

The Impact of New Media in the Information Society Era

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Abstract - The development of computer technology is very fast, both in terms of hardware and software as well as application packages that are used as a tool to process data and provide detailed, accurate, and efficient, information. Designing, creating, and implementing an in implementing the system in the data collection of teaching and learning schedules is very important in the world of education, because it facilitates and facilitates data processing activities, and data searches related to the learning schedule needed in decision making. Raksana Medan Private High School has a problem in managing scheduling because uses a manual scheduling system. Therefore with an informatystem scheduling teaching and learning with Rapid Application n Development method (RAD can increase the effectiveness in accordance with the needs of the SMA Raksana in Medan so that scheduling activities can be implemented properly. **Keywords:** Information Systems, Scheduling, Rapid Application Development

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Introduction

The development of technology and science is currently growing rapidly so that it provides convenience for all people. Advances in the field of computers also have the impact of advances in the field of information. At this time an information is needed both in government and private agencies. Making computers a tool to help the world of education and the world of work in finding information. Information systems are needed by humans in solving various problems such as complex problems in the world of education, business and so on. For example, in education, Raksana Medan Private High School is one of the educational institutions that still has weaknesses in making learning and teaching schedules. Because the schedule creation system is still manual. This can slow down the creation of a schedule that can change at any time. In order for teaching and learning activities to run smoothly at the Raksana Private High School Medan an information system is needed to schedule teaching and learning using the Rapid Application Development (RAD) method because the software development process model is classified as an incremental technique (tiered) and emphasizes short development cycles. , and fast.

Theoretical Foundation

Information Systems

In a broad sense, an information system can be understood as a set of interconnected subsystems, gathered together and form a single unit, interact and work together between parts with one another in certain ways to perform data processing functions, receive input (input).) in the form of data, then

process it (processing), and produce output in the form of information as a basis for decision making that is useful and has real value that can be felt as a result both at that time and in the future, supports operational, managerial activities, and strategic organization, by utilizing various existing and available resources for these functions in order to achieve goals (Edhy Sutanta). An information system is a system within an organization that brings together the daily transaction processing needs that support the managerial functions of the organization's operations and the strategic activities of an organization to be able to provide certain outside parties with the necessary reports (Tata Sutabri).

Scheduling

Definition of scheduling according to some experts as follows:

- a. According to Reksohadiprojo (1994), as a dynamic process which is part of the production control function that determines the time when each activity must be carried out on certain machines so that product delivery times can be met.
- b. According to Hantoro (1993), scheduling is defined as a systematic ordering of the production process, so that the sequence of processes can run smoothly by utilizing all existing facilities within the company.
- c. According to Kenneth. R. Baker states that scheduling is a process of allocating resources to select a set of jobs within a certain period of time. In this definition there are two meanings, namely scheduling as a decision-making function related to determining the process to be scheduled and scheduling as a theory with principles, technical models and logical conclusions that can clearly prove the depth of the function of scheduling itself.

Rapid Application Development (RAD)

Rapid Application Development (RAD) or rapid prototyping is a software development process model that is classified as an incremental technique. Rapid Application Development (RAD) emphasizes on short, short, and fast development cycles. Short time is an important limitation for this model. Rapid Application Development (RAD) uses an iterative (repetitive) method in developing a system where a working model (working model) of the system is constructed at the beginning of the development stage with the aim of determining user requirements. The working model is used only occasionally as a basis for the final system design and implementation.

Advantages of Rapid Application Development (RAD)

Rapid Application Development (RAD)

has the following advantages: a. It is very useful if the user does not understand what needs are used in the software development process. b. Rapid Application Development (RAD) follows the system development stages as usual, but has the ability to reuse existing components (reusable objects) so that developers do not need to create from scratch again and the shorter time ranges from 60 days to 90 days. c. Because it has the ability to use existing components and a shorter time, it makes the cost of using Rapid Application Development (RAD) lower.

Research Methodology

System Development Method

In developing this teaching and learning scheduling information system, the research uses the Rapid Application Development (RAD) method. In this study chose the Rapid Application Development (RAD) method because the stages are structured, software development can be done in a fast time by emphasizing on a short cycle, the software developed can be seen the results without waiting a long time because the process is divided into several parts. modules and the main reason for using the Rapid Application Development (RAD) development method is that this development method will work well if applied to small-scale applications. The Rapid Application Development (RAD) development method undergoes four stages of the development cycle, namely:

a. Requirements Analysis Phase This phase has the objective of identifying the services, limitations, and objectivity of the system from data collection carried out on stakeholders.

b. Modeling Analysis Phase The purpose of the modeling analysis phase is to analyze all activities in the overall system architecture by involving the identification and description of the underlying software system abstractions and their relationships.

c. Modeling Design Phase The purpose of the modeling design phase is to design a system based on the analysis that has been done previously. The analysis and design stages are repeated until a system design that truly meets the needs is obtained.

d. Construction Phase The purpose of the construction phase is to show the platform, hardware and software used and limitations in implementation, as well as to test the performance of the software prototype that has been built so that it can be seen whether the prototype is in accordance with the analysis and design specifications that have been identified previously. The final result of the construction phase is the platform, hardware and software used, as well as a list of implementation constraints, and a test plan. The development cycle of the RapidApplication Development (RAD) system can be seen in the figure Determining Goals and Information requirements Introducing the system Building the system Working with users for the planning system Planning Phase Construction Phase User feedback Using input from users Figure 1. RapidApplication Development system development (RAD).

Ongoing System Analysis

In the ongoing analysis, there is a detailed examination so that all old problems and limitations can be clearly identified. This is related to the system's ability to achieve organizational goals and objectives.

a. Input The input form used in making the schedule is in the form of a schedule input sheet.

b. Process In discussing the system that is running, which consists of procedures in carrying out various activities are as follows:

- 1) Administration announces the subjects to be taken.
- 2) The teacher reports to the administration, the schedule to be taught.
- 3) Administration enters class data, subjects, teachers and subjects that are cared for by each teacher into the schedule sheet that has been provided.
- 4) Announce the schedule to students and teachers.
- 5) Make a schedule report that is submitted to the Principal.

proposed system

The system designed is not much different from the existing system at the Raksana Medan Private High School, it's just that this system already uses an application program in scheduling teaching and learning.

Unified Modeling Language (UML)

Unified Modeling Language (UML) is a language based on graphics/images for visualizing, specifying, building, and documenting an OO (Object-Oriented) based software development system. Unified Modeling Language (UML) is not only a visual programming language, but can also be directly linked to various programming languages, such as JAVA, C++, Visual Basic, or even directly connected to an object-oriented database. Login Input Teacher Data Input Lesson Data Input Class Data Input Day data Make a Study Schedule Teacher Admin Create validation reports Provide teaching data Provide teacher data Principal Figure 2. Use Case UML Volume 2, No. 1, June 2018 90 Journal of Mantik Penusa Vol. 2, No. June 1 2018, pp. 87-90 Accredited by DIKTI No. SK 21/E/KPT/2018 e-ISSN 2580-9741 p-ISSN 2088-3943 4 Research Results This research resulted in an information system application for teaching and learning scheduling at SMA Swasta Raksana Medan. The results of the design of teaching and learning scheduling can be seen from the following views.

Conclusion

The development of information and communication technology has had an influence on the creation of information flows and patterns in society. Now the community is in a transition phase towards the era of the information society. Development of digital infrastructure or Information and Communication Technology (ICT) is also continuously carried out as a response and part of providing facilities for the community to fulfill their right to obtain adequate access to information.

The community's step to virtual migration also expands the role of the community in voicing various changes ranging from the system of Journal of Technology and Business Information to politics, education, health and culture. This happens because the information community has the opportunity to communicate wider feedback so that messages are not only received raw but can be modified and controlled for the common good.

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