation of the blended learning model with Moodle media in integrated science learning can improve the cognitive abilities of eighth-grade junior high school students. Another research finding through Moodle is revealed by Dewi, Hasibuam, Siregar, Saragih and Darmawan (2019). They stated that Moodle was an effective tool for enhancing students' listening skills. Traditional learning students are less engaged in the subject because there is nothing engaging about the learning process, however students who have access to e-learning media are more interested. Not only should the students be taught in an engaging medium, but they should also enjoy the teaching and learning procedures in the classroom in order to attain the study's goal.

The implementation of Moodle is also implemented in senior high school and vocational school. Munandar and Surjono (2017) stated based on their research that a material and media of Moodle-based e-learning can make students' knowledge of the content of anecdote texts for Class X high school students was considered feasible. It means that Moodle as media can ease students in understanding one of genre texts. Research about Moodle is also conducted by Ray, Adisaputera and Pramuniati (2020) in vocational school. According to them, the level of online learning media developed utilizing Moodle upon that inspection genre text, report, is deemed being an efficient and successful effort in enhancing the knowledge and skills outcomes of one of vocational schools in Medan.

In University level, many universities around the world use Moodle as LMS. Truong in his research conducted at Van Lang University in Vietnam stated that Moodle-based learning is highly regarded for its ability to help students improve their speaking abilities. This encouraging finding could enhance the development of an experimental study to confirm the link between recording, a Moodle-based activity, and improved speaking skills (Truong 2021). In another research, Oproiu (2015) stated that Moodle platform, which is becoming increasingly popular in Romania, serves not only as a tool for educators looking to improve the quality of online courses, but also as a tool for students looking to make their learning more convenient. Zabolotniaia, Cheng, Dorozhkin and Lyzhin (2020) stated in their article that possibilities of employing Moodle features to promote the proper applicationat higher educational institution's innovative policy are addressed. The construction of an elevated data and knowledge system is a critical and

crucial problem for higher education institutions with in context of mobile transformation of social sector.

Some perceptions related to online learning during Covid-19 Pandemic and Moodle also appeared. In students' perceptions on online learning research, Anwar and Wahid (2021) stated that Students' motivation to learn independently from home might be boosted by making online learning delivery appealing. And low internet connections in developing countries have a significant impact on online learning. Related to teachers' perceptions on online teaching though Moodle, Salas-Rueda, Eslava-Cervantes, and Prieto-Larios (2020) stated Moodle had a great impact on student engagement and communication during the educational process. In reality, this LMS enable the creation of discussion forums and task distribution from any place. In another research, Thamrin, Aminah and Maghfirah (2019) stated that almost all students agree that teaching-learning grammar via Moodle is effective, efficient, and enjoyable. As a result, every student prefers online teaching-learning training. Blended learning, it is suggested, should be fostered.

Students' perceptions on Moodle are aimed to be researched to know how students see Moodle as learning management system (LMS) for online learning. It is essential to do since improvement of LMS during online learning cannot be stopped to improve the effectiveness of teaching media and education quality. Covid-19 pandemic has made a significant contribution to the field of education. Learning from home is being used to replace traditional teaching and learning methods. Abidin, Hudaya and Anjani (2020) in their research stated that the facts discovered show that the current learning process is effective enough, yet there are still some barriers to distance learning, such as the issue of social interaction between professors and students and the economics of pupils who are barely ready. It means that students as users of LMS can give their perceptions on the use of Moodle to have more effective teaching learning process during pandemic.

In a research conducted by Mulyani, Fidyati, Suryani, Suri and Halimatussakdiyah (2021), they stated that the majority of Aceh higher education students said that internet availability in distant locations and data use limits were the biggest challenges they faced as negative aspects. However, positive aspects, such as the opportunity for a fresh learning experience, the ability to adapt to technology advances, and the development of critical thinking abilities dominated the findings. Flexible, innovative, and successful learning materials, methods, strategies, and procedures should be developed as part of this e-learning implementation. According to the findings, the government, universities, and other higher education institutions should make every effort to ensure that learning instruction runs smoothly and effectively during the COVID-19 pandemic, such as by providing alternative, flexible, and effective learning methods and strategies. In this research also revealed that WhatsApp, Opensimka, Google Classroom, and Google Meet are the most popular online learning platforms used by lecturers and university students in English classes. Zoom, Edmodo, and YouTube were the least popular platforms, but no one chose Moodle.

From previous studies stated above, the students' perceptions on e-learning and the use of Moodle as LMS is implemented in junior high school, senior high school and university. What makes this article different is that the research is conducted in higher education level. That is postgraduate program, master degree program, at Islamic University of Malang. Prasetya (2021) stated in his research that higher education institutions, particularly LMS Moodle, must integrate, apply, and use technology advancements. It is primarily for the purpose of resolving the pedagogical process's pandemic problem. To have more effective learning process, it is important to know whether they have different or same perceptions on Moodle use in higher education level, postgraduate.

METHODS

In this study, a qualitative method was used in the descriptive design, with an online questionnaire serving as the research instrument. Because of their flexibility, open-ended character, and delivered ability to examine a complicated reality with more insights and deeper information, qualitative research methods, according to Alnaim (2018), make up the majority of scientific design in the special education sector. This research adapts the qualitative research procedures for Creswell and Guetterman (2019). The procedures are included problem identification, literature review, defining research purpose, collecting data, analyzing data, and reporting. This research is conducted at Islamic University of Malang (UNISMA) in Malang, Indonesia. As this study was related to English Language Teaching (ELT), the participants were the third semester students of English education in master degree program. In total, 46 students from three English education classes attended. The participants were selected after questionnaires were administered in October of the academic year 2020/2021. The questionnaires were completed by 33 students from the three different classes.

Questionnaires are used to collect research data. The questionnaire used was adapted from Questionnaires adapted from Mulyani, Fidyati, Suryani, Suri and Halimatussakdiyah (2021), Fahmi and Cahyono (2021), and Kashoob and Attamimi (2021). There were 22 items in the questionnaires administered using Google Form that was purposed to know postgraduate students' perceptions on Moodle with 3 aspects to analyze; Moodle implementation, Moodle practicality, and online learning environment. 20 items were in close-ended questions while 2 other questions were open-ended questions to cover respondents' answers that were not covered by close-ended questions. The students were asked to rate their agreement with the statements in the questionnaire on a scale of Strongly Agree (SA) to Strongly Disagree (SD). The questionnaires were produced in *Bahasa Indonesia* to make the items in the questionnaire easier to understand. Before it was disseminated electronically to the participants, this instrument was validated by a few other researchers in this study as well as an expert in the field.

RESULTS & DISCUSSION

Results

The results of this research were collected from 33 postgraduate students who completed 22 items in disseminated questionnaires in October 2021. 20 items of the questionnaires were close-ended questions while 2 other items were open-ended questions. The students rated their agreement with the statements in the questionnaire on a scale of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD). The data obtained was presented based on three factors identified in the research questions; Moodle implementation, Moodle practicality, and online learning environment. The responses of students were then given in percentages for analysis.

As this study was conducted for English department postgraduate students, the results revealed that 19 out of 33 students strongly agreed that English was their favorite subject. It could also be stated that 57,6% respondents strongly agreed while the rest of them agreed with statement. Studying English through Moodle was preferred with 22 respondents agreed with the statement or 66,7% as percentage. Moodle was also considered as a good media to learn English with 69,7% respondents agreed as well as it could ease them to understand the lessons given with 66,7% or 22 respondents agreed with the statement. 22 respondents or 66,7% had basic knowledge of how to utilize

technology so that they could have no problem in running Moodle during online learning. Table 1 showed more detailed result of this research on the implementation of Moodle:

Table 1.
Students' Perceptions on Moodle Implementation

No	Statements	Responses				Total
		SA	A	D	SD	
1	English is one of my favorite subjects to study.	19	14	-	-	33
2	Moodle as an LMS is one of my preferred ways to study English.	9	22	2	-	33
3	Moodle is a good media for me to learn English since it encourages me to keep learning.	7	23	3	-	33
4	Moodle-based English lessons are engaging and enjoyable.	10	21	2	-	33
5	Moodle as a learning medium allows me to quickly understand the instructions provided.	7	22	4	-	33
6	Moodle also provides me with other additional advantages, like the opportunity to gain new experiences and the ability to quickly adapt to technology advancements.	18	14	1	-	33
7	Because I can instantly look for similar things on the internet while learning English through Moodle, I am able to complete the homework offered.	15	17	1	-	33
8	Moodle is a useful learning tool that allows me to make the most of my time and study independently.	12	19	2	-	33
9	I have strong self-discipline and fundamental knowledge of how to use technology tools to help my online learning through Moodle.	2	22	9	-	33
10	I have troubles, especially with several Moodle services, such as submitting assignments and others.	-	13	18	2	33
11	When the information being delivered employs online learning, which requires me to download large files and watch learning videos on Moodle, I have a financial problem acquiring internet data.	4	8	17	4	33
12	During my online English classes on Moodle, I was frequently tempted by social networking and other things unrelated to the subject material.	3	10	18	2	33

Source: Researcher (2021)

Results of Moodle practicality based on the students' perceptions was also revealed. The results showed that Moodle was easy to run with 20 respondents agreed the statement or 60,6% as percentage. They also did not need a technician to help them in

operating Moodle with 48,6% respondents agreed the statement as the highest percentage. Features and systems of Moodle were also integrated well with 63,6% respondents agreed while 36,4% strongly agreed with the statement. Table 2 showed more detailed information of Moodle practicality:

Table 2.
Students' Perceptions on Moodle Practicality

No	Statement	SA	A	D	SD	Total
13	Moodle is effortless to use.	8	20	5	-	33
14	I don't require the assistance of a technician to run Moodle.	7	16	9	1	33
15	Moodle various features and systems are well integrated.	12	21	-	-	33

Source: Researcher (2021)

Results of online learning environment was also revealed in this research. Online learning environment made students easier to comprehend lecturers' explanation of materials given as 63,6% respondents agreed with the statement in the questionnaire. 45,5% respondents also agreed that online learning environment made them prefer online learning. Table 3 showed more detailed information of online learning environment:

Table 3.
Students' Perceptions on Online Learning Environment

No	Statement	SA	A	D	SD	Total
16	The online learning atmosphere eases me to comprehend the lecturers' explanations.	5	21	7	-	33
17	English Education lecturers are very active in class, able to master the subject matter well, and provide feedback during and after online class meetings.	13	18	2	-	33
18	The online learning atmosphere motivates me to actively learn and understand the lecturers' subjects.	6	22	5	-	33
19	I prefer online studying because of the learning atmosphere.	5	15	13	-	33
20	In online classes, I feel a lot more comfortable answering questions.	8	16	8	3	33

Source: Researcher (2021)

Edmodo, Google Classroom, Insert Learning, Microsoft Team, Zoom, Freejoo, DuoLingo, Spada, Quizizz, Kahoot, Docebo, and Simaster are recommended Learning Management Systems (LMS) for online learning. Edmodo, Google Classroom, Insert Learning, and Microsoft Team are LMS that chosen by more than 1 respondent. The reasons why those 4 most recommended LMS in this study are also explained. Question number 21 was stated, "Please recommend at least one LMS other than Moodle and explain why!". Table 4 showed more detailed information of students' recommendations for other LMS:

Table 4.
Students' Recommendations for Other LMS

Students' Initials	Responses
MA, LFZ, DAR, SH, PBA, NMR, AM and FA	Edmodo is recommended because it is simple, helpful and easy to use. It is also a familiar LMS for online learning during pandemic of Covid-19.
AWI, NNG, N, DTR, LD, MM, IN and LS	Google Classroom is recommended because it also easy to use for students. Students can easily access it as well as the assignments.
MZ, SU and SK	Insert Learning is easy enough to use. It is also a simple and interesting LMS for students. They can also understand the materials posted easier in it.
IAR and MA	Microsoft Team is recommended because it is an easy LMS to use. Students can discuss and have an interaction with the lecturers when they want to have some questions related to materials posted.

Source: Researcher (2021)

As question number 22 is open-ended question and it is about suggestion for online learning, respondents are not obligated to answer the question. Even it is not a must-answer question, some of respondents gave their suggestions for future online learning. Question number 22 was stated, "What suggestions do you have for future online learning?". Table 5 showed more detailed information of students' suggestion for future online learning:

Table 5.
Students' Suggestions for Future Online Learning

Students' Initials	Responses
MM, MA, FA, LD and HI	It is suggested for lecturers to use simple and interesting LMS that can be easily accessed in various devices for online learning. Giving feedback after students submit their assignments is also considered as good things for them.
MZ, PR, IN, NMR, AF and NJ	Hopefully, having a face-to-face class can happen soon as it is considered more effective for teaching learning process if it is possible. If it is not possible to happen soon, lecturers are still suggested to use LMS that is easy to use for both students and lecturers in online learning.
DAR, SH and MHH	Lecturers as suggested to give more interesting media and various teaching methods during online teaching learning process.
SU and NT	Lecturers are also suggested to provide an interactive teaching learning process. The LMS used should be integrated with other LMS or devices such as Moodle or others integrated with Zoom or others during online learning.
RS and IAR	Student-focus is also suggested for lecturers to have an effective online teaching learning process. In another hand, students are also suggested to be more serious and active during online learning.

Source: Researcher (2021)

Discussion

Based on the results above, Moodle implementation for online learning revealed that Moodle was considered as a good LMS for learning English online. Most of students agree that English was most favorite subject. Moodle could be a good media since it encouraged students to learn more. It was also an interesting media to learn online since most of students thought so. It allowed them to quickly understand the materials given in it. New experience of learning and ability to adapt with the development of technology occurred within Moodle. It also let students to quickly access internet as it was integrated with that. Students felt that Moodle ease them in doing their assignments. Learning through it led students to study independently. Most of students did not have any troubles in turning in their assignments, downloading files, or watching explanation video through it as well. During online learning through Moodle, other things that were not related with subject materials did not spoil most of students in their online learning. Those findings came to a statement that Moodle helped students in online learning. That was supported by Ray et al. (2020) stated that Moodle that was used as media could helped students in increasing their learning achievement.

Moodle was also a practical LMS for most of students. To operate it was considered as effortless thing for them. They did not need a technician to run it because they could do that for their own. What made Moodle even more practical was that the system and features were integrated very well. It meant that lectures could various teaching strategies through it. It was supported by Prasetya (2021). In his research, he stated that Moodle gave spaces for lecturers to apply various styles and approaches of teaching through the features of it.

For online learning environment, most of students felt easier to understand lecturers' material in online learning. It was also supported by the lecturers in English education department who were active during and after the class. Feedback were always given for the students after submitting their assignments. Online learning environment inspired students more actively in class during teaching learning process. Most of the also felt more comfortable to have question and answer section in online class. However, Moodle was not the only LMS used for online during Covid-19 pandemic.

Edmodo, Google Classroom, Insert Learning and Microsoft Team were most recommended LMS other than Moodle. Each of those had their own practicality, systems, features and others. Edmodo was considered as simple, helpful and easy to use. The use of Edmodo could also be seen in a research by Agustiani et al. (2021). Google Classroom was also considered as LMS that could help students to easily access the materials posted in it. Google Classroom was also implemented in a research by Abidin et al. (2020) that revealed Online learning run effectively even it still had some obstacles in implementation. Insert Learning was simple to use that could help students understand the instructions easily as well. One last recommended LMS in this study was Microsoft Team. It let students to have interaction with their lecturers and classmates. That qualified interaction was also supported by a research by Kashoob and Attamimi (2021).

CONCLUSION

Based on results and discussion above, there were points that could be concluded. Those were Moodle implementation, Moodle practicality, online learning environment, recommended LMS and suggestion for future online learning. The first is Moodle implementation for online learning. Moodle was one of favorite media to learn English with total 93,93% taken from respondents who agreed and strongly agreed with the statement. Moodle was a good LMS to learn English that could encourage them to keep

studying during Covid-19 pandemic. It was proven with total 90,90% as percentage of the respondents who agreed and strongly agreed with it. The implementation of Moodle also affected the students' quick adaptation to technology development and provided them a new learning experience through it. 96,96% as total percentage taken from respondents who agreed and strongly agreed with the statement was an evidence that Moodle was considered as LMS giving them good advantages.

Moodle practicality was second point that could be concluded. Moodle was an easy LMS to use. It was proven with 84,84% as total percentage taken from taken from respondents who agreed and strongly agreed with it. Moodle was an LMS that various features and systems were integrated well. It could be proven with 100% as total percentage taken from respondents who agreed and strongly agreed with the statement. Even most of students considered Moodle as easy and well integrated LMS, some students still required an assistance to run it. It was revealed that 30,30% respondents thought that assistance in operating it was still required.

Online learning environment was third point that could be concluded. Online learning environment made students easier to absorb the lecturers' explanation. It was proven with 81,81% as total taken from respondents who agreed and strongly agreed with the statement. 84,84% respondents also agreed and strongly agreed that online learning environment could inspire students to study more actively as well. Students were more comfortable to have discussion such as question and answer section in online learning. 72,72% as total percentage taken from respondents who agreed and strongly agreed with the statement was the evidence for it. However, there were still many other LMS that is still used and suggestion to have future online learning during Covid-19 pandemic up to now.

As the fourth point that can be concluded in this research, there were some LMS other than Moodle that were suggested for online learning. Edmodo, Google Classroom, Insert Learning, Microsoft Team, Zoom, Freejoo, DuoLingo, Spada, Quizizz, Kahoot, Docebo, and Simaster were recommended in this research. 4 most recommended LMS of those were Edmodo, Google Classroom, Insert Learning, and Microsoft Team. Those were most recommended due to similar reasons. Easiness, simplicity, helpfulness, and accessibility were the main reasons of those LMS. Lastly, suggestions for future online learning could be concluded in this research. Most of similar suggestions were that lecturers should use simple, interesting, accessible easily LMS. They were also suggested to provide engaging and interactive teaching media for students. Some other students were expecting to have face-to-face teaching learning process because it was considered as more effective teaching learning process than online class.

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REFERENCES

Abidin, Z., Hudaya, A., & Anjani, D. (2020). Efektivitas Pembelajaran Jarak Jauh Pada Masa Pandemi Covid-19. *Research and Development Journal of Education* 1(1):131–46. doi: 10.30998/rdje.v1i1.7659.

Agustiani, Merie, Sulia Ningsih, and Anggraeni Agustin Muris. (2021). Students' Learning Motivation Through Edmodo: Blended Learning in Esp Classroom. *Research and Development Journal of Education* 7(1):39–49. doi: 10.30998/rdje.v7i1.7670.

Alnaim, Mariam. (2018). Qualitative Research and Special Education. *Education Quarterly Reviews* 1(2):301–8. doi: 10.31014/aior.1993.01.01.31.

Anwar, I. W., & Wahid, J. H. J. (2021). Learners' Perception on Online Learning Implementation During Covid-19 Pandemic. *Journal of Languages and Language Teaching* 9(2):126. doi: 10.33394/jollt.v9i2.3576.

Budiharti, R., Ekawati, E. Y., Wahyuningsih, D., and Fairusy Fitria H. (2015). Penggunaan Blended Learning Dengan Media Moodle Untuk Meningkatkan Kemampuan Kognitif Siswa SMP." *Jurnal Cakrawala Pendidikan* 1(1):140–48. doi: 10.21831/cp.v1i1.4184.

Creswell, John W. (2002). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research, 6th Edition.*

Dewi, N. R., Hasibuan, J. R., Siregar, M., Saragih, A. T., & Darmawan, D. (2019). Moodle Cloud as the Developing Listening E-Learning Media in SMP Negeri 7 Medan. *Britain International of Linguistics Arts and Education (BIoLAE) Journal* 1(2):272–77. doi: 10.33258/biolae.v1i2.94.

Fahmi, Mohammad Amiqul, & Bambang Yudi Cahyono. (2021). EFL Students' Perception on the Use of Grammarly and Teacher Feedback. *JEES (Journal of English Educators Society)* 6(1):18–25. doi: 10.21070/jees.v6i1.849.

Finanti, Elinna D. & Marzuki. (2021). Cooperative Learning Strategies in Citizenship Education Subject in Elementary Schools During the Pandemic Covid-19. *Jurnal Ilmu Pendidikan* 27(1):34–40. doi: 10.17977/um048v27i1p34-40.

Kashoob, Muna & Rais Attamimi. (2021). Exploring Omani EFL Students' Perceptions of the Newly Adopted Online Learning Platforms at the University of Technology and Applied Sciences-Salalah. *Journal of Education and Learning* 10(2):28–36. doi: 10.5539/jel.v10n2p28.

Mulyani, Fidyati, Suryani, Murnia Suri, & Halimatussakdiah. (2021). University Students' Perceptions through e-Learning Implementation during Covid-19 Pandemic: Positive or Negative Features Dominate?. *Studies in English Language and Education* 8(1):197–211. doi: 10.24815/siele.v8i1.17628.

Munandar, Abdul H., & Surjono, H. D. (2017). Pengembangan E-Learning Berbasis Moodle Untuk Meningkatkan Pemahaman Isi Teks Anekdot Pada Siswa SMA Kelas X. *Jurnal Teknologi Informasi Dan Komunikasi Dalam Pendidikan* 4(1):1–12.

Oproiu, Gabriela Carmen. (2015). A Study about Using E-Learning Platform (Moodle) in University Teaching Process. *Procedia - Social and Behavioral Sciences* 180:426–32. doi: 10.1016/j.sbspro.2015.02.140.

Prasetya, Rizky Eka. (2021). Perception and Challenges Integrating Teaching English Based on LMS Moodle During Covid-19 Pandemic. *Elitejournal.Org* 3(1):31–50.

Ray, Sukma Adelina, Abdurahman Adisaputera, & Isda Pramuniati. (2020). The Quality of E-Learning Based on Learning Media Using Moodle LMS on Text of Observation Reports of Grade 10th Students of Vocational School Telkom Shandy Putra Medan. *Britain International of Linguistics Arts and Education (BIoLAE) Journal* 2(2):688–99. doi: 10.33258/biolae.v2i2.288.

Rista, Nadia. (2021). Pengaruh Media E-Learning Dan Motivasi Belajar Terhadap Ipk Akademik Mahasiswa Stkip Panca Sakti. *Research and Development Journal of Education* 7(1):126–35. doi: 10.30998/rdje.v7i1.8409.

Salas-Rueda, Ricardo Adán, Ana Libia Eslava-Cervantes, & Estefanía Prieto-Larios.

(2020). Teachers' Perceptions about the Impact of Moodle in the Educational Field Considering Data Science. *Online Journal of Communication and Media Technologies* 10(4):1–10. doi: 10.30935/ojcmt/8498.

Shahzad, Arfan, Rohail Hassan, Adejare Yusuff Aremu, Arsalan Hussain, & Rab Nawaz Lodhi. (2021). Effects of COVID-19 in E-Learning on Higher Education Institution Students: The Group Comparison between Male and Female. *Quality and Quantity* 55(3):805–26.

Thamrin, Nur Sehang, Aminah Suriaman, & Maghfirah Maghfirah. (2019). Students' Perception on the Implementation of Moodle Web-Based in Learning Grammar. *IJOLTL: Indonesian Journal of Language Teaching and Linguistics* 4(1):1–10. doi: 10.30957/ijoltl.v4i1.552.

Truong, H. N. (2021). Students' Perception Towards the Use of Moodle-Based LMS in Learning Speaking Skill at Tertiary Level. *Proceedings of the 17th International Conference of the Asia Association of Computer-Assisted Language Learning (AsiaCALL 2021)* 533(AsiaCALL):128–34. doi: 10.2991/assehr.k.210226.016.

Zabolotniaia, Mariia, Zhichao Cheng, Evgenij Mikhailovich Dorozhkin, & Anton Igorevich Lyzhin. (2020). Use of the LMS Moodle for an Effective Implementation of an Innovative Policy in Higher Educational Institutions. *International Journal of Emerging Technologies in Learning* 15(13):172–89. doi: 10.3991/ijet.v15i13.14945.