Polytechnic students' perception toward the implementation of H5P-based interactive learning media on Learning Management System (LMS) of State Polytechnic of Lampung

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ABSTRACT

During the Covid-19 pandemic, learning activities on campus were carried out online, so lecturers and students were familiar with the LMS (Learning Management System). LMS in general is software designed to create, distribute and organize the delivery of learning material. Therefore, even though currently the majority of learning is done offline, this LMS is still used by lecturers to help them in the lecture process. This study aimed to know students' perception towards the implementation of H5P-based interactive learning media on Learning Management System (LMS) of State Polytechnic of Lampung. Furthermore, this research used survey-based approach. There were 50 samples of the research. They were students of Economics and business department who took Basic English. The findings of this study are expected to be beneficial for the future maintenance and development of H5P-based interactive learning media on LMS, as well as for determining the optimal method of conducting online learning.

Keywords: Students' perception, H5P, Learning Management System

I. INTRODUCTION

During the Covid-19 pandemic, learning activities on campus were carried out online. Online learning or e-learning is computer technology-based learning that can be carried out remotely, such as using live meeting technology with zoom applications, Google Meet, Discord and so on. This is as stated by Amali et al (2019) that e-learning is a learning method that utilizes information and communication technology to make the audience actively involved in learning regardless of time and place and so on.

LMS, Learning Management System, in general is software designed to create, distribute and organize the delivery of learning materials. This LMS system can help lecturers to plan and create syllabi, manage learning materials, manage student lecture activities, manage grades, recapitulate attendance, display grade transcripts, discuss and conduct quizzes. In a study conducted by Adzharuddin and Ling in 2013, it was discovered that university students, in the early stages of Learning Management System (LMS) development, perceived LMS as highly important in facilitating the learning process, particularly in offering increased opportunities for distance learning. Therefore, even though currently the majority of learning is done offline, this LMS is still used by lecturers to help them in the lecture process.

One of the superior features in the LMS is H5P. H5P is a free and open source JavaScript-based content collaboration framework. H5P really helps lecturers in creating, sharing, and reusing interactive HTML5 content. With this feature, lecturers can create various interactive learning media which are definitely more interesting than conventional learning media.

Numerous studies have explored perceptions of LMS and Interactive Learning Media on LMS . Adzharuddin and Ling (2013) highlighted the importance of LMS and the positive reactions of students to its implementation. Gunduz and Ozcan (2017) examined the general benefits and weaknesses of LMS. In addition, Utari et al. (2022) conducted a study investigating the utilization of H5P in the creation of interactive online language learning materials. The findings of their research indicate that H5P-based learning materials are both effective and efficient for use in English learning activities.

Furthermore, the survey employed in this study captures students' open-ended feedback regarding possible enhancements for the H5P-based interactive learning media within the LMS, drawing from their user experience. Therefore, the objective is for the outcomes of this research to enhance the interactive media, thereby refining it into a more effective tool for Polinela students and, consequently, enhancing their educational outcomes.

II. METHODS

This study employs a survey-based approach aimed at understanding undergraduate students' perceptions of interactive learning media on LMS of State Polytechnic of Lampung during online learning scenarios. Students' viewpoints were collected through a set of closed-ended questionnaire items. Examining students' perceptions is deemed crucial as it can inform the future development of H5P-based interactive learning media on LMS.

Participants:

The study involved students from the Economics and Business department, with 50 participants. These students were surveyed via Google Form in the second week of June 2023.

Instruments:

A Likert-scale questionnaire comprising 10 items, each rated on a scale of 1 to 4, was utilized to gather data. Additionally, an open-ended item was included to elicit more comprehensive responses regarding students' personal perspectives on interactive learning media. The questionnaire was developed by drawing on various theories of perception, particularly in the context of online learning by using LMS. The items carried by the questionnaire are related to the concept of organization and interpretation process by (Qiong, 2017).The questionnaire items were tailored to explore students' perceptions of H5P-based interactive learning media on LMS, covering aspects such as perceptions of different features in H5P on LMS, perceptions of its implementation in, and perceptions of its benefits and weaknesses.

Data analysis

In general, the data collection process is divided into several stages. The first is that preparation includes the following activities: 1) designing the instrument, 2) distributing the instrument, 3) checking reliability and analysis, 4) revising, and 5) finally transferring the questionnaire to Google Form for students to then distribute.

Below is a table showing the level of reliability of the questionnaire after being checked using Cronbach Alfa.

Tabel 1. Consistency level of the questionnaire analyzed using Cronbach's Alpha

Realibility Statistics		
Cronbach's Alfa	Cronbach's Alpha Based on Standardized Items	N of items
.680	.721	10

Based on the table above, The questionnaire's reliability level of 0.7 indicates a high degree of consistency, rendering it suitable for implementation in survey-based studies.

III. RESULTS AND DISCUSSION

There are 11 questionnaire items to obtain data on students' perceptions of the interactive learning media they use, 10 items are close-ended Likert scale items, while 1 item is an open-ended question. Close-ended items were analyzed to identify the statistical value of the overall responses of the 50 students. Below is a table showing descriptive statistics of student responses.

Tabel 2. Statistics of the questionnaire responses

No	Statement	Mean
1	Polinela LMS has quite complete features	3,4
2	In general, the various features in Polinela LMS really help the online learning process	3,3
3	The features in the Polinela LMS are still not optimal in supporting practicum-based learning	3,3
4	Polinela LMS can accommodate asynchronous and synchronous discussion activities well	3,4
5	The H5P feature in Polinela LMS provides an interesting alternative choice of interactive learning media	3,6
6	The interactive video feature in H5P helps when understanding utterances in English conversations	3,5
7	The interactive image feature in H5P helps when understanding new vocabulary in English	3,2
8	The interactive quiz feature is very helpful in evaluating and reinforcing material	3,4
9	Some features in H5P are never used by lecturers, while others are used too often	3
10	The use of LMS is not too affected by network interference	1,8

From table 2 it can be seen that the majority of items have an average value above 3. Most students think that the use of interactive learning media in the LMS really helps students understand the subject matter both synchronously and asynchronously. Apart from that, the diversity of features in H5P makes students enthusiastic because there are various types of media that can be used so that students don't get bored while taking lessons.

Apart from that, there are also weaknesses in using H5P-based interactive learning media, namely network problems. So the learning process becomes hampered. Furthermore, for practical courses, H5P-based interactive learning media is also not very optimal in helping students. Its use is limited to providing examples and conversation models on certain topics.

Tabel 3. Categorized responses to open-ended item based on the analysis

No	Categories based on the open-ended responses	Excerpts of students' responses	Number of students responding within the categories
1	Polinela needs to create a better system to avoid interference during LMS use	- - LMS is very difficult to access during peak hours such as 07.00 and 13.00 - - An unstable internet network makes it difficult for me to open materials, play videos or upload assignments. - Suddenly I logged out of my LMS account due to busy network	17
2	Other features need to be used in H5P to accommodate the needs of practical courses	- The use of interactive videos is quite good, but does not accommodate the need for practice	23
3	Learning media that help the learning process	- The use of H5P-based interactive learning media makes lectures more interesting - - The learning media used is not monotonous	10

Based on table 3, it can be seen that the majority of problems that occur during the use of interactive learning media in the Polinela LMS are network problems. This problem is very annoying because students cannot access the LMS when they have to attend lectures there. Apart from that, this problem also makes it difficult for students to upload their assigned assignments so that sometimes they are late in submitting their assignments. Another thing that must be paid more attention to is the use of features in H5P that can support the implementation of practical courses. Furthermore, the majority of students agreed that the use of interactive learning media helped them in the learning process. Interactive

learning media offers a diversity of different forms and functions of learning media so that lectures are not boring.

The findings of this research are in line with several previous studies regarding the implementation of online learning management systems, teaching media and the application of online digital media in EFL classrooms. Students' responses regarding the various useful features in the Virtual Classroom prove this (Turnbull et al., 2020) with their findings on how a solid learning management system (LMS) with varied features helps a valid learning process (Riyantika et al, 2021).

In addition, in line with (Muhammad et al., 2017), the findings of this research prove that students demand interactive elements such as thematic layouts and interesting features to help them learn better. Furthermore, these interactive elements make students more enthusiastic about learning because they have an attachment to the learning media.

IV. CONCLUSIONS AND SUGGESTIONS

In summary, this study highlights the crucial role of H5P-based interactive learning media in the educational process. It corroborates previous research findings, particularly in the realm of English as a Foreign Language (EFL), emphasizing the importance of developing effective interactive learning materials within Learning Management Systems (LMS). Student feedback underscores the significance of H5P-based interactive learning media on LMS, yet also points out the need for addressing technical issues and enhancing existing features.

Moreover, this study is anticipated to inspire further exploration by researchers in the field of educational media, fostering innovation in interactive learning media development. The findings hold promise for the advancement of H5P-based interactive learning media, recognizing its integral role in modern teaching and learning practices within educational institutions.

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