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Utilization of A Website-Based Industrial Practice Supervision System (Prakerin) During Pandemic

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ABSTRACT

Increasing the competence of vocational students to be able to enter the field is the first goal for the quality of every major level school. The supervisory system for monitoring field work practices at the agency is to monitor, control the activities and activities of students where the completion of reports is one of the important requirements in implementing field work practices in research places of companies or agencies, this supervision system effort occurs because most students come from regions which is far from home so that it requires boarding and the number of students who commit fraud by not attending / coming to companies or research institutions, especially when the current pandemic is an excuse for students. In this study using the direct field observation method, interviews with external supervisors, laboratory assistants and students, while the implementation uses the PHP programming language and MySQL database. The results of the student supervision system in implementation activities for 3 months which can have a positive impact on the use of supervising teachers, schools and internship students in completing reports during the pandemic.

1. INTRODUCTION

The Industrial Work Practice Program (PRAKERIN) is generally called the Work Practice in the Business/Industry World (DU/DI). Actually, prakerin is not only carried out in DU/DI but includes all activities of supervising instructors in the industry. Definitively, prakerin is one of the intra-curricular activities carried out by students in DU/DI that combines systematically and synchronously with educational programs in schools and mastery of skills programs obtained through direct work activities in DU/DI which are more focused on achieving a certain level of professional expertise. Evaluation is a process in which we consider an item or phenomenon by considering certain criteria. Evaluation is related to the process of activities to determine the value of something. Evaluation is a process of determining a person's value by using certain benchmarks to achieve a goal [1].

According to [2] states that experience raises one's potential. Full potential will emerge gradually over time in response to various experiences. In addition, [3] argues that the type and variety of a person's interest in an object reflects a personal experience that may be very different from the experience of others. Based on this understanding, experience can play an important role in the change and development of a person's potential. However, the development of this potential depends on the ability to learn from the experiences that have been experienced. In addition, experience can affect individual development both physically and spiritually which is one of the principles for the development of student readiness [4].

According to [5] argues that the family is one or more individuals who live together so that they have emotional bonds and develop social interrelationships, roles and tasks. According to [6] explains that the family environment is the first educational environment for children, because it is in this family that children first receive education and guidance, it is also said to be the main because most of the children's lives are in the family. With a conducive family environment, relationships between families will be well maintained. A good and harmonious relationship in a family can bring peace to its members. Vocational education according to the law, is secondary education that prepares learning participants, especially to work in certain fields [7].

So that the purpose of this research in brief is to solve problems related to the supervisory system for internship students in implementation activities for 3 months which can have a positive impact on the use of supervisors, schools and internship students in completing reports during the pandemic.

The research conducted by S. Thya Safitri [8] is a case study at ST3 Telkom which focuses on data

management of street vendors by BAK and the administrative process of street vendors by students using the waterfall development method. Research conducted by Fendhika Candra [9] is a case study at PT PLN Persero P3B Java Bali APP Salatiga, using the YUI Library to facilitate the management and delivery of information on street vendors with an attractive appearance. The research conducted by Teguh Andriyanto [10] is a case study at Univ. PGRI Kediri. This study builds an integrated information system using a web service, so that it can be integrated with the basic data of students and lecturers managed by the Information Systems Bureau. Research conducted by Muhammad Arifin [11] discusses information systems for field work practices at agencies/companies that focus on managing street vendors data on the agency/company side.

2. METHODS

2.1. Waterfall Model

The system development activities that the author does in accordance with the software development model above are [12]:

2.1.1. System Planning

At this stage there are several important things that need to be done in making this internship student supervision system, namely collecting data to retrieve the information needed to create an internship student supervision system. The data collection methods that the author uses are as follows:

2.1.1.1. Interview

Conduct direct question and answer communication with the computer laboratory section of ISB Atma Luhur, laboratory assistants, industrial work practice students and supervisors for each vocational school when conducting field monitoring (agencies).

2.1.1.2. Observation

In this case, the writer directly saw or made observations to the parts that had to do with the system of implementing industrial practice procedures that had been running as well as collecting the documents used.

2.1.1.3. Literature Study

Using several books as references, to obtain theoretical explanations related to the problem under study. Literature study is used to collect data from previous research, learning from various kinds of literature and documents such as books, journals and theories that support research, tools to be used and other supporting data related to the implementation system of industrial work practice students.

2.2. System Analysis

In the system analysis there are several basic steps that must be done are as follows:

2.2.1. Activity Diagrams

Part of the description of the system functionally describes the logical processes or processes function.

2.2.2. Output Analysis

Contains an overview of the output generated by the system being analyzed.

2.2.3. Input Analysis

Contains an overview of the input generated by the system being analyzed.

2.2.4. Needs Identification

Contains the identification of needs / proposals required by the system based on the results of the analysis of the output and input of the system that is running, managing and implementing industrial work practices at the Atma Luhur ISB computer laboratory.

2.2.5. Use Case Diagrams

Use Case This diagram also describes what the system will do.

2.2.6. Package Diagrams

The author groups the model elements from the Use Case Diagram.

2.3. Oriented Method

Object The software development method used is an Object Oriented approach that uses OOA (Object Oriented Analysis) and OOD (Object Oriented Design) which are visualized with UML and include the following: Activity Diagrams, Use Case Diagrams, Package Diagrams, Classes Diagrams, Deployment Diagrams, and Sequence Diagrams[13].

2.4. System Development Tools

The author uses UML (Unified Modeling Language) as a tool for designing and developing the application. The UML (Unified Modeling Language) tools that the author uses in developing this system consist of [14]:

1. Activity Diagrams
2. Use Case Diagrams
3. Package Diagrams
4. Class Diagrams
5. Deployment Diagram
6. Sequence Diagram

2.5. Research Steps

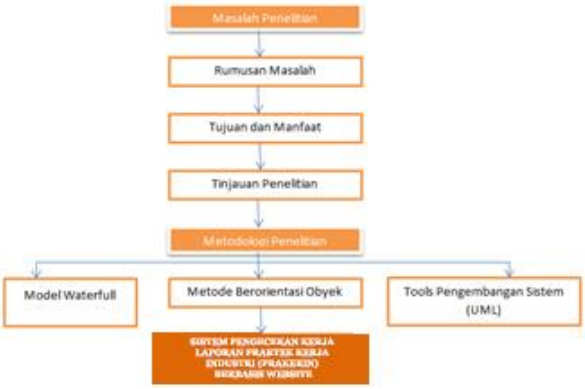

Figure 1. Research Steps

3. RESULTS AND DISCUSSION

3.1. System Planning

3.1.1. Use Case Diagram

The Use Case Diagram will explain who the actors in the system (actor) are and what is done in a system (use case)[15]. Use Case The proposed system diagram illustrates the system accessed by the user consisting of a login page, a journal data page whose function is to enter data on daily student activities which are inputted directly by internship students, and the last is a report page that can be accessed by the supervisor of the institution where Prakerin students carry out practical work and can also be accessed by the school supervisor of each student. The website-based prakerin student supervision proposal system looks like the picture below;

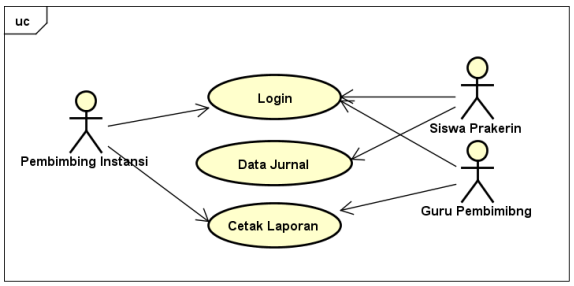

Figure 2. Image Use Case Diagram of the Proposed System

3.1.2. Activity Diagram

The Activity Diagram below is to illustrate how the data process from the website-based prakerin student supervision proposal system works.

3.1.2.1. Activity Diagram Login Page

The login page is used by all users/users to enter the menu page, where the user/user enters the user and password first, after the user/user presses the login button, the data entered by the user/user is checked by the system, if the user and password are If the user/user input is correct, the system allows the user/user to enter the menu page, otherwise if the user or password is incorrect, the system asks the user/user to input another user or password.

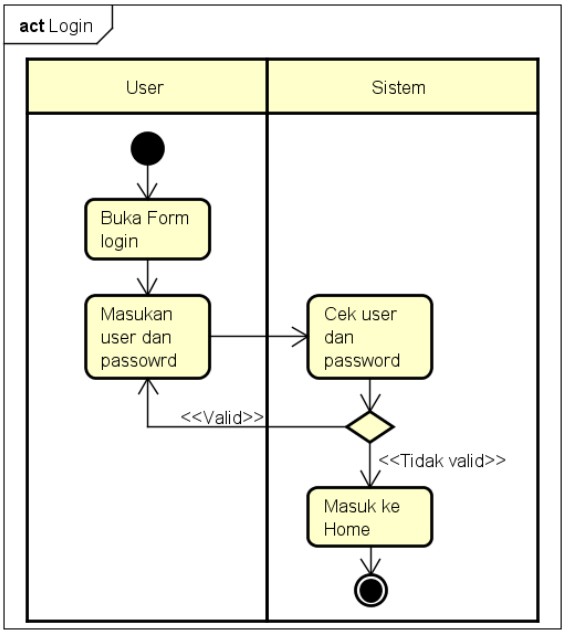

Figure 3. Picture of Login Page Activity Diagram

2.3.1. Journal Page Activity Diagram

Journal pages are used by internship students to enter data on their daily activities which are inputted directly by students every day. On this page students are required to fill in complete data from activities that have been carried out before returning home. If there is still data that has not been filled in, the system does not allow the data to be stored and will give a message to complete the data first before the data is saved.

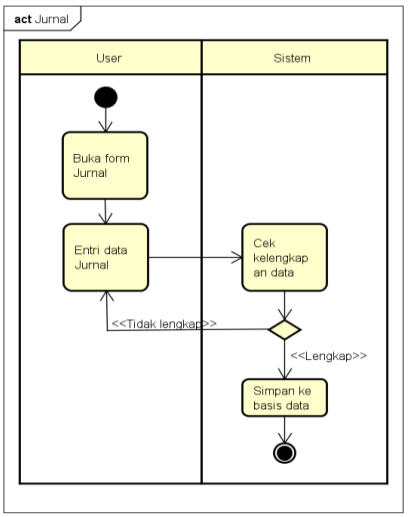

Figure 4. Picture of Journal Page Activity Diagram

3. Activity Diagram Report Page

The report page is used by agency supervisors and supervising teachers to see the results of activities carried out by prakerin students every day. If there are students who are not present it will be seen in the report. To display the report data of the agency supervisor and the supervising teacher, enter the date of the data starting from the start date and end date, then the system will search for data based on the date of the inputted data, if there is any, the data is displayed, otherwise if the data is not there, the system will give a message to find the date other.

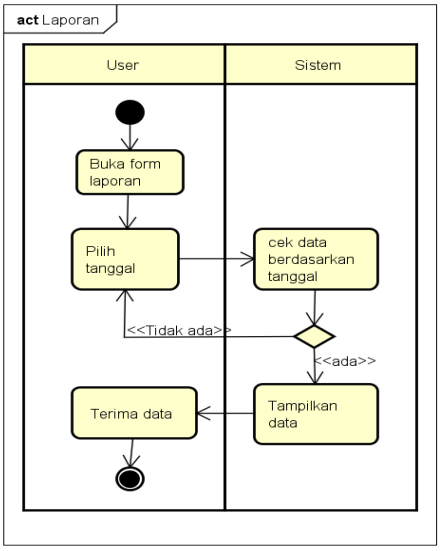

Figure 5. Image of Activity Diagram Report Page

3.2. System Implementation

The following are the steps in running a website-based system for industrial work practices;

3.2.1. Login Display

The initial stage is required to login where, you are required to fill in the username and password in the internship supervisory system.

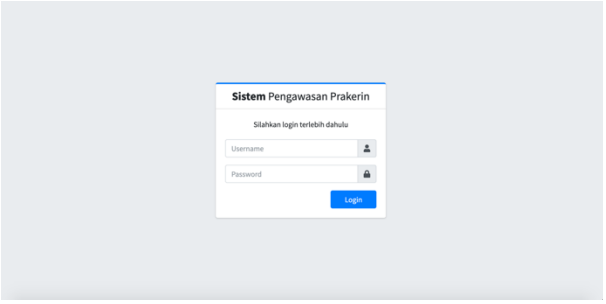

Figure 6. Login Form

3.2.2. Dashboard View

The following is a dashboard display containing data on internship students' journals, print reports. And there are the number of schools, the number of supervisors, the number of students, as well as the number of journals carried out by internship students.

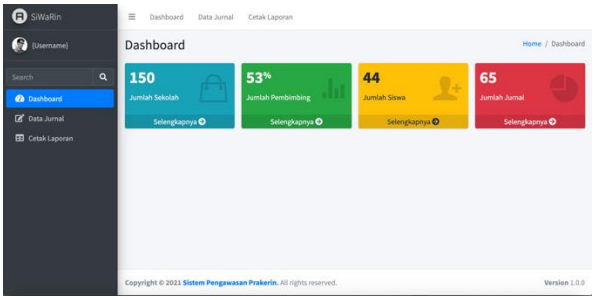

Figure 7. Dashboard

3.2.3. Journal Data Menu Display

This menu contains journal data for internship students which contains the date, title, work carried out, the status can be seen in Figure 8 below;

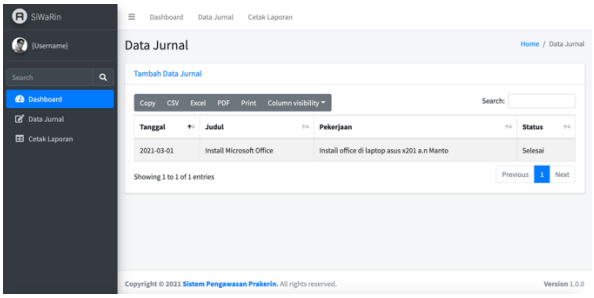

Figure 8. Data Menu Display

3.1.5 Print Report Menu Display

The following is a display of the report print form, facilities are available from start to last implementation, and can print.

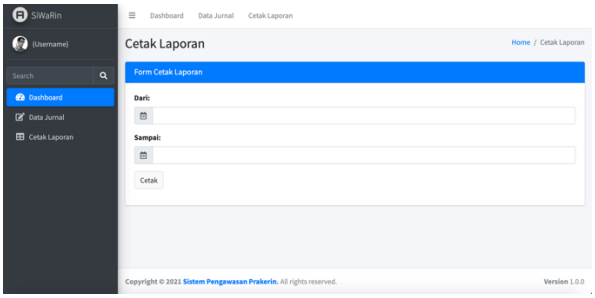

Figure 9. Report Menu Display

Based on the research and description above, it can be concluded:

1. The process of implementing industrial work practices can be managed and monitored.
2. The results of the student supervision system in implementation activities for 3 months which can have a positive impact on the use of supervising teachers, schools and internship students in completing reports during the pandemic.

This system is not yet constrained by internet facilities where the location of the home address is in the countryside which must be improved so that it can run well even during the pandemic.

4. CONCLUSION

This study builds an integrated information system using a web service, so that it can be integrated with the basic data of students and lecturers managed by the Information Systems Bureau. Research discusses the field work practice information system in agencies/companies that focus on managing street vendors data on the agency/company side. The results of the student supervision system in implementation activities for 3 months which can have a positive impact on the use of supervising teachers, schools and internship students in completing reports during the pandemic.

The challenge in this research is still something familiar, it needs improvement in the methodology so that the impact on science is greater.

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