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## The Designing of Website-Based Learning Media as an Alternative for Online Learning for Student Practicing at SMKN 1 Sawoo Ponorogo

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**Abstract.** SMKN 1 Sawoo is a vocational high school that requires each student at a certain class level to do an internship. These activities require students to carry out these activities outside of school and of course the learning process does not stop completely. Therefore, we need a learning media that can help teachers in online learning. So that the learning process can continue. One of them uses website-based learning media. The website-based learning media at SMKN 1 Sawoo aims to help teachers and students in carrying out teaching and learning activities remotely. The research method used is the waterfall method. The media needed is a learning media website that can be used to deliver material and conduct learning evaluations. The material that can be delivered is of course multimedia based, which in addition to text can be in the form of images, videos and audio. In addition to being used for delivering material, this online learning media website can be used as a medium to do assignments given by each subject teacher.

### 1. Introduction

Developing technology covers various fields, starting from business activities, information, entertainment and also education. The development of a technology has a purpose as a media or tool to facilitate users in doing their jobs. Among them a job is possible to be done in a different place or done remotely (Online). One of the things that can be done is the scope of education.

SMKN 1 Sawoo Ponorogo is a vocational high school that allows for the distance learning process. This needs to be done because the policy of each Vocational School requires each student at a certain class level to carry out business activities or PKL (Field Work Practices). The activity requires students to run outside the school and of course the process of learning is not stopped completely. Thus the students will need more time to take part in learning and of course it will be difficult for students who run Practice activities outside the City.

Based on the above exposure, a medium that is capable of assisting students to obtain learning materials Online during the process of Prakerin activities takes place. The media is a learning media website that can be used to convey material. The material that can be submitted must be various in addition to the text, the material that is sonicated can be images, video and audio. In addition to being used for material delivery, this online learning media website can be used to work on and accomplish the tasks provided by teachers of each subject.



Website is chosen as an alternative media learning because according to some studies, the media website has various advantages including in the form of e-learning so that the learning process is more efficient and effective because it can be done anywhere and anytime.[1]

Therefore, the author plans to design a website "The Designing of Website-Based Learning Media as an Alternative for Online Learning for Student Practicing at SMKN 1 Sawoo Ponorogo ", which is made especially for students of SMKN 1 Sawoo Ponorogo. With hope later can assist in the learning process Online and develop the advancement of learning media technology in the future.

## 2. Learning Media

Media can also be called audio-visual equipment, meaning tools that can bring up images and sound, which can be used in the learning process with the intent to make the way to communicate more effectively and efficiently. With the use of a media teacher and students can communicate more accurately and the interactions are many directions or long distance.[2]

According to Daryanto (1993:1), that media is a tool that can help teach learning activities that serve to clarify the meaning of the message conveyed so that the teaching purpose can be delivered better. Media in the educational technology area is a source of learning that is a combination of materials and equipment.[3]

## 3. Website

According to Hidayat, R. (2010), the website or <sup>6</sup>website is a collection of pages that serves to display text, image, animation, sound, video, and other information both static and dynamic, each of which is connected to the Various page networks. The relationship between one Web page and the other Web page is called Hyperlink, while the text being used as a link media is called Hypertext. [4]

## 4. Research Methodology

The research methodology used in the app-based learning media design process in SMKN 1 Sawoo Ponorogo consists of several phases. Starting from the library study to collect various literature, followed by observation methods and interviews. Observations were conducted at the scope of teachers and students regarding teaching and learning process during the practice work, and then the interviews were conducted on teachers and students. Next is the design stage, in the process of designing conducted research using the Waterfall method and using various tools, among others, Context Diagram, DFD, ERD and so on.

### 4.1. Literature Review

Literature review is done by searching literature related to the issues studied, namely the literature on learning media, alternative media, website designing. Some sources of literature on this study were obtained from books, journals and some online media.

### 4.2. Observation

Observation is done on teacher and student learning activities during practice work. To get the curriculum information and learning system in SMKN 1 Sawoo and to obtain information and classification of problems in SMKN 1 Sawoo Ponorogo, this obtaining information on system needs tailored to the design System for Learning Media at SMKN 1 Sawoo.

### 4.3. Interview

The interview was conducted to several teachers and students of SMKN 1 Sawoo Ponorogo, to obtain information of teachers and students needs tailored to the needs of the system design.

## 5. Analisis

### 5.1. Analysis of Interview Results

From the interview results of several teachers at SMKN 1 Sawoo. That the teacher needs an online medium that can be used to efficiently study the learning process for students during an off-school practice activity process. So students can get learning during a practical practice.

The results of the analysis carried out to several students, that students need learning media that can help them get learning materials during the process of practical activities, without having to come to school. So that practice activities outside the school can run optimally and still get learning material.

### 5.2. System Requirements Analysis

The results of analysis on the system that will be made that there is an administrator in charge of managing the learning media system, then each teacher can private access to be able to manage the subjects and classes according to the task chasing him. It is able to add text, image and video materials to the subjects and classes they teach.

Students get private access based on their parent number to be able to view material that has been shared by the teacher of the respective subjects according to the set schedule. Each student is required to do online learning activities during the practice.

### 5.3. Hardware Analysis

To support the running of the learning media that is designed it takes a hardware device, namely a complete computer. At PonorogoSawoo 1 Vocational School already have a computer device that is quite complete so that it can help the system run. Based on the results of the analysis the user needs a computer that is used to manage and run a learning media website with minimum specifications as written in the table below:

**Table 1.**Hardware Analysis

No	Component	Spesification
1	Processor Intel	Core i3
2	Memory (RAM)	4 GB
3	Harddisk	500 GB
4	Mouse	Usb Mouse
5	Audio	Speaker
6	Lan	Internet Connection

From the results of the analysis of hardware requirements above, that SMK 1 Sawoo already has computer peripheral components that meet the system requirements.

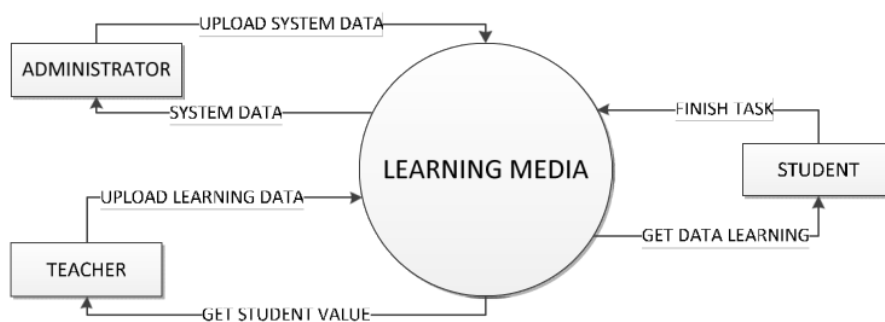
### 5.4. Software Analisis

Software requirements used to support the running of the system with minimum specifications using the Windows 7 Ultimate 64 bit operating system. Windows 7 Ultimate was chosen because of the fairly lightweight specifications and can be used for the latest generation of software and the older generation of software.

## 6. System Design

### 6.1. Context Diagram

The context diagram is the highest level part that describes all inputs to the system or output and the system that describes the whole system. Context diagram is the highest level in the data flow diagram and only contains one process. [5]



**Figure 1.** Context Diagram

The context diagram above explains that in the system designed there are several users, namely:

- Administrator  
The task is to manage the online learning media system, including the input of teacher data and student data at SMK 1 SawooPonorogo.
- Teacher  
Duty to input material and assignments according to the subjects taught based on a predetermined schedule. Give an assessment of each student who does the task through online learning media.
- Students  
Receive material from subject teachers of each class and do assignments given by subject teachers through online learning media.

## 7. Interface Design

### 7.1. Login Design

In designing the login page there are two columns that function to input the id number and password of the users starting from administrators, teachers and students. All users can enter based on the id number that has been adjusted by the administrator. Following is the design of the login page in explained in Figure 2.

The login page design for SMKN 1 SAWOO PONOROGO ONLINE LEARNING MEDIA. It features a header with a circular school logo on the left and the title 'SMKN 1 SAWOO PONOROGO ONLINE LEARNING MEDIA' on the right. The main content area is a light gray rectangle containing a white box titled 'PLEASE LOGIN'. Inside this box, there are two input fields: the first is labeled 'NIP/NIK/NIS/NISN' and the second is labeled 'PASSWORD'. Below these fields is a rounded rectangular button labeled 'LOGIN'.

Figure 2. Login page design

### 7.2. Administrator Page Design

The admin page is used for users as administrators, administrators have the right to full access to the learning media system. Administrators are in charge of input and manage all data requirements needed to run a learning media system, starting from teacher data, student data, learning schedules and much more. The administrator page design as in Figure 3.

The administrator page design for SMKN 1 SAWOO PONOROGO ONLINE LEARNING MEDIA. It features a header with a circular school logo on the left and the title 'SMKN 1 SAWOO PONOROGO ONLINE LEARNING MEDIA' on the right. Below the header is a horizontal bar labeled 'ADMINISTRATOR'. To the left of the main content area is a vertical sidebar menu with five items: 'MENU 1', 'MENU 2', 'MENU 3', 'MENU 4', and 'MENU 4'. The main content area is a large, empty white rectangle.

Figure 3. Administrator page design

### 7.3. Teacher Page Design

Teacher pages are used by teaching teachers to input learning material according to the subjects being taught, assign assignments and provide assessment to students according to the results of doing the assignments. Next is the teacher page design as in Figure 4.

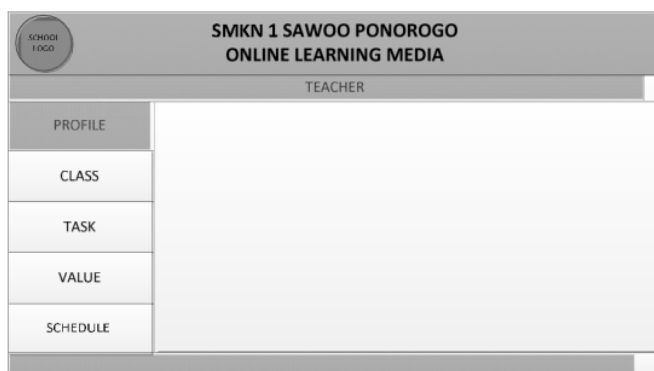


Figure 4. Teacher page design

### 7.4. Student page design

Students can only access student pages provided by online learning media systems. Each login is in accordance with the specified learning schedule, automatically students also attend attendance. On this page students will get learning material that has been shared by subject teachers. Students can work on assignments and can see the schedule of lessons that have been determined by the school. The following is the design of the student page as in Figure 5.

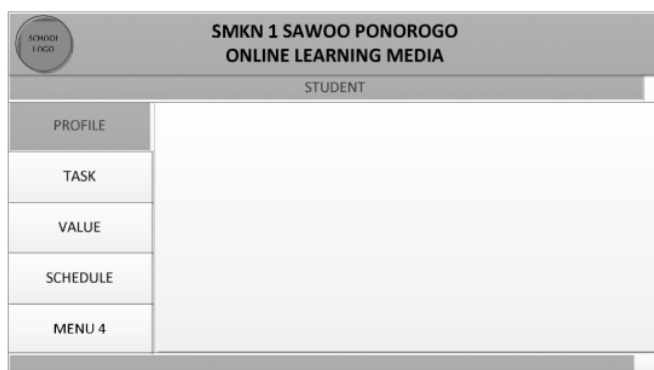


Figure 5. Student page design



## 8. Conclusion

1. Conventional learning is less effective if done when students are running practical work outside of school.
2. System design can help facilitate programmers in making online learning media. So that later this online learning media website can be used in the distance learning process at SMK 1 SawooPonorogo.

## 9. Suggestion

1. Better learning media are needed to improve the process and quality of learning at SMK 1 SawooPonorogo.
2. Development of an online learning media system is needed at SMKN 1 SawooPonorogo Vocational High School from the design section, complete system and detailed system requirements. So that it becomes an optimal online learning media system.
3. With the design of online learning media at SMK 1 SawooPonorogo, it is expected to be developed into a learning media application that can run on various devices.

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