

## DEVELOPMENT OF A WEBSITE-BASED ONLINE LEARNING MODE AS A MEANS OF INCREASING STUDENT INDEPENDENCE IN LEARNING

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### Abstract

Now with advances in technology students and teachers alike can learn in the hands of technology. Currently, all countries in the world are facing the Covid-19 pandemic. All activities are restricted to prevent the spread of the Corona virus, including educational activities. In Indonesia, it has been more or less three months, all educational activities, from primary and secondary to tertiary levels, are conducted online. In this research concept, what researchers will do is how to make a website as a learning medium easily and can be understood by students and readers from all walks of life. Features can also be used properly so that students are interested and enthusiastic in independent learning. At the stage of making the website the researcher uses wordpress as a medium for editing the appearance of the theme or other features. So that it really can help researchers in simplifying and accelerating the creation of a website as a learning medium that helps students to learn independently online. At this stage the research model used is the waterfall model. Starting from the level and progress of the system, using this model has a systematic sequential software development method. In developing a website-based online learning mode as a means of increasing student independence in learning, teachers can update subject data, input new subject data, and delete unnecessary data. Subject data whose access time limit has been determined will be deleted by itself at a predetermined time. The teacher only needs to register as a teacher and can immediately become a teacher on the Website-Based Online Learning Mode Development Website as a Means to Increase Student Independence in Learning after passing certain predetermined phases and conditions. After completing teaching and learning activities, users can close the account or Logout from an existing account on the Website. After that, the website can be closed by closing the browser application which is used to open a website-based online learning mode development website as a means of increasing student independence in learning.

**Keyword:** Website, Learning, Learning, Teaching

## INTRODUCTION

It is undeniable that the times are constantly evolving and life is also advancing. From traditional to modern until now, Indonesia is arguably one of the countries that has reached the modernization phase. We can observe from his society and the fulfillment of his life which has now changed. One of them is the advancement in education which is usually done face-to-face and learning in schools. Now with advances in technology, students and teachers can learn in the palm of technology. Currently, all countries in the world are facing the Covid-19 pandemic. All activities are restricted to prevent the spread of the Corona virus, including educational activities. In Indonesia, it has been approximately three months, all educational activities, ranging from primary and secondary to tertiary levels are carried out online, without face-to-face between teachers and students[1].

According to Abdul Zahir (2019) in his research using the Website-Based Computer Knowledge Live Streaming Learning Media Development method with the aim of making these students understand the course and be able to apply it to life [2]. According to Admi Rut Sinana and Abertun Sagit Sahay (2021) in their research using the Website-Based E-Learning method at SLBN 1 Palangkaraya with the aim of being an entertainment medium and also a means of practicing reading [3]. According to Kukuh Septyanto, Mustofa Abi Hamid, and Didik Aribowo (2020) in their research using the Website-Based E-Learning Development method using the Waterfall Method with the aim of describing the development process and testing the feasibility of the product [4]. According to Nur Widiya (2018) School is a system of social interaction of an organization as a whole consisting of personal interactions related together in an organic relationship[5]. Meanwhile, according to Parta Ibeng (2021) the school is an educational institution whose nature is formal, non-formal, and informal, whose establishment is carried out by the state or also the private sector with the main objective being to provide teaching, manage, and also educate students through guidance provided by educators or teachers [6][1].

Based on previous research using the website-based Live streaming learning media method, Website-based E-Learning, and website-based E-learning with the Waterfall method. Most of the functions are almost the same, namely using a website as a learning medium with different methods. In this study, we will create a Website program with a method that supports students to learn independently with the material on the website in the future. So the students do not find it difficult to find updated material according to the existing curriculum and according to the subject area to be sought. According to Mifta Rakhmadian, Syarif Hidayatullah and Harianto Respati (2017) Information systems are one of the solutions to the problems faced by organizations, and are useful for facing challenges in the present[7]. According to Ridho Pamungkas (2017) information systems are one way to support services to students[8]. According to Zeny Dwi Martha, Eka Pramono Adi, and Yerry Soepriyanto (2018) Mobile learning is a learning model that utilizes mobile devices to access it[9]. According to Gufron Amirullah and Restu Hardinata (2017) Mobile learning is an alternative to

developing learning media. Mobile learning has practical characteristics and can be carried anywhere[10].

In this research concept, what the researcher will do is how to make a website as a learning medium easily and understandably by students and readers from all walks of life. The features can also be used well so that students are interested and enthusiastic in self-study. At the stage of creating a website, researchers use wordpress as a medium for editing the appearance of the theme or other features. So that it can really help researchers in making websites easier and faster as a learning medium that helps students to learn independently online. With this research, it is hoped that it can help teachers, parents, and students in providing updated material according to the existing curriculum and in accordance with the subject area sought. Related to website-based independent learning to increase the interest of interested students and enthusiasm in independent learning and make this website a useful medium for students' learning. In the future, the website will have an attractive appearance and features that are easy to use for students. In terms of the content of the learning website, it will contain material, sample questions, and work steps. That's the picture of the estimated website-based learning in the future.

## **RESEARCH METHODS**

### **Data Collection**

in conducting this research to obtain data and information, the methods used in the data collection process are as follows:

#### **1. Observation Method**

At this stage, the researcher will make an observational observation in real or direct terms of students and also on the school environment both from service and teaching. so that the results of using this observation method researchers can find out how the response from various parties to be able to draw a conclusion.

#### **2. Literature Method**

in this stage, it also uses the literature method (library study) in the form of references from journals from previous researchers, books, and from the appropriate official website. in this method, researchers search, collect and study and summarize all relevant and accurate data that has been obtained from journals and books related to mobile learning introduction to environmental health.

### **System Development Methods**

At this stage the research model used is the waterfall model. Starting from the level and progress of the system, using this model has a systematic sequential software development method. The explanation of the waterfall diagram stages above is as follows:

#### **1. Analysis**

In this stage, researchers analyzed that schools still do not utilize technology in their learning systems. Therefore, researchers analyze and then think about making mobile learning introduction to health.

#### **2. Design**

In this stage researchers begin to design, design, create the mobile learning. By using the facilities on the theme on the WordPress platform which is intended to create mobile learning.

3. Coding

In this stage, researchers use several Java, Html5, and CSS3 programming languages in the process of making mobile learning.

4. Test

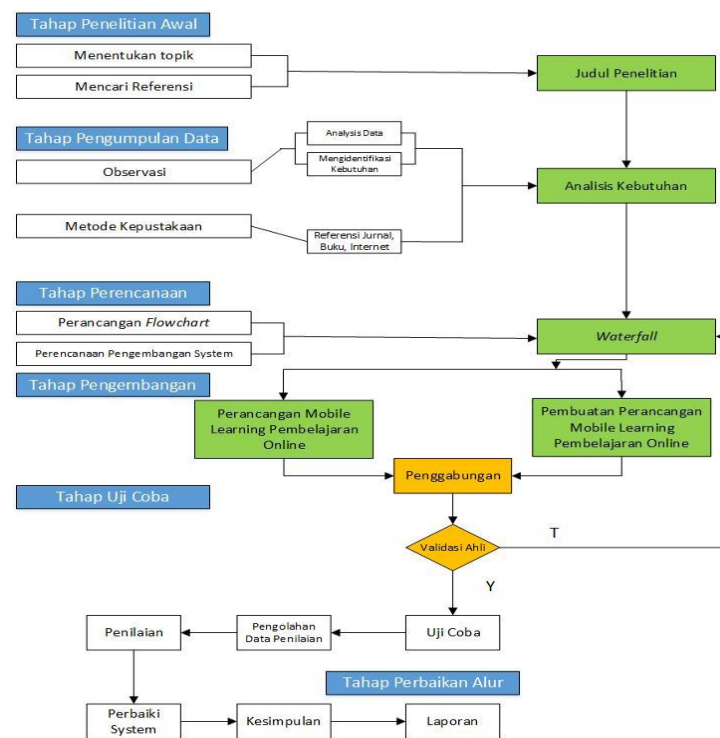
At this stage, researchers test mobile learning, because the new mobile learning is suitable for various smartphones. Then it is necessary to conduct tests so that this application runs smoothly and as expected by researchers.

5. Maintenance

In this stage, the researcher acts as the admin of the website, so if there is an error report on the website, the researcher will immediately fix the application or add content and update the website.

**Research Thinking Framework**

The thinking framework of this research explains the results or details of the research stages which will be explained through the flowchart below:



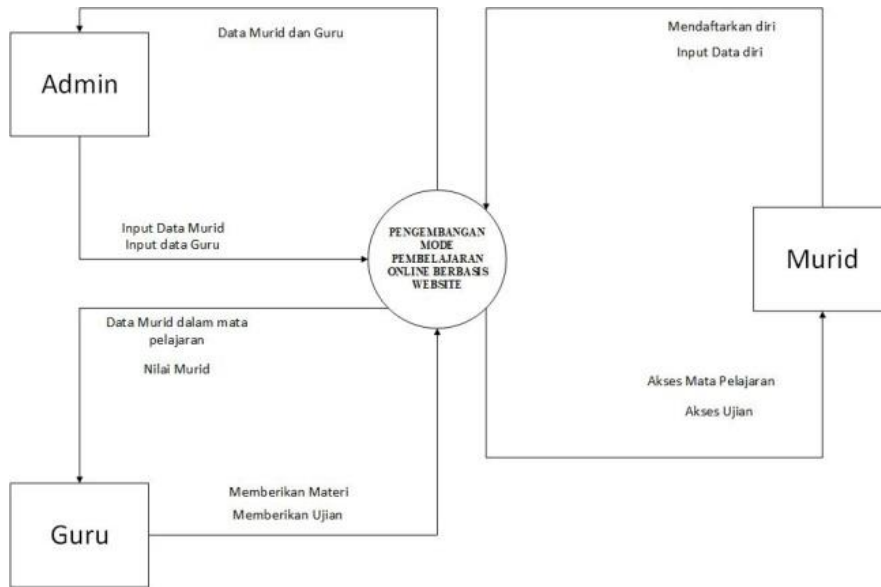
Picture 2. Research Thinking Framework

The thinking framework of this research explains the stages of the research carried out. Starting from the initial steps of research such as determining the title, analyzing needs, determining the methods used, designing a website to implementation.

## DISCUSSION

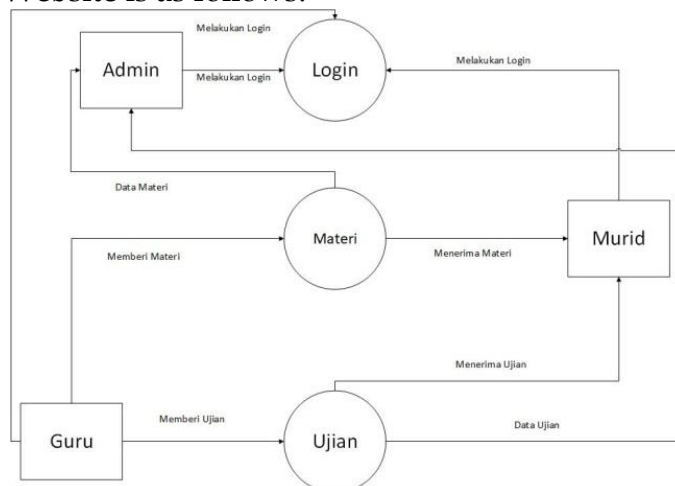
### Design

The context diagram is the highest level of DFD, which describes the overall situation of the inputs or outputs of the system. The system in DFD is bordered with broken lines. Context diagrams have only one process.



Picture 2. Context Diagram

DFD describes a contextual system data flow diagram that will first appear is the interaction between the system and outside entities. DFD is designed to denote systems divided into the following sections: A smaller sub-system section to emphasize the flow of data between the two The things mentioned above. Then "developed" the image to see more details in this way you can see the models in it. The DFD on this Website is as follows:

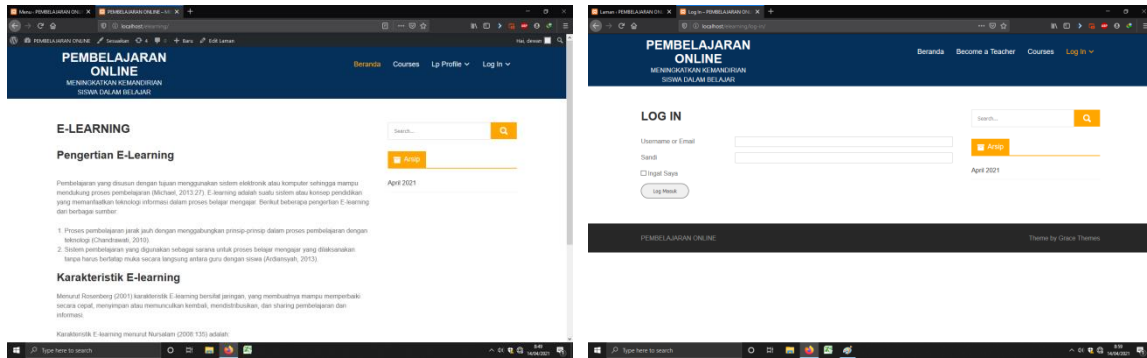


Picture 4. DFD Diagram

### Implementation

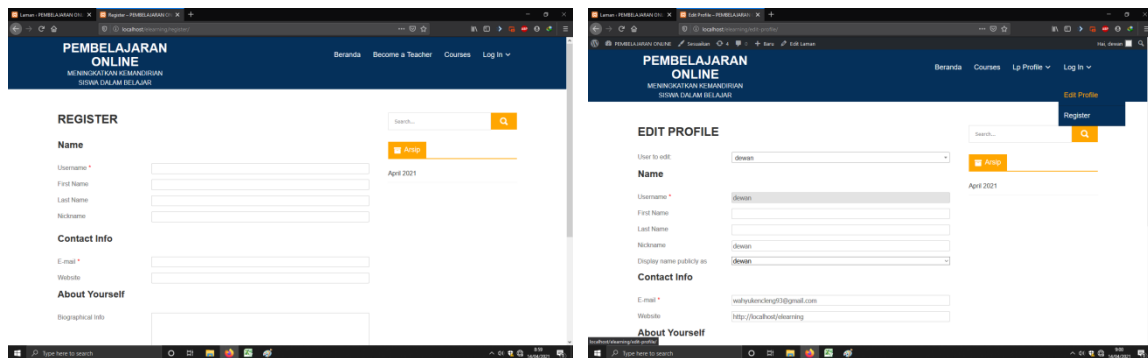
The implementation stage is the stage of using the system to be ready for operation and testing. With the aim of conducting trials on hardware as a means

of data processing and information presentation. The activities that can be carried out at this implementation stage are from the process of opening a browser, opening a website address, registering, logging in, conducting teaching and learning activities, and closing or exiting the website. The main page is a page that will appear when a website visitor first opens the website.



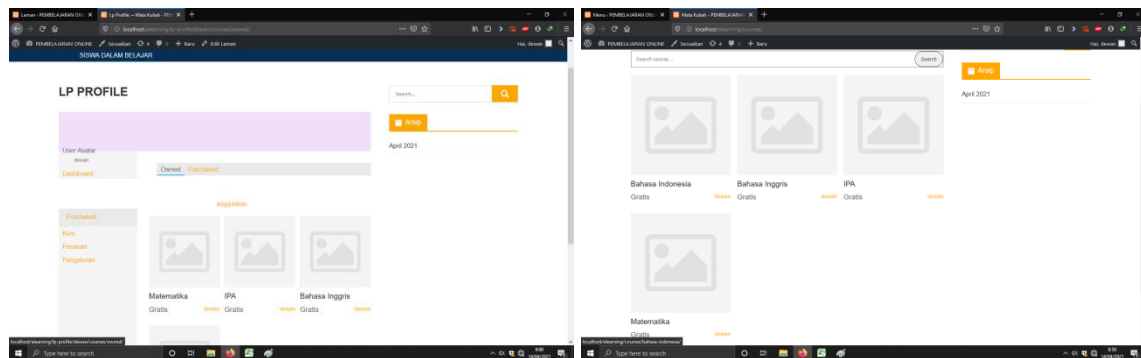
Picture 6. Main Page View and Login

The login page is the page that administrators, teachers and students use to log in. Registration page is a page used to register as a student or teacher on the website.



Picture 7. Teacher or Student Registration Display

The edit profile page is a page for updating or changing user profiles. The teacher profile page is a page used to provide material, make exam questions, provide grades and other teacher activities.



Picture 8. Teacher Profile Page View

## **Implementation Testing**

At this stage the system will be used and tested for use in the learning process by teachers and students. To open the Website, you must first open the Browser application contained on the device used by the user. The devices used can be in the form of Android, Laptop, and also Desktop. To open the Development of Website-Based Online Learning Modes as a Means of Increasing Student Independence in Learning, the first thing to do is to open a browser application on the device used, then use the Website address, then after the Website is open log in to the website. If you do not have an account, please register on the Website, after logging in the teacher or students can access and carry out teaching and learning activities. In the Development of Website-Based Online Learning Modes as a Means of Increasing Student Independence in Learning, teachers can update subject data, input new subject data, and delete data that is no longer needed. Subject data that has been determined by the accessor's limit time will be deleted by itself at a predetermined time. Teachers only need to register as a teacher and can immediately become a teacher on the Website Development Website as a Means of Increasing Student Independence in Learning after passing certain phases and conditions that have been determined. After completing teaching and learning activities, users can close their account or log out of the account on the Website. After that, the Website can be closed by closing the Browser Application used to open the Website Development Website-Based Online Learning Mode as Means of Increasing Student Independence in Learning.

## **CONCLUSSION**

Based on the analysis and discussion of problems that exist in the teaching and learning process in the Development of Website-Based Online Learning Modes as a Means of Increasing Student Independence in Learning, it can take the following conclusions: By using the Development of Website-Based Online Learning Modes as a Means of Increasing Student Independence in Learning, the learning and teaching process in online form will be easier and more effective, and Development of Website-Based Online Learning Modes as a Means of Increasing Student Independence in Learning can help increase interest in students in independence and perseverance in learning. Some of the suggestions in this study are as follows: Development of Website-Based Online Learning Mode as a Means of Increasing Student Independence in Learning, it can be developed again in terms of appearance and design in order to better attract students. Development of Website-Based Online Learning Mode as a Means of Increasing Student Independence in Learning, in the future it can provide more and wider lessons and materials so that the learning circle can cover all types of circles.

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