BARRIERS AND PROSPECTS OF LMS APPLICATION IN ISLAMIC HIGHER EDUCATION

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Abstract:

The study aimed at finding out the students' access and ease with technology, as well as the barriers and prospects of using the Learning Management System (LMS) at Institut Parahikma Indonesia (IPI). An explanatory sequential mixed method was used in this study. There were 16 students from English Education Department and four lecturers selected using the purposive sampling technique. The instruments were a questionnaire and an in-depth interview. The results revealed that the students' access was well-versed in technology and felt at ease utilizing the LMS. Students' and lecturers' common barriers were insufficient bandwidth connections and a lack of personal time management, while their common prospects were enhanced infrastructure and internet connections, and large capacity in LMS for uploading data, lack of training for students, incompatible features in particular assignments, and a limited budget for internet usage. Meanwhile, students' prospects were LMS application on Google Play, direct assignment notification via SMS, and feedback from lecturers. In contrast, the lecturers' prospects were that all IPI materials should be accessible in LMS. Therefore, the institution needs to provide LMS training for the students, evaluate the lecturers, and enhance the capacity of the bandwidth connection. Moreover, the LMS features should be upgraded to maximize the functions.

Abstrak:

Penelitian ini bertujuan untuk mengetahui akses dan kemudahan mahasiswa terhadap teknologi, serta hambatan dan prospek penggunaan Learning Management System (LMS) di Institut Parahikma Indonesia (IPI). Metode campuran sekuensial penjelas digunakan dalam penelitian ini. Ada 16 mahasiswa dari Jurusan Pendidikan Bahasa Inggris dan empat dosen yang dipilih menggunakan teknik purposive sampling. Instrumen yang digunakan adalah angket dan wawancara mendalam. Hasil penelitian menunjukkan bahwa akses siswa fasih dalam teknologi dan merasa nyaman memanfaatkan LMS. Hambatan umum mahasiswa dan dosen adalah koneksi bandwidth yang tidak mencukupi dan kurangnya manajemen waktu pribadi, sementara prospek umum mereka adalah peningkatan infrastruktur dan koneksi internet, dan kapasitas besar di LMS untuk mengunggah data, kurangnya pelatihan untuk mahasiswa, fitur yang tidak kompatibel dalam tugas tertentu , dan anggaran terbatas untuk penggunaan internet. Sedangkan prospek mahasiswa adalah aplikasi LMS di Google Play, notifikasi tugas langsung melalui SMS, dan feedback dari dosen. Sebaliknya, prospek dosen adalah bahwa semua materi IPI harus dapat diakses di LMS. Oleh karena itu, institusi perlu memberikan pelatihan LMS kepada mahasiswa, mengevaluasi dosen, dan meningkatkan kapasitas koneksi bandwidth. Selain itu, fitur LMS harus ditingkatkan untuk memaksimalkan fungsi.

Keywords:
Barriers, Learning Management System (LMS), Prospects, Students' Perceptions

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INTRODUCTION

Information and Communication Technologies (ICT) are crucial in this era because it is widely used worldwide. Knowing Information and Communication Technologies (ICT) allows people to enjoy their life, and it also makes people do or work something easily. Green and Gilbert (1995); Woo and Reeves, (2008) as cited in Kartaloglou & Fyntanoglou (2015) claimed that ICT which made learning teaching practices more efficient and effective has a big impact in education and develops in the learning-teaching process.

ICT is the knowledge needed to manage information so that information can be traced back easily and accurately (Nina W. Syam in Muhtadi, 2016). In addition, Miarso in Aka (2017) defined Information and Communication Technology (ICT) as infrastructure (hardware, software, useware), systems, and methods for the acquisition, transmission, receipt, processing, interpretation, storage, organization, and use of meaningful data ICT can also provide online learning systems, for instance, E-learning.

E-learning has emerged as a new paradigm in modern education, especially to facilitate the field of study and teachers to monitor students' understanding and repeat school material. E-learning is a medium used for various learning purposes that serve as an adjunct to conventional classrooms and substitutes for face-to-face learning with online learning (Guri-Rosenblit in Larasati & Andayani, 2019). In addition, Bouzabia et al. (2013) argued that many researchers have shown that exploiting E-learning gives many opportunities. One E-learning that is used for teaching is Learning Management System (LMS).

A learning Management System (LMS) is a web-based learning system used to design and convey materials, track students' development, and mediate online interrelated and unrelated communication between learners and educators (Unwin, Kleessen, & Hollow, 2010). There are a lot of universities around the world that have widely implemented LMS in the educational context. Similarly, Kartaloglou & Fyntanoglou (2015) defined LMS as blended learning that supports face-to-face education and enables increased communication and interaction between instructors and learners.

LMS is a multiuser software application typically accessed through an online browser. It facilitates organizations to manage coaching events, self-paced courses and blended learning programs. It supplies automation that replaces rigorous and pricy manual work, saves time, and allows you to arrange your content, data, and learners. It tracks and reports coaching activity and results (Foreman, 2018). On the other Dias, Diniz, & Hadjileontiadis (2014) defined LMS as an information system focused on

communication and collaboration procedures and well-defined educational aims.

Moreover, Mahnegar in Mhungu (2018) defined LMS as the commonly utilized software system that provides courses and paths and organizes coaching for the teaching-learning process via a web in education situations. Another study was Pektas (2012). He described that LMS is a code application used for online criticism, downloading factual materials and design summaries, and submitting design sketches and style projects in the design studio. LMS is blended learning that supports face-to-face education and enables increased communication and interaction between instructors and learners (Kartaloglou & Fyntanoglou, 2015).

In terms of prospect or expectation, Fleming & Levie (1993) defined them as all the desires, hopes, and ideals of something that want to be achieved with real behaviour and action. Moreover, prospects are the belief of pleasure that is not constant, arising from the idea of something in the future (Boeree, 2015). It can be inferred that the prospect can be obtained or achieved with actual accomplishment in the upcoming times.

In terms of prospects related to LMS found by Ssekakubo, Suleman, & Marsden (2013) from their research that assignments, resources, announcements, course outlines, and the chat room are the most desired and most accessed LMS services by the students. At the same time, mobile phones are graded as the least utilized devices to access the LMS services, chiefly because of the inadequate design of LMSs for mobile interaction. Furthermore, Kulshrestha & Kant (2013) found that the benefits of LMS are subjects that can be reviewed again and again until learners know it properly and are flexible concerning timings and completion of a syllabus.

There are so many advantages of using LMS in learning in a college. Based on the researchers' experiences using LMS in the class, the students can download lecture material such as handouts, file documents, PPTs, etc. Hence, they can review the materials in and outside of the classroom. In addition, every interaction that a student has with the LMS, such as downloading files and clicking links, can be stored and analyzed. LMS is also capable of storing assignment grades as well. Furthermore, the lecturers easily assign the students' grades from their assignments without checking each students' assignments one by one, reduce paper usage, easily identify the students who are often late in collecting assignments, easily find out plagiarism of the students in doing assignments, and others.

Although there are many advantages of using LMS in the learning-teaching process, there are many barriers in implementing LMS in the learning-teaching process. There are still many lecturers and students who do not understand how to use technology, specifically the use of LMS. Sometimes it is unsuitable for what lecturers and students expect in implementing the LMS in the learning-teaching process. In addition, Parahikma Institute of Indonesia (IPI) has also implemented LMS in the learning-teaching process since 2018. LMS is one of the blended learning officially used at IPI. Therefore, the researchers conducted this research to find out the barriers and prospects in using the LMS in the learning-teaching process at Parahikma Institute of Indonesia regarding students' and lecturers' perceptions.

Many researchers in different contexts have studied Learning Management systems (LMS). Some researchers, Rahman, Arifin, & Alfurqan (2019) argue that in adopting a learning management system in Indonesian higher education: encountering barriers to the transformation discovered that the major hassle with the technical problem is the shortage of teachers' expertise. Furthermore, the lack of a systematic system in imposing the gadget, the absence of school members' commitment closer to the transformation, and the less involvement of college leaders in promoting the gadget are demanding situations from the organization.

Mhungu (2018) investigated the students' and lecturers' perceptions of the effectiveness of LMSs in studio-based teaching-learning spaces at the University of Technology. This study is qualitative research. The participants were the lecturers and the students in South Africa. The result indicated that the students were glad about the E-learning tools they utilized as their lecturers prepared a work to support them along their technique in the Architecture department. However, several students conveyed anxiety and frustration in excess of the way several their lecturers had been pleasing with E-learning features, and several lecturers were unsatisfied by the total of time which they must spend on the organizational duty of enrolling the students in their courses at the establishment of each year in the Graphic Design Department.

The other study was at three Universities in Germany, Ireland and Portugal. O'Sullivan & Krewer (2017) explored technology-enhanced collaborative learning using a project-based learning management system. They found that an approach to collaborative learning involving a new learning management system can support collaboration, enhance student engagement, and mitigate the effects of social dilemmas.

A study on improving the interaction and communication through the LMS opens e-class in blended learning was conducted by Kartaloglou & Fyntanoglou (2015). This study is qualitative research with an inductive qualitative approach. The participants were instructors and users of TEI in Athens, Greece. The results indicated that Open e-Class is used to facilitate instructors conveying material and information to the students. At the same time, neither meaningful communication, interaction, nor collaboration is performed adequately through the platform.

Another researcher was Sergeyevna (2014). She implemented the Learning Management System (LMS) in teaching a foreign language at the university. This research is qualitative. The participants were the students, teachers, and managers In the National Research University Higher School of Economics. The result indicated that teachers and students find LMS convenient for the material repository as a theoretical resource tool in one place available at any time (lectures, glossaries, e-libraries, etc.). It is considered effective for material sharing and collaborative projects as a wiki-tool.

The previous studies above only focused on the effectiveness of the implementation of LMS, the impact of using LMS, the students' and the lecturers' perception of using LMS, and the barriers of LMS in Indonesian context. Moreover, less has researched the prospects of using LMS, so the researchers were also interested in conducting research on the prospects of LMS use in teaching-learning at Parahikma

Institute of Indonesia. In addition, it is expected that this research contributes to the development of education, especially the use of LMS, its strengths, and weaknesses so that the users can maximize its utilities.

RESEARCH METHOD

Since this research concentrated on LMS, especially for the barriers and prospects, exploratory sequential mixed methods research was applied. According to Gay & Mills (2016), the explanatory sequential mixed methods design is where the researchers collected the quantitive data first, and the qualitative data were provided significantly to strengthen the quantitative data. Thus, the researchers applied this method to know the barriers and prospects of implementing LMS at Institut Parahikma Indonesia (IPI). The students' access and ease in using technology were identified using quantitative data, while the barriers and the prospects perceived by the students were explored by applying a qualitative approach. This study was conducted at Parahikma Institute of Indonesia, located at Jl. Mustafa Dg. Bunga 119, Gowa, 92113, South Sulawesi, Indonesia.

In this research, purposive sampling was delivered because the researchers chose the samples based on the objectives which were achieved. Purposive sampling is a data collection technique based on the objectives to be achieved with the consideration of researchers (Saat & Mania, 2019). The participants of this research were the 6th-semester students of English Education Department at Parahikma Institute of Indonesia with a total number of 17 students and 5 teachers of English Education Department who used LMS in learning and teaching at Parahikma Institute of Indonesia. However, for interviewing the students, the researchers chose only three students. There were four courses of LMS researched, namely Language Testing course, Computer Assisted Language Learning (CALL) course, Audio-visual Translation course, and Literature in Language Teaching course.

In line with the research questions, questionnaires and interviews were used to collect the data. The researchers used a close questionnaire prepared on Google form to give the students to fill. It made the researchers collect large data easily in a period short of time. Meanwhile, through in-depth and semi-structured interviews, the researchers interviewed the lecturers and three students from the total of students' participants about their perceptions of implementing LMS.

In analyzing the data, the researchers used qualitative and quantitative data analysis techniques based on Creswell (2012). It began with collecting qualitative data, followed up with quantitative data, and finally, interpreted both. For qualitative data analysis, the researchers used the interactive data analysis methods proposed by Miles and Huberman (2020) to capture more data. There are three stages of interactive data analysis: data condensation, data display, and conclusion drawing or verification. Meanwhile, for the quantitative data analysis method, the researchers used interactive data analysis methods proposed by Saat & Mania (2019). This data analysis has four stages: editing, coding, scoring, and inputting the data.

RESULTS AND DISCUSSION

The Students' Access and Ease in Using Technology

The researchers used a questionnaire to collect data to determine the result of the students' access and ease of technology use. Seventeen respondents needed to fill out the questionnaire. However, only sixteen respondents filled out the questionnaires because he/she had no enthusiasm to participate in this research. All of the students' results in the use of LMS can be seen in the data in the figure below:

The Availability of Accessing LMS Through Mobile Phone

Sixteen respondents filled out the questionnaire. All of them were able to access LMS on their phones. It can be seen in figure 1.

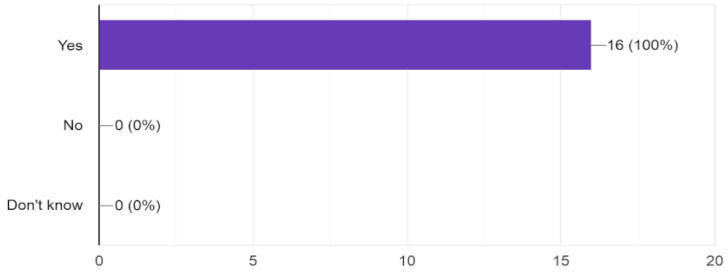

Figure 1. The availability of accessing LMS through mobile phone

It was revealed that the students had no problems accessing LMS through their mobile phones. Rahman, Arifin, & Alfurqan (2019) found that the lack of a systematic system impairs the gadget. However, in this research, the researchers found that all students had the gadget to access LMS.

Students' Comfort Level Using Technology and Technology Applications

There was 62.5% said that they were very comfortable, 25% said they were somewhat comfortable, and 12.5% said they were neutral. It showed in figure 2.

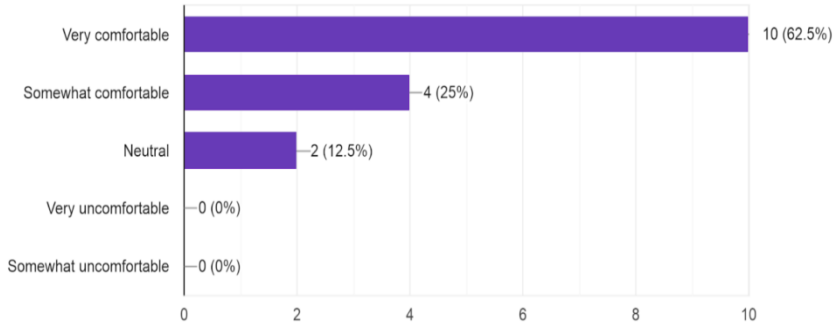

Figure 2. Students' comfort level using technology and technology applications

It can be seen in the chart that the students were comfortable using technology and technology applications in their learning.

Students' Experience with LMS

The question concerning experience with LMS was shown on a five-point scale (1% highly experienced; 2% somewhat experienced; 3% neutral; 4% somewhat inexperienced; 5% struggling). Overall, the students rated themselves. 62.5% had highly experienced with LMS, and 37.5% were somewhat experienced, as shown in figure 3.

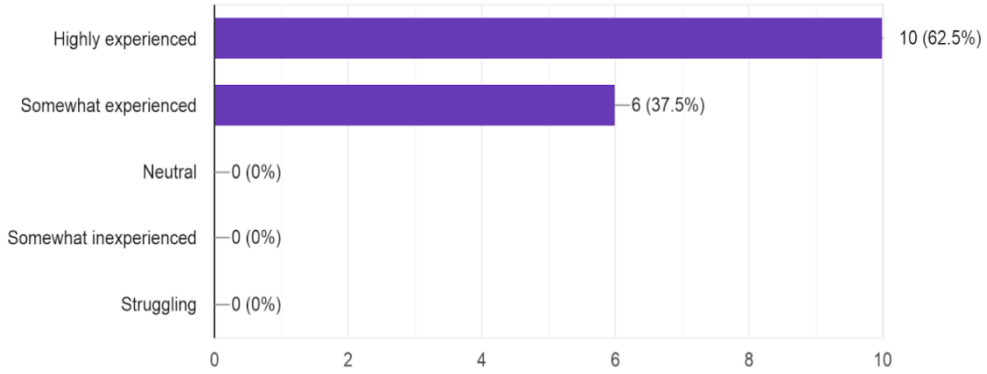

Figure 3. Students' experience with LMS

From the chart above, it was displayed that all of the students had experiences with LMS. It is marked because they could access LMS using technology or mobile phones.

Frequency of LMS Access by the Respondents

There were 31.3% of the respondents said they accessed the LMS several times a day and about once every day, while 6.3% 3-4 days a week accessed the system at all. There were 25% of respondents accessed LMS every few weeks, and 12.5% said they accessed the LMS 1-2 days a week. It can be seen in figure 4.

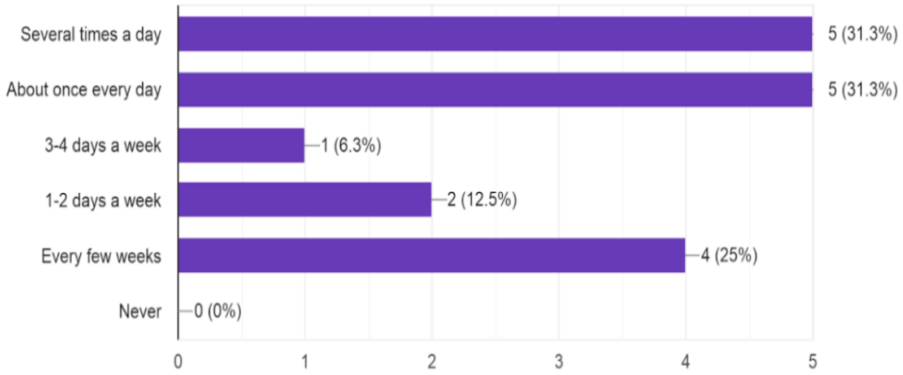

Figure 4. Frequency of LMS Access by the Respondents

From the information above, the result showed that there was a significant difference among the students in accessing LMS. Some students diligently accessed LMS because they checked whether or not there were new assignments and the deadline for assigning assignments and reviewing the material on LMS. On the other hand, some students rarely accessed LMS for certain reasons, such as not having internet data. The evidence of it will be discussed further.

Frequency of accessing the LMS using a PC/laptop

There were 50% used PCs and laptops sometimes, 31.3% most of the time, and 18.8 % all the time. It shows in figure 5.

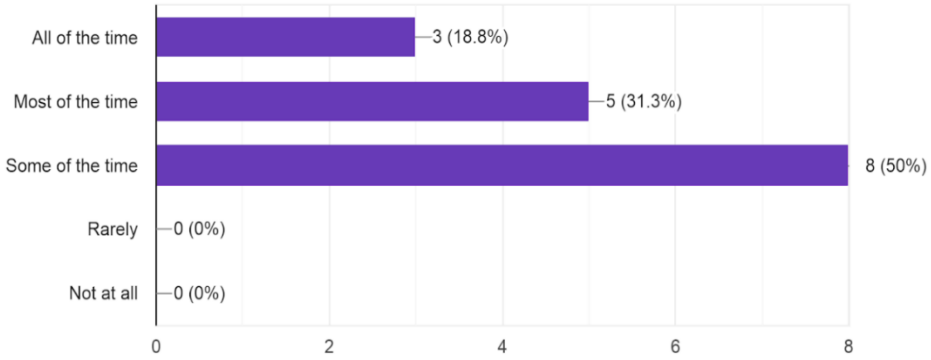

Figure 5. Frequency of accessing the LMS using a PC/laptop.

Frequency of Accessing the LMS Using a Mobile Phone

There were 6.3% who rarely use their mobile phones, 6.3% some of the time, 62.5% most of the time, and 25% who use their mobile phones to access LMS all the time. It can be seen in figure 6.

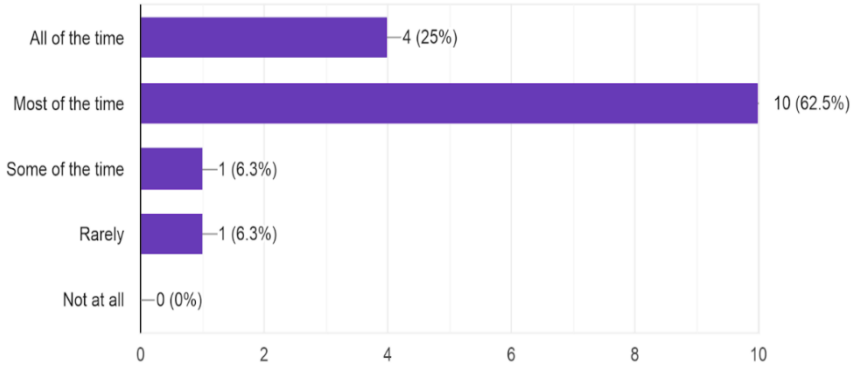

Figure 6. Frequency of Accessing the LMS Using a Mobile Phone.

In the devices they used to access the LMS in Figures 5 and 6, it can be inferred that there were a few variations among the students regarding the devices they used to access LMS. Thus, it depends on their needs. Sometimes they used a laptop and a mobile phone to access their LMS.

Students' Preferred Devices for Accessing LMS

The students ranked mobile phone as the most preferred device for accessing the LMS with 50%, laptop computer with 43.8%, PC/desktop computer with 18.8%, and tablet with 6.3%. It is revealed in Figure 7.

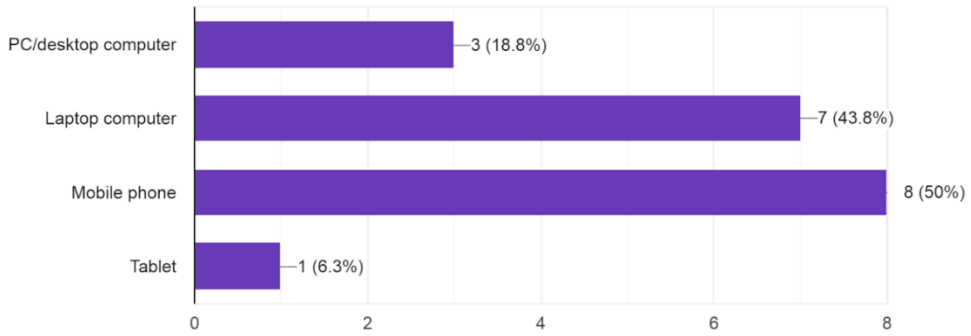

Figure 7. Students' Preferred Devices for Accessing LMS

From the chart above, it was dissimilar from what Ssekakubo, Suleman, & Marsden (2013) stated a laptop is the most convenient device as it is portable. In contrast, a mobile phone is as good as a laptop even though it is slow when opening some pages. In contrast, the findings from the information proved that students ranked mobile phones as the most preferred devices to access their LMS over laptops.

Following all of the findings from the data questionnaire, the researchers concluded that students had no problems using technology to access the LMS and had a gadget or device to access the LMS. Furthermore, they were comfortable using LMS in their learning.

The Barriers of Using LMS Perceived by the Students

Concerning the result of informants' interviews, the researchers found that the barriers of using LMS were:

Poor Bandwidth Connection

The result of informants' interview related to the barriers of using LMS was poor bandwidth connection. It was evidenced by the result from a student who stated, "my challenge in using LMS was that poor bandwidth connection, the rest of it is secure". While another one added that "The problem that I often experienced in using LMS was poor bandwidth connection". The other one also said, "Sometimes if there was a quiz, I could not open it because of poor bandwidth connection and the web error".

The information shown above revealed that the barriers perceived by the interviewees were related to poor bandwidth connection. It is in contrast with what Rahman, Arifin, & Alfurqan (2019) found that the barriers of LMS are the lack of a systematic system in imposing the gadget, the absence of school members' commitment closer to the transformation, and the less involvement of college leaders in promoting the gadget which is concluded as demanding situations from the organization.

Moreover, it was revealed that the barriers perceived by the interviewees were related to poor bandwidth connection. It is in line with what Kulshrestha & Kant (2013) showed that the challenge of implementing LMS is the readiness of infrastructures such as the internet and computer. When they tried to access LMS, they could not access it because of poor bandwidth connection or web errors. The policymakers were supposed to check the internet connectivity and ensure it was good before implementing LMS so

that the students and the lecturers did not have problems using LMS in their learning, especially with the poor bandwidth connection.

No Direct Notification Via SMS if there was an Assignment at LMS

It was shown from the result associated with the other barriers of using LMS from the informants interviewed: no direct notification via SMS if there was an assignment at LMS. A student illustrated that the obstacles he/she usually faced when using LMS were that there was no direct notification (via SMS) if there were tasks that the lecturer on LMS provided without having to access the LMS or through direct notification from the lecturer.

It can be inferred from the information above that the barrier encountered by students is that there was no direct notification via SMS if there was an assignment at LMS; as a result, students were often late in submitting assignments at the LMS. It would be better if there were a feature of LMS regarding direct notification of LMS via SMS so that students knew that there were new assignments provided at the LMS and students were not late again in submitting their assignments.

Lecturers' Lack of Feedback on Assignments if the Assignments were in the Form of Document Files

It was shown from the result that the other barrier of using LMS from the informants interviewed was lecturers' lack of feedback on assignments if the assignments were in the form of document files. The learner commented, "Sometimes there were lecturers who did not give assignment feedback, especially if the assignment was in the form of uploaded document files.

From the informants' interview, it was displayed that some lecturers did not provide feedback on assignments, especially if the assignments were in the form of document files. Therefore, lecturers should provide feedback on assignments given to students so they can find out their mistakes in doing the assignments.

The Barriers of Using LMS Perceived by the Lecturers

To find out the result of the barriers of LMS perceived by the lecturer, the researchers used interviews to collect data. Five informants were needed to interview. However, only four informants were interviewed because one was unwilling to be interviewed due to certain personal reasons. The recorded data was transformed into textual form to interpret the key idea. The key idea was then categorized, and each data was compared to find the relation among the issues. As a final step, the conclusion of the data was drawn to make clear summarized information. According to the result of the informants' interviews, the researchers found that there were some barriers of using LMS in the learning-teaching process that was:

Poor Bandwidth Connection and LMS Features

The informants' interview revealed that most of the barriers of using LMS were poor bandwidth connection and LMS features. A lecturer explained, "The problem with

using an LMS was actually synchronous; it seemed that it required a high budget, meaning that if I use BigBlueButtonBN for web conferencing, it required very good internet connectivity for both students and lecturers. Several times I tried, it suddenly turned off, so for synchronization, it needed improvement in terms of internet connectivity or bandwidth which needed to be increased. Another one also encountered "one of the obstacles was the internet connectivity, especially for my students in the village".

From the information above, those findings showed the effect of internet connectivity and the LMS features. It is similar to what Muniz & Moraes (2012) found: LMS's challenge is a lack of interaction activities between teachers and students. The lecturer could not optimize his teaching using LMS, especially web conferencing features, because it needed high-quality internet connectivity. The policymakers should improve its high-quality internet connectivity so that the lecturer could use the feature without obstacles in their learning-teaching process using LMS.

Limited Time Management (Personal Problems)

Associated with the other barriers of using LMS from the informants interviewed, it was limited time management (personal problems). The lecturer expressed that his/her problem was that LMS management was still not optimal because of limited time. If he/she worked from home, there were many personal businesses, and he/she had to cope with time for that. Furthermore, she did not have time to explore more LMS features, such as the discussion feature, because of the limited time.

Thus, it was shown that the teacher's limited time was affected. It is in line with what Rahman, Arifin, & Alfurqan (2019) found that many institutions in Indonesia had been forced to prematurely employ the LMS in the teaching and learning process without considering the availabilities of teachers and the provision of the infrastructural establishment. In addition, it is related to what they revealed that the challenge of LMS was the lecturers' attitude toward the transformation of digital technology in the teaching and learning process towards the use of LMS. Implementing LMS in the learning process would be significant if both lecturers and learners were ready to use in their learning, and the lecturer should be committed to maximizing LMS in the learning process.

The Device did not Support to do Students' Assignments (Not Compatible for doing Certain Assignments)

The informants' interview showed that the challenge of using LMS was that the device did not support doing students' assignments (not compatible with doing certain assignments). It was evidenced by the interviewee's result "For me personally, there were no obstacles but those from my students. The device did not support doing their assignments."

It was displayed that the barriers perceived by the interviewee were related to his/her students' problems; namely, the device did not support their assignments (not compatible for doing certain assignments). Therefore, the institution should improve the

LMS, especially the LMS device, so that the students can do all kinds of assignments given by the lecturer.

Students Lack of Budget to Buy Internet Data

The result associated with the other barriers of using LMS from the informants indicated that students lack the budget to buy internet data. The lecturer's statements are illustrated as "There was no internet data, they had not enough money to buy internet data, and they had enough time. Thus, for me personally, the problem was not with me but with my students. It means that the students have no internet data to access LMS and no money to buy the internet data, and they were busy." Hence, it can be inferred that the lecturer or institution should encourage the students to keep their money to buy internet data so they can also use LMS. In addition, the students should manage their time well to access their courses on LMS.

Lack of Training for the Students in Using LMS

The challenge of using LMS was the lack of training for the students in using LMS, as is shown from the informant's interview. One of the lecturers commented that students lacked training and had to be taught more because sometimes they did not know how to submit their assignments or did not know how to access the LMS. Moreover, it was not the teacher's job to explain it but the policymakers. The policymakers should have provided adequate training and ensured all students understood how to use the LMS.

The comment indicated that the barrier of using LMS in their teaching is students' lack of training in using LMS in the learning-teaching process. It was in line with what Rahman, Arifin, & Alfurqan (2019) found that the lecturers and students had to be able to operate and utilize LMS platforms. The institution should have provided adequate training and ensured all students comprehended how to utilize the LMS. Ironically, the lecturers' perception of the students' lack of training in using LMS in the learning process differs from the students' responses in the questionnaire that they highly experienced using LMS.

To conclude this section, the literature identified the barriers to LMS perceived by the lecturers and the students that there were barriers in implementing LMS in the learning-teaching process. Those were poor bandwidth connection, no direct notification via SMS if there was an assignment on LMS, some lecturers did not provide feedback on assignments, especially if the assignments were in the form of document files, teachers' limited time, and students' lack of training in using LMS.

Therefore, policymakers should develop the building and enhance high-quality internet connectivity and the professional competence of lecturers and students using LMS to properly apply the LMS. The students should manage their time to access their courses on LMS and save their money to buy internet data to access LMS. Meanwhile, the lecturers should also manage their time to access and provide materials so that their teaching using LMS is optimal. They also should provide feedback on assignments given to their students, especially if the assignments are in file document form.

The Prospects of Using LMS Perceived by the Students

As this course also would like to find out the prospects of LMS perceived by the students, the researchers used interviews to collect data. There were three informants interviewed. The recorded data was transformed into textual form to interpret the key idea. The key idea was then categorized, and each data was compared to find the relation among the issues. As a final step, the conclusion of the data was drawn to make clear summarized information. The researchers found from the interview result that there were some prospects of using LMS in the learning-teaching process, namely:

LMS Should have its own Application on Google Play

Referring to the interview result, the informants' prospect of using LMS was that LMS should have its own application on Google Play. A student explained, "for me, the good thing was that LMS also had an application on Google Play so that we could download the application ourselves because most people preferred to have an LMS IPI application by itself. LMS IPI did not have its own application like MOODLE.

According to the extract above, it was revealed that LMS should have its own application on Google Play. She preferred accessing LMS through an application than a website because it would be easier.

LMS Should have a Direct Notification Via SMS if there were Assignments on LMS

From the interview result, the informants' prospect of using LMS was that it should have a direct notification via SMS if there were assignments on LMS. The student states, "my prospect was that if there was an assignment, there would be direct notification or direct SMS so that we were not often late in submitting assignments."

Following the information above, it was displayed that LMS should have a direct notification via SMS so that the students were not late submitting their assignments on LMS. Since no feature can link LMS to SMS, the lecturers were supposed to confirm to the students through another application, such as WA, about the assignments provided on LMS.

Lecturers Should Provide Feedback on Assignments (File Document Assignment)

Concerning the informants' interview results, the prospect of using LMS related to that lecturer should provide feedback on assignments (file document assignment). The student stated, "there was no feedback on each assignment because there was usually a lecturer who did not provide feedback on the assignment which was given; for example, the assignment was uploading document files." It was shown from the information above that the lecturers should give feedback on the students' assignments if the assignment is in the form of document files so that the students knew mistakes on their assignment and they could correct their assignment.

LMS is Already Good

The students' interviews indicated that LMS was already good. "LMS was very good for me because it made me easier as a student in work. For example, if I had assignments,

I could access them whenever I wanted. Thus, there were no prospects because I thought LMS was already good," said one of the students. It can be inferred that LMS was already well. Thus, it did not need to be enhanced because she felt satisfied using LMS in her learning. It is in line with what Kulshrestha & Kant (2013) found that LMS is good because subjects are able to be reviewed again and again until learner knows it properly and flexible concerning timings and completion of syllabus.

The Prospects of Using LMS Perceived by the Lecturers

The researchers found that there were some prospects of using LMS in the learning-teaching process as follows:

The Infrastructure and Internet Connection Needs to be Improved

Referring to the result of informants' interviews, the researchers found that the prospects of using LMS in the learning-teaching process were that the infrastructure and internet connection needed to be improved. The interviewee's results showed that he/she expected the infrastructure to be improved and the campus needed to be increased in connection. Then, for synchronous, we could not use web conferencing, so we could not know whether or not students were actually taking classes. Hence, it was revealed that policymakers should enhance the infrastructure and connection of LMS. It is the same as what Kulshrestha & Kant (2013) argued the challenge of implementing LMS is the readiness of infrastructures such as the internet and computer.

There are LMS Features that Need to be Enhanced

Based on the result of informants' interviews, the researchers found that the prospects of using LMS in the learning-teaching process were that the LMS features need to be improved. It was evidenced in the result from the interviewee that "Yesterday I made a short answer quiz, sometimes the right one was to blame or the opposite so that the features need to be improved. Hopefully, there was an LMS system in the future that could support or make the interaction between teachers and students."

Another lecturer added that "Actually, the LMS was already good. The problem was the BigBlueButton feature in the LMS, which for web conferencing needed to be improved so that we could make video conferencing there. The information indicated that the policymakers should enhance high-quality internet connectivity so that she could use the BigBlueButton feature for web conferencing well. Moreover, they also should improve the LMS's feature, especially quiz (short answer), because its feedback sometimes was an error. In addition, she hoped there was a LMS system that supported and made interactions between teachers and students.

There Should be a Big File Size Capacity

The other prospect of using LMS was that a big file size capacity should exist. It was proven in the result of the informants' interview that "Uploading video was limited, so maybe in the future we could directly upload a video to the LMS without first uploading the video on YouTube. Thus, it was indicated that the capacity for uploading files needed

to be improved. Policymakers should upgrade the capacity of uploading files so that we can upload all forms of files on LMS, such as video, file documents, PowerPoint, etc.

All Materials at IPI should be provided in the LMS Before the Courses

Based on the result of informants' interview, the researchers found that the prospects of using LMS in the learning teaching process were all of the materials at IPI should be provided in the LMS before the courses. A lecturer expressed her opinion, "My prospect is that in the future LMS, I wanted all courses in IPI to have materials in the LMS, and all materials could be uploaded there, not just lesson plans. Thus, it was shown that all courses at IPI should already have material on LMS. The administrator should take a schedule of the lecturers and instructors at the provider and enrol it on LMS so that the use of LMS is more organized.

Students Need a lot of Training in Using LMS

Following the result of the lecturers' idea, the prospect of using LMS was that the students needed a lot of training in using LMS. It was proven in the results of the interviewee that "It required a lot of training for students to use the LMS because accessing the LMS was not easy." It was displayed from the information above that the policymakers should train the students a lot in using LMS and make sure that they understand the use of LMS.

In summary, it had been explained the prospects of using LMS perceived by the students and lecturers that there were various prospects of using LMS. Those are the infrastructure and connection in the campus, which need to be improved, and LMS's features, namely BigBlueButton and quiz (short answer). In addition, LMS does not have enough capacity to cover all files that should be uploaded in terms of uploading files. Similarly, neither the system that could be used to upload videos directly on the LMS without uploading video on YouTube and sending the link to LMS nor an LMS system that could support interaction between teacher and students.

Moreover, all of the courses at IPI already had materials in the LMS so that lecturers could directly teach them. Students need a lot of training to use the LMS, and the admin should have a timetable or schedule for the lecturers to input on LMS so that the LMS is organized well. However, one of the interviewees claimed that LMS was good enough for her because LMS had many benefits for him/her, especially easy to do assignments and access the materials as a student of English Education Department, Parahikma Institute of Indonesia.

In addition, some related research findings are in line with these research findings, such as the research conducted by Asuman, Khan, & Clement (2018), who found that teachers had a positive attitude toward incorporating Web-Based Learning (WBL) into the teaching and learning process, but they encountered some difficulties which were identified as slow internet speeds, insufficient web-based tools, lack of technical support, etc. Ngafeeson et al. added that the difference in continuing use and initial use decision depends on differences in the influences of personal control perceptions about technology and subjective norms. Furthermore, Al-Hunaiyyan, Al-Sharhan, & Alhajri

(2020) instructors were generally comfortable and positively perceived LMS Moodle. The results revealed that LMS's administrative functions, such as files and announcements, are widely used compared to the advanced interactive learning activities. Moreover, LMS's use on mobile devices is infrequent, and more emphasis must be placed on using LMS-friendly user interfaces that enable all tools and functions to use LMS.

Several studies also reveal the respondents' most preferred online learning devices; for instance, in the study by Quadri, Muhammed, & Sanober (2017), it was found that the infrastructure and Technology Dimension is the most significant as perceived by respondents. Most students preferred online real-time lectures and recorded lectures (Yatigammana & Wijayarathna, 2021). Teachers intend to use ICT and see a different didactic tool that allows different approaches, thus increasing the quality of teaching and learning (Veiga & Andrade, 2021). The last, Rahman, Daud, & Ensimau (2019) asserted that students have good knowledge of LMS and a positive view of LMS. The study suggested that LMS facilitate students in the learning process and thus should be designed to provide a user-friendly interface and navigation to support students' learning.

Therefore, it is suggested the institution provide LMS use training for the students who lack understanding in using it, evaluating the lecturers in preparing the materials, grading, and giving feedback in LMS. The institution should enhance the capacity of the bandwidth connection as well. Moreover, the LMS features should be upgraded in some aspects to maximize the usage.

CONCLUSION

All students had no problems and were highly experienced using LMS. Besides, they felt comfortable using it and could access it several times using mobile phones and laptops. Most of the students and lecturers perceived barriers in using an LMS were poor bandwidth connection. There are other barriers, namely, no direct notification assignments via SMS, lecturers' lack of feedback on assignments, lack of time management, lack of training for the students in using LMS, not compatible features in a certain assignment, and lack of budget to buy internet data. Moreover, the prospects of using an LMS perceived by the students were there should be an LMS application on Google Play and direct notification via SMS if there is an assignment on LMS. In addition, lecturers should provide feedback on uploaded assignments on LMS. In contrast, the lecturers' expectations were the internet connection at the campus needed to be improved, LMS's feature (direct system for uploading videos without inserting a link from YouTube) needed to be improved. All materials at IPI should be provided in the LMS before the courses, and students need a lot of training in using LMS. Therefore, it is recommended for the institution not only to provide LMS use training for the students who lack understanding in using it, evaluate the lecturers in preparing the materials, grading, and giving feedback in LMS but also to enhance the capacity of the bandwidth connection. Moreover, the LMS features should be upgraded to maximize the functions.

REFERENCES

Aka, K. A. (2017). Pemanfaatan Teknologi Informasi dan Komunikasi (TIK). *ELSE (Elementary School Education Journal): Jurnal Pendidikan Dan Pembelajaran Sekolah Dasar*, *01*(30). https://doi.org/10.30651/else.v1i2a.1041.

Al-Hunaiyyan, A., Al-Sharhan, S., & Alhajri, R. (2020). Prospects and Challenges of Learning Management Systems in Higher Education. *International Journal of Advanced Computer Science and Applications (IJACSA)*, *11*(12). https://doi.org/10.14569/IJACSA.2020.0111209.

Asuman, B., Khan, M. S. H., & Clement, C. K. (2018). Integration of Web-Based Learning into Higher Education Institutions in Uganda: Teachers' Perspectives. *International Journal of Web-Based Learning and Teaching Technologies (IJWLTT)*, *13*(3). https://doi.org/10.4018/IJWLTT.2018070103.

Boeree, C. G. (2015). *Personality Theories: Abraham Maslow, 1908-1970*. Shippensburg University Faculty Website.

Dias, B. S., Diniz, A. J., & Hadjileontiadis, J. L. (2014). *Towards an Intelligent Learning Management System Under Blended: Learning Trends, Profiles and Modeling Perspectives*. Switzerland: Springer International Publishing.

Fleming, M. L., & Levie, W. H. (1993). *Instructional Message Design: Principles from the Behavioral and Cognitive Sciences*. Educational Technology.

Foreman, D. S. (2018). *The LMS Guidebook: Learning Management System Demystified*. United States of America: The Association for Talent Development (ATD).

Gay, R. L., & Mills, E. G. (2016). *Educational Research : Competencies for Analysis and Applications* (11th ed.). England: Pearson.

Kartaloglou, E., & Fyntanoglou, D. (2015). *Improving the Interaction and Communication through the LMS Open eClass in Blended Learning*.

Kulshrestha, T., & Kant, A. R. (2013). Benefits of Learning Management System (LMS) in Indian Education. *International Journal of Computer Science & Engineering Technology (IJCSET)*, *4*(8). https://www.semanticscholar.org/paper/Benefits-of-Learning-Management-System-(LMS)-in-Kulshrestha-Ramswaroop/e24c54eb66f656a185e2fbd65d88f292e598cdcd.

Larasati, N. A., & Andayani, S. (2019). Pengaruh Penggunaan Learning Management System (LMS) Terhadap Tingkat Kepuasan Mahasiswa Menggunakan Metode DeLone and McLean. *Jurnal Teknik Informatika UNIKA Santo Thomas*, *4*(1). https://doi.org/10.17605/jti.v4i1.506.

Mhungu, B. A. (2018). *Students' and Lecturers' Perceptions of the Usefulness of LMSs in Studio-Based Teaching and Learning Spaces at University of Technology*. *Doctoral Dissertation*. Cape Peninsula University of Technology.

Muhtadi, A. (2016). *Pemanfaatan Teknologi Informasi dan Komunikasi (TIK) dalam Pendidikan Karakter di Sekolah*. Universitas Negeri Jogjakarta.

Muniz, M. I. de P. A., & Moraes, A. de. (2012). Usability Issues in Learning Management Systems (LMS). *National Library of Medicine*. https://doi.org/10.3233/WOR-2012-0250-832.

O'Sullivan, D., & Krewer, F. (2017). Technology Enhanced Collaborative Learning using A Project-Based Learning Management System. *International Journal of Technology Enhanced Learning*, *9*(1). https://doi.org/10.1504/IJTEL.2017.10004161.

Pektas, S. T. (2012). The Blended Design Studio: An Appraisal of New Delivery Modes in Design Education. *Procedia-Social and Behavioral Sciences*, *51*. https://doi.org/10.1016/j.sbspro.2012.08.226.

Quadri, N. N., Muhammed, A., Sanober, S., Qureshi, M. R. N., & Shah, A. (2017). Barriers Effecting Successful Implementation of E-Learning in Saudi Arabian Universities. *International Journal of Emerging Technologies in Learning (IJET)*, *12*(6). https://doi.org/10.3991/ijet.v12i06.7003.

Rahman, A. A., Arifin, M. A., & Alfurqan. (2019). Adopting Learning Management System in Indonesian Higher Education. *International Journal of Academic Research in Business and Social Sciences*, *9*(11). https://www.researchgate.net/publication/347598350_Adopting_learning_management_system_in_Indonesian_Higher_Education_The_encountering_challenges_to_the_transformation.

Rahman, M. J. A., Daud, M. Y., & Ensimau, N. K. (2019). Learning Management System (LMS) in Teaching and Learning. *International Journal of Academic Research in Business and Social Sciences*, *9*(11), 1529–1535. https://doi.org/10.6007/IJARBSS/v9-i11/6717.

Saat, S., & Mania, S. (2019). *Meteodologi Penelitian: Panduan Bagi Peneliti Pemula*. Gowa: Pusaka Almaida.

Sergeyevna, M. L. (2014). The Use of Learning Management System (LMS) in Teaching A Foreign Language in the University. *Austrian Journal of Humanities and Social Sciences*.

Ssekakubo, G., Suleman, H., & Marsden, G. (2013). Designing Mobile LMS Interfaces: Learners' Expectations and Experiences. *Interactive Technology and Smart Education*, *10*(2). https://doi.org/10.1108/ITSE-12-2012-0031.

Unwin, T., Kleessen, B., Hollow, D., Williams, J. B., Oloo, L. M., Alwala, J., & Muianga, X. (2010). Digital Learning Management Systems in Africa: Myths and Realities. *Open Learning: The Journal of Open, Distance and e-Learning*, *25*(1). https://doi.org/10.1080/02680510903482033.

Veiga, F. J. M., & Andrade, A. M. V. de. (2021). Critical Success Factors in Accepting Technology in the Classroom. *International Journal of Emerging Technologies in Learning (IJET)*, *16*(18). https://doi.org/10.3991/ijet.v16i18.23159.

Yatigammana, K., & Wijayarathna, G. (2021). Students' Perception of Online Lecture Delivery Modes: Higher Education during Covid-19 Pandemic and Beyond. *International Journal of Emerging Technologies in Learning (IJET)*, *16*(21). https://doi.org/10.3991/ijet.v16i21.25305.