PROBLEMS OF MOODLE-BASED LEARNING MANAGEMENT SYSTEM DEVELOPMENT IN IMPROVING LECTURERS' PROFESSIONAL COMPETENCE

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Abstract: The Covid-19 pandemic brought changes to the implementation of lecturer certification. But change is not always taken for granted, there are several problems. This study aims to analyze the problems of developing a moodle-based learning management system in increasing the competence of professional lecturers. This research focuses on three things, namely on the use, impact and problems in its development. The research method used is qualitative with a case study approach, with research informants, professional lecturer competency training participants at UIN Sultan Syarif Kasim Riau. Collecting data using observation, interviews, and documentation studies. The results of the study reveal that the learning management system is used as a virtual learning platform that allows participants to access and read learning resources, discuss and carry out assignments. A significant impact on the increase in professional competence is realized from the higher mastery of lecture material, and the increase in the technological competency of the participants. Problems faced such as difficulty adapting, network damage, difficulty understanding information. This research certainly has implications as a reference for UIN Sultan Syarif Kasim Riau, especially in improving the quality of training.

Keywords: Learning Management System, professionality, Online learning

Abstract: Pandemi covid-19 membawa perubahan pada pelaksanaan sertifikasi dosen. Namun perubahan tidak selamanya diterima begitu saja, terdapat beberapa permasalahan. Penelitian ini bertujuan menganalisis problematika pengembangan learning management system berbasis moodle dalam meningkatkan kompetensi dosen profesional. Penelitian ini berfokus pada tiga hal yakni pada penggunaan, dampak dan problematika dalam pengembangannya. Pnelitian ini mengunakan metode kualitatif berbasis studi kasus, informan penelitian yakni peserta pelatihan kompetensi dosen profesional di UIN Sultan Syarif Kasim Riau. Pengumpulan data dengan observasi, wawancara, dan studi dokumentasi. Hasil penelitian mengungkapkan bahwa learning management system digunakan sebagai wadah pembelajaran virtual yang memungkinkan peserta mengakses dan membaca sumber belajar, berdiskusi, dan penugasan. Dampak signifikan terhadap peningkatan kompetensi profesisional terwujud dari penguasaan materi perkuliahan yang semakin tinggi, dan peningkatan kompetensi teknologi peserta. Problematika yang dihadapi seperti kesulitan beradaptasi, kerusakan jaringan, kesulitan memahami informasi. Penelitian ini berimplikasi sebagai rujukan dalam memperbaiki kualitas pelatihan.

Kata Kunci: Learning Management System, Profesionalitas, pembelajaran Daring

INTRODUCTION

Technological advances are felt in almost all aspects of human life, including education. Its existence makes it easy for all subjects involved in educational practice, from the government, educators, and students, to the wider community. The era of the industrial revolution 4.0 is when almost everything is controlled by technology, including education. With technology, teachers and students find it easier to learn (Ramli et al., 2023). Apart from providing convenience, advances in technology in education also play a role in helping humans improve their competence. The government is a subject that benefits from the presence of technology in educational practice. In addition, technology is also defined as development activities and the application of various types of systems or equipment used to help solve problems faced by humans in everyday life (Paramitha et al., 2022;Yana & Adam, 2019).

With the reason that many jobs that used to be done on a timely basis can now be saved in a short time; before, they were done face-to-face, now they can be reached online they were done with expensive financing, and now they can be minimized. The point is that with technological advances, the government can provide more optimal services to improve the quality of education in Indonesia. (Isroqmi, 2020).

Concerning improving the quality of education, educators are vital objects whose abilities continue to need to be improved. In recent years, the government has made many efforts, including the certification policy. According to the Law of the Republic of Indonesia Number 14 of 2005 concerning teachers and lecturers, certification awards educator certificates to teachers and lecturers. The certificate is given to educators who have met the requirements and standards. Its implementation so far, specifically for lecturer certification, is carried out as a portfolio assessment of academic and professional experience using a lecturer portfolio. (Puspananda, 2023). However, in 2022 something will be different, in this case, specifically for lecturers under the auspices of the Ministry of Religion; the government will strengthen the certification program through a program to increase the competence of novice lecturers, which focuses on increasing the professionalism capacity of lecturers in carrying out the tri dharma of higher education and increasing lecturers' understanding and commitment to values. -national values and religious moderation. (Sartika et al., 2023).

Uniquely, this program is carried out online using technological advances in the form of e-learning *learning management system* (LMS) based *Moodle.* E-learning must be designed in such a way as to make it attractive for students to access. The content in it must be friendly, contain knowledge, and easy to use so that students can learn independently and effectively (Satriani et al., 2023). The selection of this program is of course

based on various considerations starting from its reach throughout Indonesia, time efficiency and costs, the effectiveness of the results, to the ease of controlling the results. Modular Object Oriented Dynamic Learning Environment or abbreviated Moodle is a learning space that uses an online-based object orientation model. Moodle is programmed using the PHP programming language [9]. Moodle's Learning Management System meets the educational requirements for learning in educational institutions used by universities and colleges (Pratama & Razaq, 2023). This program is indeed considered new, but the adaptation of virtual training participants is not new, because for two years all lecturers in Indonesia have been familiar with digital learning as a result of the Covid-19 pandemic. It's just that of course each application is different from one another, which requires people to be able to adapt properly, so they can be familiar with using it.

Learning Management System in general is software designed to create, distribute, and manage the delivery of learning materials. This LMS system can help teachers or lecturers to plan and create syllabus, manage learning materials, manage student lecture activities, manage grades, recapitulate attendance, display grade transcripts, discuss and conduct quizzes. Usually *Learning Management System* it is app based and*platform web*, making it easier for lecturers to plan the online learning

process,*Learning Management System* also makes it easier for students to access content or lecture materials from anywhere and anytime. Because of its convenience, it's not wrong if *Learning Management System* touted as a place of learning in the modern era that is practical and liked by many people.

Learning Management System or also called *Learning Management System* as it is also known, can be considered as a type of online content management or online content delivery platform. It is used to deliver training and educational materials to the workforce or external users via the Internet. It delivers content in a format that can be accessed, downloaded, and worked on from any location where an Internet connection is available. This flexibility and cost savings are two key elements of *Learning Management System*. But *Learning Management System* it also serves as a powerful enterprise solution. (Syahrijar et al., 2023)

There are four types of learning management platforms available in the market today. This includes desktop, web-based, *Learning Management System*, and application platforms. Desktop systems are web-based systems, usually Java or HTML based, that support common web browsing technologies such as Internet Explorer, Safari, Firefox, and Google Chrome. Web-based systems require installation of a browser on the end user's computer that uses a browser that supports required technologies such as

Java, Hypertext Transfer Protocol (HTML), and Adobe Flash.

Even though it is said to provide convenience and practicality, in its use it sometimes has problems, which sometimes actually turn things around to make things difficult for lecturers, even essentially hindering the desired achievement. In this regard, Sultan Syarif Kasim Riau State Islamic University is one of the tertiary institutions that organizes programs to strengthen the certification of increasing the competence of novice lecturers, in practice they often receive complaints from participants. Among the complaints were not always related to the technical use, but also related to the adaptation and interest of the participants. These complaints are of course a separate problem for lecturers who use the application. So it is sometimes undeniable that some people actually choose to do it face-to-face rather than online. (Hakim et al., 2023)

Problems about development *Learning Management System* between one campus and another is not always the same, but the differences that exist actually contribute in terms of recommendations for improvement. This study seeks to analyze the problems experienced by participants in the competency improvement training for novice lecturers at the Sultan Syarif Kasim Riau State Islamic University in terms of using *Learning Management System*. With the aim of research focusing on three things, namely analyzing its use, its

problems, and the impact of its achievements. Of course, this research is expected to have implications for improving development *Learning Management System* at Sultan Syarif Kasim Riau State Islamic University. Not only that, the implications of this research can be used by other universities that carry out similar training.

This research certainly has a distinction with other studies, this is evidenced by the focus of the study which is different from other studies. Several other research studies lead to three things, namely: (1) use and development *Learning Management System*, including research on development *Learning Management System* in Mathematics Education Study Program (Listiawan, 2016); use *Learning Management System* in Indonesian educational universities (Munir, 2010); effectiveness of use *Learning Management System* (Sudiana, 2016), (2) LMS-based learning models, including research on learning-based models *Learning Management System* in high school (Raharja, 2011); learning activities using an Edmodo-based LMS (Jayusman & Shavab, 2020), (3) the effect of using*Learning Management System*, some research on this includes influence *Learning Management System* on student satisfaction (Larasati & Andayani, 2019); influence*Learning Management System* on student teaching motivation (Khunaini, 2021). Of course all of the research mentioned above is different from this research which is more directed at the study of disclosing the problems

encountered in its use, besides that the average previous research focused on school students as an object, but this research examined participants in strengthening training in the certification program. Research objects that are well established in terms of age still have obstacles in their application, of course this is a unique finding from this study.

METHOD

This study uses a qualitative research method with a case study approach. The problems encountered in the use of the LMS by the trainees are the cases that will be analyzed and explored as deeply as possible so that they can be simplified and then become recommendations for solving the problems. This research was conducted at UIN Sultan Syarif Kasim Riau, the reason for choosing the location was because the tertiary institution was one of the organizers of the lecturer certification strengthening program for beginner lecturer competency improvement (PKDP) appointed by the Ministry of Religion. Sources of data in this study are divided into two, namely sources of informants and sources of literature. The intended source of informants is research informants consisting of training participants, lecturers, and the head of the program organizer. While the library sources in question are documents related to the implementation of these activities, plus books, journals and previous

research results which are used as references.

Data collection techniques using observation, interviews, and documentation studies. Observation is used to directly observe the activity of using the LMS by training participants. Interviews were used to explore information regarding the problems experienced by the training participants and the impact felt by the training participants. While the documentation study deals with documents related to the implementation of these activities, books, journals and previous research results are added as references. Data analysis using techniques *Miles* and*Huberman* namely data collection, data reduction, data presentation, and drawing conclusions. Furthermore, to test the validity of the data, data triangulation was carried out, extending observations in the field, and increasing persistence.

RESULTS AND DISCUSSION
The use of the Learning Management system in training to increase the competence of novice lecturers

It should be explained that the LMS used at UIN Sultan Syarif Kasim Riau is Moodle-based. Moodle is a type of LMS or*e-learning management system* the most popular worldwide, Martin Doughlas is the designer of the e-learning based Moodle LMS platform. This platform was launched in 2002, the popularity of this platform is still consistent today because in general this application is specifically for the world of education. With the

existence of Moodle based LMS*e-learning* making the world of education more advanced in teaching and learning, developing innovations make lecturers and students even younger in communicating in transferring knowledge today without limits. The learning system is implemented through computers (PCs), laptops, smart phones, and gadgets that are connected to an internet network connection, educators can carry out joint learning independently (Irnandi et al., 2015.).

The implementation of training to increase the competence of novice lecturers at UIN Sultan Syarif Kasim Riau is the first to be implemented as a strengthening program for certified lecturers in 2022. In addition to increasing the professional competence of lecturers, this Moodle-based LMS training also aims to increase lecturers' understanding of religious moderation and nationality, so that lecturers can become agents of change and*rahmatal lil alamin.* The software used as a medium for making learning is an open source Moodle-based LMS (Learning Management System) software (Listyorini et al., 2022)

This is indeed based on the evaluation results of issues that are currently developing in the midst of life today that Indonesia as a heterogeneous country has the opportunity for conflict between these differences to occur. So as the creator of the nation's generation, lecturers should gain knowledge about religious moderation. It should be

emphasized that what is meant by religious moderation is a way of life to get along in harmony, mutual respect, care and tolerance without having to cause conflict because of differences. By strengthening religious moderation, it is hoped that religious people can position themselves appropriately in a multi-religious society, so that social harmonization and balance in social life occur.

In general, the use of LMS in this training aims to achieve a number of things, namely: preparation of lesson plans to completion, creation of interactive videos of learning materials/resources to completion, production of teaching practice videos to completion, assessment assistance making Assignment Designs, preparation of assessment instruments, assessment analysis, mentoring scientific article writing. The total planned meetings in the training were 123 meetings. So if simplified LMS as online learning has a role in three things, namely:

a. Plays a role in presenting learning material

Online learning with Moodle-based LMS will greatly facilitate lecturers in presenting a variety of learning materials, especially learning materials packaged in digital form. Such as e-books, e-journals, final project works, proceedings, power point slides and so on. Digital learning resources will provide convenience to trainees because they can be read anytime and anywhere without having to be bound

by time and place. The learning resources used in the training LMS are of course in the form of modules and other learning resources that can be used by trainees to achieve the expected competencies. Based on the results of research (Tasya, n.d.) using LMS in online learning proves that students' activities and understanding in learning can increase.

b. Act as a forum for discussion

Online learning with LMS will make it very easy for lecturers and students to interact with each other in discussions related to problems experienced by lecture material. Various kinds of features such as chat and video conferencing are also the main attraction for lecturers and students. Discussions in this way are the same as those previously mentioned, there are no constraints on the spot because they can be done anywhere.

c. Serves as a vessel for assignments and assessments

The LMS application also makes it possible to give assignments to trainees with various forms of affirmation. It's not even just giving assignments, but LMS makes it possible to directly provide an assessment of the assignments that have been given by the trainees. Assignments with the LMS system can be controlled both in terms of time and the developmental achievements that have been obtained by the trainees. Unlike the case with assignments that are carried out face-to-face which require a separate time and location to be able to carry them out, meanwhile with the LMS application the

time and location can be adjusted and moreover it can be carried out using only the Android or smartphone owned by the trainees. Assignments with the LMS system can be done not only for one class but can be done with several classes and even these assignments can be used many times because with the LMS application the assignment will be saved automatically.

Problems of using Moodle-based LMS in competency improvement training for novice lecturers

In connection with the use of the LMS, there are a number of problems that cannot be avoided and are often the complaints of participants in training to increase the competence of lecturers. Some of the problems in question are as follows.

a. Difficulty Adapting To Learning*Online*
   Difficulties in adapting to online learning were often experienced by the trainees. This was because the trainees revealed that this was the first time they had used a moodle-based LMS. Training participants often admit that so far they are used to online-based learning, but so far what they have used is internet applications that can be accessed for free such as Google classroom, Zoom meeting and so on. What is meant by adapting in this problematic is that trainees often have to first adjust their understanding of the features contained in this Moodle-based LMS.

The impact of difficulties adapting to online learning using this LMS is that training participants often experience confusion in using the features contained in the LMS. Not only that, even at a certain level the difficulty of adapting is to the point that the trainees end up being late in submitting assignments or being late in working on the assessment given by the lecturer or tutor. Many training participants admitted that sometimes the laptop devices they used sometimes did not support this LMS application so that sometimes it took a while for their laptop devices to be able to connect to the application. Of course, this condition will psychologically worry the trainees which will ultimately lead to the difficulties of the trainees adapting to this LMS application system.

b. Network breakdown and slow internet access

Network failure is a common problem faced by all trainees when using Moodle-based LMS applications. Damage to this network is unavoidable because it is very much influenced by the weather or the location where the participant is located. Due to this problem, of course, there are several activities that are sometimes overlooked or missed by trainees, so that it requires extra work to be able to understand them independently. Even though this is a common problem, training participants often complain about network damage, and it is something that trainees can relate to the most because with the condition of network damage they will be hampered and late in participating in the training given by the lecturer. Actually, not only network damage, but slow internet access is also the main problem experienced by some lecturers. As befits other online learning applications, LMS also requires the training participants' devices to be connected to the internet. So fast internet access is a prerequisite for the stability of trainees using the LMS application. Not a few were found by several training participants who claimed that they were late or did not submit training assignments due to network destruction or slow internet access. Even psychologically it will certainly have an impact on the trainees because these conditions will cause concern which sometimes actually causes stress on the trainees.

c. Difficulty Understanding Information

Another problem related to the use of the LMS is the difficulty of the trainees understanding the information that has been provided. In using the LMS, of course, there are many things that are presented in writing that must be understood independently by the trainees. In understanding this, of course the ability to analyze information and

understand information as a whole is fundamental to being able to understand all the demands or procedures desired in the LMS application. Several research findings revealed that training participants admitted that they sometimes had difficulty understanding information or often misunderstood the information presented in tutorials given by lecturers or tutors. Of course, an error in understanding this information will result in an error in using the LMS application. as happened, for example the distance learning web site at Suska Riau State Islamic University and the distance learning web training are different, so many participants were fooled into not being able to enter distance learning, the participants thought that there was no explanation about this. Finally, this condition makes it difficult for the trainees themselves.

The problematic impact of using Moodle-based LMS on training to increase the competence of novice lecturers

Participants in the competency improvement training for novice lecturers at the Sultan Syarif Kasim Riau State Islamic University revealed that there were several achievement impacts that they felt during the training process using a moodle-based LMS. namely as follows:

a. Increased understanding of learning technology

The training participants admitted that they experienced an increased understanding of learning technology during the training process using the LMS. With the understanding they get about this learning technology, it will motivate lecturers to later be able to implement a similar learning system on their respective campuses. According to them, this understanding of learning technology is very rarely obtained by trainees because the places where they serve or work are of course different in terms of responding to the use of learning technology. Especially for universities with private status which very rarely use learning technology in the lecture process, they admit that the training in using the LMS means a lot to them, even to the point that they say that if it were not for the competency improvement training for novice lecturers, maybe they would not get an understanding of the learning technology they get today.

b. Increasing the professional competence of lecturers

As the final target of training for improving novice lecturers is increasing lecturer professionalism, One form of professionalism is of course manifested from the ability of lecturers to understand learning material. The LMS application makes it possible for trainees to be organized in mastering a variety of learning materials, this is due to the ability of the LMS to provide a variety of learning materials. The LMS application will make it possible to manage trainees in completing learning

materials because this application will make it possible to set time, set assignments, and set achievements. so that the various conveniences in these arrangements will further facilitate the increase in the professional competence of lecturers.

c. Increasing Independent Learning

Increased learning independence is also one of the impacts that is felt by the training participants in increasing the competence of novice lecturers. Because as many theories say that online learning has a positive side, especially in increasing the independence of learning for its participants. Moreover, lecturers are students in the adult category who are very likely to study independently. The Moodle-based LMS will record everything that is done by the trainees, therefore the extent to which the trainees' achievements in participating in learning is highly dependent on their ability to interact with the LMS. The ability of the training participants to manage and manage themselves to participate in learning is an indication that the training participants are increasingly independent in terms of learning.

CONCLUSION

Based on the explanation above, it can be concluded that the LMS is used as a virtual learning platform for training participants which allows participants to access and read learning resources, discuss, and carry out assignments.

Participants acknowledged that the LMS had a significant impact on increasing professional competence, this was manifested in the higher mastery of lecture material, and the increase in participants' technological competence. However, in its use there are problems encountered such as difficulty adapting to online learning, network damage, difficulty understanding information. This research certainly has implications as a reference for UIN Sultan Syarif Kasim Riau, especially in improving the quality of training. As a suggestion to managers to optimize the provision of information or tutorials so that training participants get a complete understanding. And for other researchers the results of this study can be the basis for research development, especially in finding solutions to the problems experienced at UIN Suska Riau.

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