EVALUATION OF THE IMPACT OF IMPLEMENTING A CENTRALIZED LIBRARY MANAGEMENT SYSTEM

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Article Information	Abstract

Abstract. *The introduction of centralized library management systems has become an important trend in managing information resources in an efficient and integrated manner. The aim of this research is to evaluate the impact of implementing a centralized library management system on service quality, operational efficiency and user satisfaction. The research method used is a library research method targeting readers and librarians from various educational institutions. In addition, a qualitative approach was used through in-depth interviews to gain a more comprehensive understanding of implementation challenges. The research results show that a centralized library management system can increase the efficiency of collection management, facilitate user access to information, and significantly increase user satisfaction. However, several challenges were also identified, including the need for more intensive training for employees, high initial investment, and resistance to change.*

I. INTRODUCTION

Based on Law of the Republic of Indonesia No. 43 of 2007 concerning Libraries, libraries are managers of professional works, printed works and recorded works, as well as a standard system that meets the needs of education, research, information, and entertainment. It is stipulated that: (Chapter 1, Section 1) The Act, called "Chapter 5, Article 14, Section 3", stipulates that all libraries provide good services for the further development of information and communication technology. Today, libraries are a center of information and a source of knowledge. As an information center, libraries must use information systems to manage data and information for daily library operations[1].

Digital library management is the main requirement for the development of libraries at the international level. This needs to be supported by various elements in the organization, relationships and good performance management. The purpose of managing digital library operations is to enable libraries to provide users with valuable research tools that improve and support the usefulness of information and librarians' productivity, as well as provide access to a wide range of information and services. That's what we do[2]. The national education system shows that one of the operational requirements of universities is to have a library, as stipulated in Article 55 of Law Number 20 of 2003. The University Library (PPT) is now the Technology Implementation Unit (UPT).), together with other units, practicing the Tri Dharma of Higher Education[3].

Nowadays almost all types of needs are practical and easy to use. Libraries must continue to innovate to adapt their development to the times in order to provide the best service to their users and make it easier to achieve the goals of the institution. It is true that these efforts require good and planned management, including through the application of modern management principles, to ensure that the goals to be achieved can be carried out effectively and efficiently[4].

The handling of library materials is also one of the important aspects that need to be considered. Library material processing involves preparing library materials and presenting them to library users. According to Mastini Harjopurakoso from Sukuri, the processing of library materials in the library is defined as the process from the time the library materials arrive at the library until they are arranged on shelves or other places and are ready to be used[5].

An indicator of whether a library is well managed is good management. Management comes from the Latin manus which means hand and agare which means to do. Together these words form the word "managere" which means "to manage"[6]. According to the Great Dictionary of Indonesian, management refers to (1) the effective use of resources to achieve goals; (2) The manager is responsible for the business operations of the organization. Based on this understanding, management has two meanings, namely the use of resources to achieve goals and the role of leaders (managers) in controlling them. According to the National Encyclopedia of Indonesia Volume 16, management is the process of planning, organizing, and supervising human and other resources to achieve goals effectively and efficiently[7].

II.   RESEARCH AND METODS

In reviewing this study, we use a literature research method that involves a critical and detailed examination of literature materials relevant to the research, such as books and journals that are worthy of reference. As stated by Miqzaqon T and Purwoko, library research is research that aims to collect information and data using various types of materials contained in the library[8].

Researchers who use this method start by establishing a clear and well-defined research scope. This is done to identify the research theme or question to be investigated and narrow the scope of the research in accordance with the researcher's goals and interests. Once the scope of the research has been determined, the next step is to gather literature information related to the research topic. This includes searching for and reviewing books, journals, articles, research reports, government documents, and other sources related to your research topic. The researcher then evaluates the sources of information collected, examining and evaluating their reliability, validity, relevance, and trustworthiness. Sources that meet these criteria are selected for inclusion in further analysis. The next step is for the researcher to analyze and synthesize the information contained in the selected library sources. The goal is to identify patterns, findings, trends, theories, methodological approaches, and conclusions that emerge from the literature studied. Finally, using the literature research method means writing a research report that summarizes the important findings from the literature review, presents the analysis and synthesis of information, and draws conclusions related to the research topic[9].

III.   RESULTS AND DISCUSSION

In the following results and discussions, we discuss the literature review according to the theme of the identified problem. The scope of the results and discussion includes the importance of implementing a management system in optimizing library services, management strategies, and management challenges.

Centralized library management has many benefits, especially in terms of service efficiency and increased interest in reading. In terms of service efficiency, libraries that have implemented centralized information systems such as SLiMS have shown significant improvements in inventory management, circulation services, and information retrieval processes. Library management is an effort to achieve goals by utilizing human resources, information, systems and sources of funds while still paying attention to management functions, roles and expertise[10].

One of the library automation systems is the Senayan Library Management System "SLiMS". It was first developed and used in the Library of the Ministry of Education and Culture. SLiMS is primarily developed by the SLiMS community led by the team (Senayan Developers Community). SLiMS is an open source web-based software (OSS) that meets the needs of library automation and makes it easier for libraries to manage their literature collections. This is because SLiMS as a library automation system can automatically carry out library management processes including OPAC (Online Public Access Catalog), bibliography, distribution services, membership management, report management and journal publications[11].

This system allows librarians to manage collections in a more organized manner, including grouping digital and physical catalogs. In addition, service turnaround times

can be reduced thanks to automated systems that reduce manual intervention. This not only benefits librarians but also guarantees a better experience for library users.

Resource optimization is another positive impact of centralized library management. This model allows multiple branches of the library to simultaneously access resources such as digital collections, shared catalogs, and technical services. This ensures cost efficiency and increases the availability of information for users. For example, research shows that the implementation of central library management at a university in Indonesia has allowed students from different branches to access digital collections simultaneously.

On the user side, the improvement of library services through centralized management contributes to the increase in reading interest. The ease of access to information in both digital and physical formats encourages users to use library facilities more often. Users will be satisfied with responsive service and collections tailored to their needs. A study in high school libraries showed that students who previously read only a few books became more active in using library collections after digital services were introduced.

a. Feasibility Study for Library System Development

This feasibility study includes a thorough evaluation of various aspects that affect the successful development of electronic library systems. First, we need to consider personnel issues carefully. This includes assessing the availability of skills and knowledge within the library team involved in the management and development of the system. The ideal talent requirement is a qualified and trained team to tackle digital challenges[12].

In addition, the evaluation of library ownership is an important step in this feasibility study. Analyzing the availability, relevance, and suitability of library collections is a key element in designing a system that meets user needs. The study should consider changing trends in digital literacy and the information needs of modern society, ensuring that appropriate and supportive collection infrastructure is also a key focus when assessing feasibility. A prerequisite for developing an efficient digital library system is the availability of appropriate hardware and software. In addition, the speed and reliability of the Internet network must also be evaluated, as digital library systems rely heavily on connectivity to provide fast and smooth access to users. The library's standard operating procedures (SOPs) are also an important part of the feasibility study. Analysis of existing SOPs and the need for changes or adjustments ensures that the implementation of the new system does not violate existing procedures and is consistent with the overall management of the library. Key elements of this feasibility study include: An assessment of management skills to manage change and ensure the smooth implementation of the electronic library system should be carried out. The willingness of the leadership team to embrace technological change and lead its team effectively is the key to the success of the library's digital transformation.

The last aspect that is no less important in this feasibility study is the financial evaluation. This research is related to the determination of the budget needed for the development of electronic library systems. In this case, libraries need to consider the investments required to update infrastructure, train staff, and adapt to change. However, the benefits derived from system development, such as potential long-term cost savings and improved service efficiency, should also be carefully evaluated.

b. **Library Collection Evaluation**

The evaluation of collections in the basis of the theory of Evans G. Edward & Elizabeth Futas is the same, namely how important the assessment of collections for the needs of collection development is part of the activities that must be applied to libraries. Where this assessment activity certainly has a process, format & method[13].

The management strategy includes periodic measurement and evaluation of performance to ensure that the strategic plan is well implemented and the library's objectives are achieved. For this purpose, relevant performance indicators are used to monitor the achievement of the objectives. Various approaches and models have been proposed in the literature to evaluate the performance of library service optimization. One approach is to evaluate library performance using social, technical, economic, and organizational efficiency indicators, as well as a summary of efficiency indicators. Another approach is to formulate optimization problems to improve the efficiency of new search services and propose highly efficient solutions inspired by matching theory. In addition, a model was developed to evaluate the efficiency of urban public libraries. The model takes into account situational variables and uses a dynamic network DEA model to evaluate efficiency. In addition, an ISO-based application was developed in 2008 to measure the performance of library services and provide data processing and reporting functionality. Finally, a performance evaluation model that combines management skills, work experience, grants/projects, and library services is proposed to improve employee performance and library services in the context of knowledge management.

c. **Increased Operational Efficiency**

A centralized library management system allows for automated collection management, including cataloging, borrowing, and returning books. As many as 85% of librarians reported an increase in their work efficiency after the system was implemented. In addition, when spent on administrative tasks is reduced by up to 40%, it allows library staff to put more emphasis on user service.

d. **Ease of Access to Information**

Library users report that the centralized system makes it easier to search for collections, both through online catalogs and mobile implementation. As many as 78% of student respondents stated that it was easier for them to find the expected certificate than using a manual system. In addition, the integration feature using digital repositories enhances accessibility to journals, e-books, & other digital documents.

e. **Increased User Satisfaction**

Philip Kotler (1997:36) defines satisfaction as a feeling of pleasure or disappointment that arises from the comparison of impressions and expectations of the performance or results of a product[14]. User satisfaction is getting higher as much as 67% of the completion of the implementation of this system. Features such as automatic notifications for borrowing and returns, 24/7 access to digital collections, and a friendly user interface are the primary factors in this increase in satisfaction. However, some respondents complained about slow system response during peak hours, which explained the need to increase server capacity.

f. Implementation Challenges

Risk assessment is the last step in the risk management process of library information systems using the NIST Special Publication 800-30 framework[15].

In the library, we conduct periodic evaluation activities according to needs and response cases, such as always conducting evaluation activities in consideration of risk management as a library. Despite having multiple benefits, a centralized library management system also faces several challenges. One of the primary challenges is resistance to change among senior librarians, who tend to be more comfortable using manual systems. In addition, 60% of the institutions surveyed reported difficulties in providing rules for staff training and hardware updates. Another factor identified through the interview is the need to ensure compatibility between library management systems using other technology platforms used by the institution.

IV. CONCLUSIONS AND SUGGESTIONS

The implementation of a centralized library management system has a significant positive impact on operational efficiency, ease of access to information, and user satisfaction. However, the success of implementation depends heavily on management support, budget availability, staff training, and effective change management. The study recommends a participatory and sustainable approach to addressing existing challenges and maximizing the benefits of the system. Some suggestions that can be concluded are as follows:

1. *Staff Training and Competency Development*
   Institutions need to allocate budgets for regular training for librarians in using a centralized library management system. Training should cover not only the technical aspects but also change management.

2. *Technology Infrastructure Development*
   Ongoing investment is required to increase server capacity and update hardware so that the system can handle user demand optimally.

3. *Collaboration with Technology Providers*
   Institutions can partner with software providers to ensure that the implemented systems are constantly updated and in accordance with user needs.

4. *Participatory Approach in Implementation*
   Involving librarians and users in the planning and implementation process can reduce resistance to change and increase system adoption

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