Website Development of Accreditation Information System in Higher Education

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ABSTRACT

The problem regarding archives that are often experienced when preparing for study program accreditation is that many documents cannot be recovered, so they have to create new documents to replace lost documents. These problems are always repeated so that the accreditation committee has to lose a lot of time to make documents that should already exist. Previous research has succeeded in producing a description of the needs that support the archival system to be built and creating an archival system design that can guarantee the availability of information for study programs and departments related to data that supports accreditation. Next stage of research is the stage of developing an archive management system. This research was conducted at the Faculty of Economics and Business, Jenderal Sudirman University. Research and development adapt the Borg & Gall model and prototype model in software development. The software development method begins with requirements analysis, development design, flowchart design, implementation, and testing. As a result, an accreditation information system website was developed based on the Study Program Accreditation Instrument, which consists of nine university accreditation standards.

Keywords: Archive, Digital, Accreditation

1. Introduction

Records that are not managed properly can cause various problems for an organization. Archives can be the basis for decision making. Neat and good archive storage can provide various information for stakeholders. Along with the times, the development of archival storage patterns uses technology that can assist managers and users in accessing the required archives.

The development of an information system that can be reliable by the organization is expected to help provide archives quickly and accurately. The problem with the archives at the Faculty of Economics and Business, Jenderal Sudirman University, is that there are documents that have been completed during accreditation, are not stored properly after the implementation of accreditation so that when other study programs are to be accredited and require the same documents, the committee must re-create the document.

This problem is certainly not in accordance with the principles of good archiving. A good archive system is able to ensure the safety of archives and is able to provide archives back quickly when needed and maintain records to avoid damage. Each department and study program at the Faculty of Economics and Business does not yet have an archive storage system that is devoted to storing archives related to academic activities, departmental or study program meetings, minutes of meetings, and academic activities held. Not all archives can be digitized, it takes human resources in the department or study program who are able to identify the type of archive. Faculties are expected to be able to provide a special room to store general archives that can be used by each study program as a source of information.

The first year of research has been able to identify the problems faced in the management of accreditation archives at the Faculty of Economics and Business, Jenderal Soedirman University as follows:

- The need for data on accreditation activities is not inputted periodically by the manager of the study program or department so that the manager needs to look again when the accreditation is carried out,
- Many documents in study programs and departments are not managed properly so it is difficult to find them when they are going to be used.
- Input of accreditation data is done manually by the accreditation team,
- The data obtained from the survey results are sometimes not in sync with the points asked in the accreditation,
- The faculty of economics and business does not yet have a website-based information system related to archives and does not yet have a data base to store archives related to the accreditation process,
- The accreditation team is usually disbanded immediately after accreditation is completed and a new team is formed during re-accreditation so that traces of previous accreditation data are difficult to find,
- Accreditation data relating to one standard to another has not been integrated,
- Lack of good cooperation between the accreditation team and the staff as data providers (such as financial data, student data, research data/ community service).

Based on these problems, the development of an archive management system is very important so that these problems can be resolved. The research team tried to design a website-based accreditation archive system in accordance with the results of the needs analysis. The menu entries in this system have been adjusted to the guidelines for the Study Program Accreditation Instrument (IAPS). The name of the planned system is SI AKSI (*Accredited Archive System*).

2. Literature Review

2.1 Information System

The limited use of information technology is an obstacle in the management and development of an educational organization (Umanailo, 2017). The strategy in information systems stems from the difficulties of strategic management due to the lack of well-established structures and studies of the theoretical basis (Khan, 2016). However, Information Technology (IT) strategic planning is considered a key component of educational institution planning and becomes the main focus in IT

management so that it becomes an important concern for academics and practitioners (Wilkin et al., 2012). The concept of IT strategic planning is a stage in the process of developing a computer-based IT application portfolio so that it supports the strategic plans of educational institutions to achieve goals. The use of methodologies in IT planning is used to avoid the risk of failure with the involvement of all interested parties, the presence of individuals, and strategies in the process and defined goals. Ward and Peppard's version of the methodology approach starts from the condition of IT investment that is less useful for its intended use, does not capture existing opportunities, and the phenomenon of an organization's competitive advantage because it is able to utilize IT to its full potential. The less useful IT investment for the organization is because the IT planning strategy is more focused on technology rather than based on business needs.

2.2 Digital Archive

Education is a learning process that aims to develop self-potential. Archives are systematic storage that can speed up their discovery (The Liang Gie, 1998). Archives hold recording, storage and processing of all letters, both in matters of government and general matters, both internally and externally with a certain system that can be accounted for (Widjaja, 1986). Archives play an important role in the life journey of an organization, so we need a good and correct system to handle archive management to maintain the life cycle of an archive. Archives are also a source of information that has an important function to support the process of administrative and management activities of educational institutions (Barthos, 2009).

3. Research Methodology

3.1 Research Subjects and Objects

The subjects of this research include administrative staff from each study program and department at the Faculty of Economics and Business, managers of study programs and departments, as well as lecturers from each study program and department. The object of this research is the study program and department at the Faculty of Economics and Business Jenderal Soedirman University.

3.2 Method

In this study using the waterfall model where there are 6 steps, namely: requirements, analysis, design, implementation, testing, and maintenance. The requirements stage is the stage for collecting data and determining the needs of all system elements. Methods of data collection by observation, interviews and literature study. Observations were made by making direct observations on research objects related to accreditation archives, then conducting interviews with parties related to study program accreditation. In addition, conducting literature studies or looking for theoretical references that are relevant to the accreditation archive. At the analysis stage, namely analyzing the flow of the system the accreditation archive that is already running at the Faculty of Economics and Business, Jenderal Sudirman University, then analyzes the data obtained so that they are able to analyze the things needed in system development. The design stage is designing the accreditation information system database and designing an easy-to-understand user interface. The implementation stage is translating the data into data specified computer programming language. The next stage is the testing stage, which is the stage to conduct trials on

the web-based certificate processing information system that has been made whether it is in accordance with the requirements
needs.

3.3 Research Instruments and Data Collection

Data mining in developing the archive management system, the research team conducted a Focus Group Discussion (FGD) with program coding experts. Furthermore, based on the results of the FGD, the research team created the program code. The coding results were discussed again through FGDs with interested parties.

4. Results

The Accreditation Information System (SIAKSI) was developed based on user requirements. The software used in system development are: 1) Linux web server with php v 5.xx, 2) Mysql Database, and 3) Browsers (chrome, firefox, etc.). The hardware used is a PC Server as a hosting medium (upload files). The requirements for application users who will use this application, especially from the staff side, include: 1) Have an understanding of computer interfaces, and 2) Have an understanding of Accreditation data business processes.

The menu structure in the SIAKSI Application is divided into 2 groups, namely displays for guests and for verified users. What is meant by verified users are all users who enter the system through the application login stage. The menu structure in the SIAKSI Application is divided into 2 groups, namely displays for guests and for verified users. What is meant by verified users are all users who enter the system through the application login stage. The first group is the guest. Views for guests include: 1) Main page of the website; 2) News; 3) Download; and 4) Login.

The second group is verified users (lecturers and admins). In the verified user group, the display includes: 1) Academic Year; 2) Faculty; 3) Study Program; 4) Tridarma Cooperation; 5) Student Data; 6) HR Data; 7) Financial Data & Infrastructure; 8) Education Standard Data; 9) Research Data; 10) Devotion Data; 11) Data Outcomes & Achievements of Tridharma; 12) Reports Per Category; 13) News; 14) Document Archive; 15) Sliders; 16) Role; 17) Menu; 18) User; and 19) Permissions.

To start accessing this SIAKSI application: 1) Open the SIAKSI application via a web browser (IE or Mozilla FireFox or others) with the following url address: http://siaksi.feb.unsoed.ac.id/; 2) Then press Enter on the keyboard key or click the Go button on the browser; 3) The SIAKSI application front page will appear. Then the screen will show the Welcome Page / Start menu of the SIAKSI site; 4) If you want to enter the login menu, point your cursor and click the Login button on the far right menu. Then you will be directed to the Login menu; 5) Enter Username and Password, for example User admin with password: admin. Once entered correctly, click the Sign in button or press the Enter key on the keyboard. When verified will display the main page.

To start the application, it is necessary to understand that in the application there are two types of menus that must be prepared at the beginning, namely master data as reference data and setting data used for user data and access rights management. In SIAKSI applications that are categorized

as master data include: 1) Academic Year (The academic year menu is used to manage the academic year that will be used in the application. In it we can view and add data); 2) Faculty (The faculty menu is used to manage faculty data that will be used in the system. We can add, edit and delete data. The following is a display on the faculty menu); 3) Study Program (The study program menu has almost the same function as the faculty menu, the difference is that for this menu the data that is managed is the study program data. This menu also takes reference data from faculties, meaning that this menu can add data if faculty data has been added first. The data must be inputted first before starting other data input because the data will later become input references in other menus. While the settings menu can be used to manage user data with certain criteria.

In this SIAKSI application, it is very possible to divide tasks to several other users. Among them: 1) Role; 2) Menu; 3) User; 4) Permissions. Other menus in SIAKSI can be explained as follows: 1) Tridharma Cooperation (Used to manage Thridarma Cooperation data. It includes add, edit, and delete features); 2) Student Data (Used to manage student selection data and foreign students. It includes add, edit, and delete features); 3) HR data (Used to manage lecturer data. For this menu, after adding lecturer data, it will automatically create an account for the lecturer with the following conditions); 4) Financial Data and Infrastructure (Used to manage financial data, facilities and infrastructure. It includes add, edit and delete features); 5) Education Standard Data (Used to manage curriculum data, courses, aspects of student satisfaction, and student satisfaction score data); 6) Research Data (Used to manage lecturer research data. It includes add, edit and delete features); 7) Devotion Data (Used to manage lecturer service data. It includes add, edit and delete features); 8) Data Outcomes & Achievements of Tridharma (Used to manage output data and tridharma achievements including: graduate data, student achievement, study period, graduate competitiveness, student satisfaction, and others which are separated in their respective sub menus); and 9) Reports By Category (This menu is the output data from the application which is poured in the form of a report with excel format).

5. Discussion

The accreditation information system (SI AKSI) is a system built for better data management in accreditation activities. The system built will assist the leadership in organizing the need for accreditation data and assist in the management of human resources who manage the accreditation data. Based on the needs analysis carried out in developing SI AKSI, it is known that it is necessary to divide tasks and limit access to data so that with the system built the lines of authority are more visible.

Today more and more organizations are devoting their main attention to the creation of useful (quality) information for management. An important feature of the information age is that only organizations that are able to generate and use information effectively will survive and be successful. The success of organizations in the third wave of civilization is largely determined by the organization's ability to have a management information system that can effectively assist decision makers by constantly presenting management information for various stages of decision making which in the end will greatly assist the organization in making decisions. achieve the goals and objectives of the organization as previously set (Andayani, 2017:10).

Building a system certainly cannot be separated from the obstacles faced, both from human resources and from the development of the system itself. In designing SI AKSI, the constraint faced by the research team is that in the process of implementing the program, there are still some improvements that need to be made. The error is in the master database section there is still an error in the settings section of the user menu. This is because the development uses php 7 while it is applied in php 5. The follow-up is to adapt to php 5. This causes the system to be tested to take time to repair. In addition, the role menu will be added especially for executives according to access to data, access restrictions also need to be rethought so that the right person can access the appropriate data.

6. Conclusion

Development of "SI AKSI" as an accreditation archive system based on an analysis of higher education needs for accreditation records. It is a system built for better data management in accreditation activities. SI AKSI is necessary to divide tasks and limit access to data so that with the system built the lines of authority are more visible. Through "SI AKSI" is expected to improve the quality of the accreditation archive so that it can support accreditation activities in universities

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