

OPTIMIZATION OF LEARNING WITH SCHOOLGY FOR BEST PRACTICES IN QUALITY OF LEARNING OUTCOMES

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Abstract. The expected learning outcomes in pandemic learning are very different and need to be emphasized on certain things. Various ways are done by adding media, learning management systems, and learning aids are expected to help students learn something new. The new experiences learned will be important information for students to be able to develop their abilities. E-learning is an innovation that can be utilized in the learning process, not only in the delivery of learning materials but also in changes in the abilities of various student competencies. E-learning is an educational system that uses information technology in the teaching and learning process that can be done anywhere and anytime because the learning materials can be accessed remotely. The analysis used uses a survey system of qualitative data that describes the percentage of the use of several Learning Management Systems (LMS). This is done to determine the optimization of learning carried out with various LMS. There are 3 LMS used, namely: local LMS (SIPDA); Schoology; and Google Classroom. The three LMS will be used as material for comparison of user responses in learning Physics. This assessment is based on the use of the appropriate features of the three LMS. The picture shows the acceptance of respondents to Schoology reaching 90%. This seems to have a difference of around 20%-30% compared to the other two LMS. This shows that Schoology is more familiar with the features needed in e-learning. This makes it easy for users. Schoology is more ready to be used as an e-learning-based Physics learning platform.

Keywords: Optimization; LMS; Schoology; E-learning

INTRODUCTION

Learning is developed with various methods and strategies to achieve optimal learning outcomes. Learning during a pandemic requires various strategies that need to be prepared by educators by considering all aspects of education. This makes the basis for consideration that requires caution in its application (Geng et al., 2019; Lai, 2019; Moon et al., 2021). The expected learning outcomes in pandemic learning are very different and need to be emphasized on certain things. Various ways are done by adding media, learning management systems, and learning aids are expected to help students learn something new. The new experiences learned will be important information for students to be able to develop their abilities (Andresen et al., 2020; Hoel & Barland, 2021; Nguyen et al., 2020). Self-abilities are expected to be a source of qualifications from those expected by developing countries.

Indonesia as a developing country prepares all capabilities to be used as qualification capital to compete internationally. In terms of technology and education, adjustments need to be made that can be used as reinforcement in preparing resources that greatly support

the development of the country. The government as a state official carries out policies by supporting the progress of education through various developing technologies. This support is not only moral but also economic and social.

One of the strategies expected in a pandemic is E-Learning. This e-learning has efficiency and effectiveness in helping the teaching and learning process and is a solution to support the independent learning program on campus and alternative technology to be used in teaching methods in the global era, especially during this covid 19 pandemic. In addition, appropriate authentic assessment is required to be implemented with E-Learning. Authentic assessment requires students to show the learning outcomes they have in real life, not something made up or just an essay but also real from within the student (Rukmini & Saputri, 2017; Sutadji et al., 2021; Villarroel et al., 2018). The reality in the field is that the teacher does not carry out an authentic assessment, the teacher only evaluates the output. On the other hand, the weakness in the application of authentic assessment can be felt in online learning and authentic assessment is carried out to be able to assess students as a whole, this requires a place to be able to store documents widely, so we need an

assessment media that can overcome these problems that are practical, efficient and dynamic. Thus, appropriate learning is needed by combining E-learning and appropriate authentic assessments to achieve learning outcomes that reflect quality learning.

E-learning is an innovation that can be utilized in the learning process, not only in the delivery of learning materials but also in changes in the abilities of various student competencies. E-learning is an educational system that uses information technology in the teaching and learning process that can be done anywhere and anytime because the learning materials can be accessed remotely. Learning with e-learning can guide students to learn independently so that learning can shift from Teacher-Centered learning to Student-Centered Learning. Learning with the help of the website can make Student-Centered Learning (Arooj et al., 2021; Gamage et al., 2021; Gerritsen-van Leeuwenkamp et al., 2019; Tavares et al., 2021).

E-learning is learning that utilizes information and communication technology-based information packages for learning purposes that can be accessed by students anytime and anywhere. The benefits of e-learning are: 1. Teachers and students can communicate easily and quickly through internet facilities without being limited by distance, place, and time; 2. Make it easier and faster to access or obtain a lot of information related to learning materials from various sources of information by accessing the internet; 3. Learners are more active and independent in studying learning materials and do not rely on giving from the teacher; 4. Relatively more efficient in terms of place, time, and cost; and 5. The use of E-learning to support the implementation of the learning process can improve students on the material they are learning; and 6. Increase active participation of students (Alam et al., 2021; Alqahtani & Rajkhan, 2020; Garad et al., 2021).

Learners are independently responsible for their learning. Through e-learning, students not only listen to material descriptions from educators but also actively observe, perform, demonstrate, and so on. Physics teaching materials are virtualized in various formats so that they are more interesting and more dynamic so that they can motivate students to go further in the learning process. The process of implementing E-learning requires an LMS that functions to regulate the implementation of learning. LMS is a supporting software in E-learning learning that can manage online classes, such as management in giving assignments, subject matter, evaluations/tests, and others (Abazi-Bexheti et al., 2018; Bradley, 2020; Zabolotniaia et al., 2020).

This information and communication technology-based learning has changed the conventional pattern learning system into a media pattern, including computer media with the internet which gave rise to E-learning. E-learning is a distance learning system through electronic learning. E-Learning requires learners to learn independently and not rely on information from educators. The internet will affect the task of educators in the learning process and how to learn from the learners themselves because the learning process is not dominated by educators. The development of computer systems through the internet network is increasing.

In conventional education, the philosophy of e-Learning is as follows: a. e-Learning is the delivery of information, communication, education, and training online.; b. e-Learning provides a set of tools that can enrich the value of conventional learning (conventional learning models, studies of textbooks, CD-ROMs, and computer-based training) so that they can answer the challenges of globalization developments; c. e-Learning does not mean replacing conventional learning models in the classroom but strengthening the learning model through content enrichment and the development of educational technology. The content capacity received by students varies greatly depending on the form of content and the way it is delivered. The better the alignment between content and delivery tools with learning styles, the better the student's capacity which in turn will give better results. The delivery system or delivery system of e-Learning can be classified into two, namely: 1. One-way communication (one-way communication); and 2. Two ways communication (two-way communication) (Badir & Hariharan, 2021; Short & Martin, 2011; Wang et al., 2022).

Communication or interaction between teachers and students should be through a two-way system. In e-learning, this two-way system can also be classified into two, namely: through a direct (synchronous) way. This means that when the instructor gives a lesson, students can immediately listen; and indirectly (a-synchronous). For example, messages from instructors are recorded before use. The process of implementing e-learning is inseparable from several components in it, the components that must be carried out are (1) relevant content; (2) using learning methods, such as discussion, and problem-solving; (3) using media elements such as sentences and pictures to distribute content and learning methods; (4) learning can be done directly with the instructor (synchronous) or individual learning (asynchronous); and (5) building new insights and techniques related to learning objectives. The problem that arises is that the existing facilities cannot be utilized optimally (Hamid & Nofiza, 2018; Novitasari, 2017). Schools still do not have an integrated e-learning system, teachers still have difficulty in making learning media using e-learning, and the use of existing ICT facilities for learning media is not optimal. To optimize the use of e-learning, every teacher must have adequate knowledge regarding the concepts and ways of implementing these methods and by using methods that are suitable for the conditions of students, a comfortable learning atmosphere will be created and all learning objectives can be achieved.

METHOD

The analysis used uses a survey system of qualitative data that describes the percentage of the use of several Learning Management Systems (LMS). This is done to determine the optimization of learning carried out with various LMS. There are 3 LMS used, namely: local LMS (SIPDA); Schoology; and Google Classroom. The three LMS will be used as material for comparison of user responses in learning Physics. The respondents

used are a combination of students and educators who use the LMS. The number of respondents used as a source of information amounted to 200 respondents who were taken randomly from various areas around Medan, North Sumatra, Indonesia. The respondents will receive a questionnaire response to the use of the three LMS.

RESULT AND DISCUSSION

Based on the results of the response questionnaire, it can be seen in Fig. 1 that the use of the three LMS describes the percentage of acceptance and rejection of the use of the LMS by respondents. This is done on the part of the LMS which is considered to have clear benefits for users. Some parts of the LMS are considered not suitable for use. This is considered from the use of LMS related to the planned learning activities. In the implementation of the response, it has not fully optimized the various features in the LMS (Chu et al., 2021; Patel et al., 2019; Putra et al., 2020). This assessment is based on the use of the appropriate features of the three LMS. The picture shows the acceptance of respondents to Schoology reaching 90%. This seems to have a difference of around 20%-30% compared to the other two LMS.

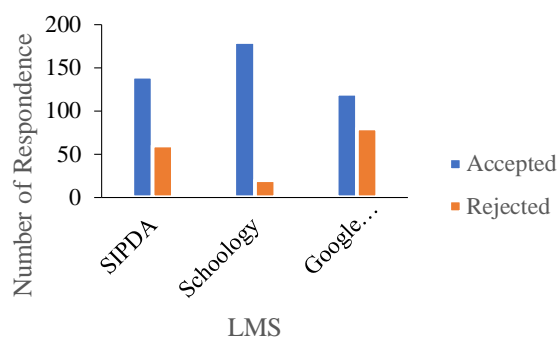


Figure 1. Response Result Description

Acceptance of respondents to the LMS feature is based in more detail on the three basic criteria contained in e-Learning, namely: a. e-Learning is a network, which makes it able to quickly repair, store or retrieve, distribute, and share learning and information. This requirement is very important in e-learning; b. e-Learning is sent to users via computers using standard internet technology. CD ROMs, Web TV, Web Cell Phones, pagers, and other personal digital aids, although they can prepare to learn messages, cannot be classified as e-learning; and c. E-Learning focuses on the broadest view of learning, learning solutions that outperform traditional paradigms in training (Abazi-Bexheti et al., 2018; Alqahtani & Rajkhan, 2020; Arooj et al., 2021; Patel et al., 2019; Tavares et al., 2021; Wang et al., 2022; Zabolotniaia et al., 2020).

This shows that the basis of E-Learning is the use of internet technology. E-learning is a form of conventional learning as outlined in digital format through internet technology. Therefore, e-Learning can be used in distance education systems as well as conventional education systems. LMS optimization can be used as the basis for developing technology-based

learning preparation. This is what makes Schoology stand out from the rest. Schoology provides easy features in use for both in terms of educators and students who use it as a learning medium. Schoology can include various features that can provide the delivery techniques needed in learning Physics. This is not presented from LMS SIPDA and Google Classroom. Both are general LMS without making their features in them unique in a particular field. However, the features of Schoology still need to be improved to be able to achieve a more authentic procedural assessment of learning and higher-order thinking skills (Apriliani et al., 2021; Handaini & Zulfah, 2021; Napitupulu et al., 2020; Tigowati et al., 2017; Widayanto, 2020; Widayoko, 2021). This is very important as learning outcomes need to be improved in Indonesia, especially in the field of education. This kind of development is expected to be a bridge to achieving more innovative learning.

CONCLUSION

Schoology has an advantage in assessing the response 20%-30% greater than the other two LMS. This shows that Schoology is more familiar with the features needed in e-learning. This makes it easy for users. Schoology is more ready to be used as an e-learning-based Physics learning platform. Various features that can be used as support for e-learning learning, Schoology also provides convenience in accessing learning.

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