Development Of An E-Learning Model Using CMS Moodle During Covid 19

Leni Marlina[1], Heri Kurniawan[2], Sri Wahyuni[4], Sheranita[3]
[1,2,4]Department of Computer System, Universitas Pembangunan Panca Budi, Indonesia
[3]Department of Computer Engineering, Universitas Pembangunan Panca Budi, Indonesia

Article Info	ABSTRACT
	Every aspect of life, particularly the field of education, has seen a change in orientation as a result of the COVID-19 pandemic. Education is changing, and distance learning can help. In-person interactions are no longer the main focus. The purpose of this study is to use the CMS paradigm to create an e-learning model. In addition, the paradigm of teacher-oriented learning has given way to student-oriented learning. Students are now positioned as learning subjects rather than as learning objects in this student-oriented learning environment. These days, there are a lot of learning resources available, and e-learning involves the use of technology (the internet). Through the use of the Internet, intranet, or online media, educational resources can be made available to students through e-learning. further networks of computers. Given that computer technology is used by educators, students, and educational institutions to carry out teaching and learning activities, e-learning has become essential for the academic community. Software for online and website-based learning activities is known as Moodle-based e-learning media. This medium takes the form of an online course presentation tool where instructors can post lesson plans, instructional videos, PowerPoint presentations, discussion boards, and tests pertaining to certain journal articles.

Corresponding Author:

Heri Kurniawan,
Department of Computer Engineering,
Universitas Pembangunan Panca Budi,
Jl. Jend. Gatot Subroto Km. 4,5 Sei Sikambing 20122 Medan, Propinsi Sumatera Utara, Indonesia.
Email: herikurnia@pancabudi.ac.id

1. INTRODUCTION

The shift from a teacher-centered to a student-centered learning paradigm is what's happening in the field of education [1][2][3]. Students are now positioned as learning subjects rather than as learning objects in this student-oriented learning environment. Put another way, a student's own learning activities have a significant impact on their achievement in the classroom [4]. High levels of contact between teachers and students, as well as amongst students themselves, will result from student participation in the learning process[5][6][7]. This will produce a lively and supportive learning environment where every student may participate to the fullest [8][9][10]. Student-generated activities will promote the development of knowledge and skills, which will raise learning achievement [1,2]. E-

learning is a popular kind of learning that makes use of technology, specifically the internet [13][14]. E-learning is a kind of instruction whereby students can get course materials via the Internet, intranet, or other computer network medium. Since professors, students, and educational institutions have all used computers in the process of teaching and learning activities, e-learning has become essential for the academic community [3,4,5, 6]. Software for online and website-based learning activities is known as Moodle-based e-learning media [19]. This media takes the form of a webpage with a feature that allows teachers to create and share lesson plans, instructional videos, PowerPoint presentations, forum posts, and quizzes pertaining to particular journal entries. Real-time student-student or teacher-student contact can be facilitated by Moodle, allowing for the sharing of knowledge, the exchange of ideas, and the resolution of issues that arise throughout the learning process. In addition to being designed with a social constructivist approach to educational activities, Moodle can be connected with other systems or necessary technologies [8,9].

2. RESEARCH METHOD

Phases of ResearchIn addition, design methodologies were employed in this study, utilizing a system that consists of the following stages:

1. Analysis of System RequirementsUse analysis, which is a comparison of the theoretical basis employed with objects, to analyze data for system needs.
2. System Design In order to achieve the desired outcomes, the system will be designed at this stage, beginning with the design of the system architecture, interface procedure, and user interaction.
3. Implementation This phase involves putting the system into operation so that users may use and operate it. Thus, PHP is used as the programming language.
4. Testing The purpose of this step is to make sure the program can function properly and efficiently. The Blackbox Technique is used in the program's testing, which is done mostly to determine whether functions can perform without error.
5. System documentation, which includes recording actions from the start of data gathering until the system is put into place.

The following is the data collection methodology employed in this study:

1. Observation:

   This is a technique for gathering data that involves going out into the field and seeing firsthand how high school students are taught. This procedure involves observation, which entails seeing, documenting, computing, measuring, and noting incidents.

2. Interview

   This technique involves asking and receiving questions from the source or person being interviewed face-to-face, either with or without the use of an interview guide.

3. Literature Review:

   This technique for gathering data involves gathering information from written texts, including documents, periodicals, ebooks, newspapers, journals, and others, as well as from other digital copies. Data on learning applications using Moodle and PHP programming is included in this study.

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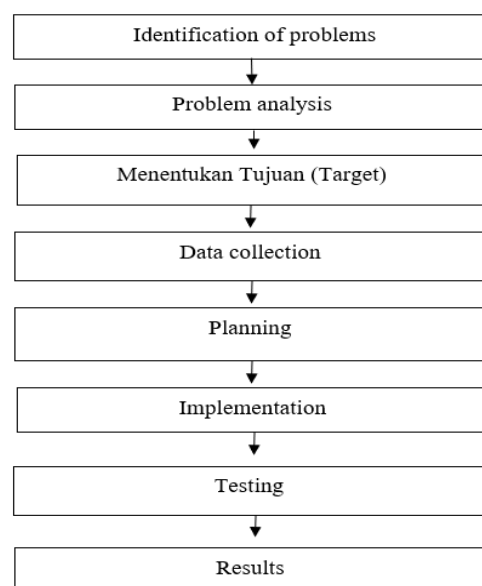

Figure 1. Research Framework

3. RESULTS AND DISCUSSIONS

Configure TCP/IP Address
The purpose of IP Address Configuration is to provide an address for a server or computer on a network. In simple terms, so that a computer on a network can be recognized by all clients and itself must be given an address, this address is what is meant by an IP Address. IP Address is a certain number which will later be used as a benchmark for giving addresses to clients in a client server or workgroup based LAN network.
Configure the IP Address on the Server
In order for the server computer to be recognized, it must be given an IP address.

1. Login Page

This is the page that is accessed when the application is run after carry out the login process when the application is run, on the page login, the user will be asked to input a username and password for enter the e-learning learning application level subject matter high school. The login page can be shown in Figure 2.
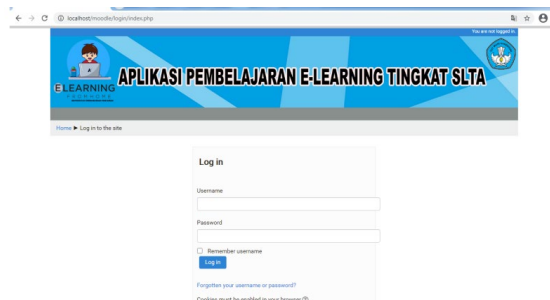
Figure 2. Login Page Display

2. Home Page

This is the page that is accessed after logging in when the application is run, the Home page is the main page high school level e-learning application. Home page can shown in figure 3.
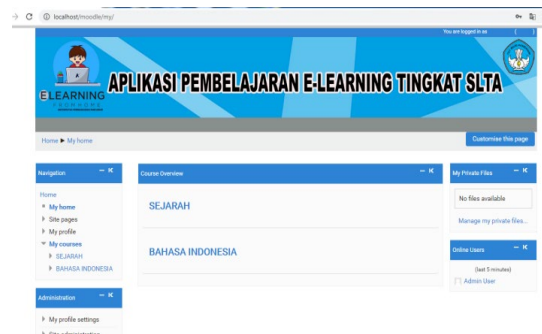

Figure 3. Home Page

3. Course Materials Page

Course material page as a page for displaying material regarding high school level subjects. The Home page can be displayed figure 4.
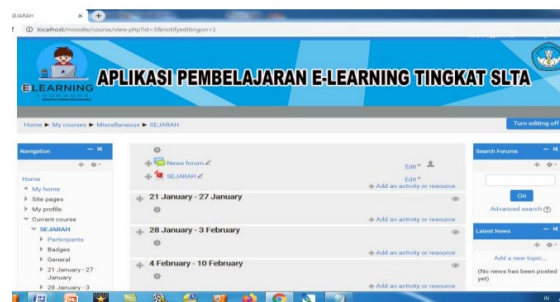

Figure 4. Material Page View

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4. Learning Material Contents Page

The course material content page is a page for displaying material content regarding paragraph lessons. The Home page can be displayed on the figure 5.
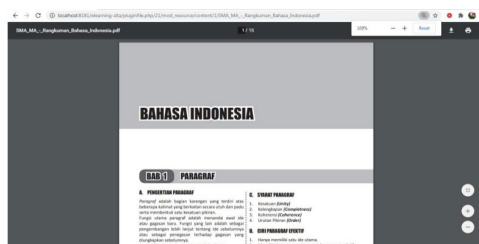
Figure 6. Contact Forms and User Interaction

4. CONCLUSION

The conclusions from the development of the learning model are: E-Learning for high school level using CMS Moodle is as follows :

1. Development of an e-learning learning model based on Moodle CMS as a learning medium for high school level, especially for the eyes Indonesian and History lessons will have an impact on the process there are no obstacles to timely learning activities due to space and time constraints.

2. Students' competency towards the subject will increase because of this become something new so that it becomes a place for learning together as well as the learning activity itself.

3. Evaluations carried out by teachers for students are more timely so that serve as a guideline in creating student evaluation reports.

4. To optimize e-learning activities, encourage student motivation to use information and communication technology devices such as PC laptops or smartphones. Implementation of additional learning for material on the use of information and communication technology.

With the completion of the development of the E-Learning learning model fo high school level using Moodle CMS, there are several suggestions Hopefully all parties can respond, namely:

1. For further development of the use of Moodle CMS-based e-learning as a learning medium, it is necessary to develop infrastructure, both intranet and internet, to support e-learning activities so that there are no obstacles when using e-Learning.

2. Learning applications for Indonesian and History subjects at the high school level should be updated more frequently by teachers on a regular basis to provide more material.

3. The computer used to create a web-based application should have medium level specifications because using software can use up computer resources such as memory and hard disk capacity.

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