

Development of a Library Automation System Using SLiMS in the Department of Curriculum & Educational Technology, Padang State University

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Abstract

Development of a Library Automation System Using SLiMS in the Department of Curriculum & Educational Technology, Padang State University. In the current digital era, university libraries are expected to be able to adapt to developments in information and communication technology. An ideal library should be able to provide fast and easy access to information resources, whether in print or digital form. Meanwhile, the fact found in the field is that there are still many libraries that still use manual systems in library management. One of them is the library of the Department of Curriculum & Educational Technology, Padang State University. This of course causes various problems. Therefore, this research aims to develop a library management system that was previously manual into a library automation system using SLiMS 9 Bulian software. This type of research is R&D using the fourD (4D) model. This research consists of 4 stages, namely: definition, design, development and dissemination. The system validity test was carried out by two system experts from lecturers at the Department of Curriculum & Educational Technology, Padang State University. Practicality tests are carried out for literacy unit administrators and library users. Based on the system expert validator's assessment, an average percentage result was obtained of 92% with the criteria "Very valid". The practicality test results obtained an average score of 4.75 in the "Very Practical" category.

Keywords: *Development, Library Automation System, SLiMS 9 Bulian, Library.*

INTRODUCTION

The library is an important means of supporting teaching and learning activities. As regulated in Law Number 43 of 2007 concerning Libraries, libraries have a vital role in supporting the learning process, research and scientific development. The Indonesian government, through the Ministry of Education and Culture, has established national library standards to ensure adequate service quality in all libraries, both at school and college levels.

The National Standards for Higher Education Libraries published by the National Library of the Republic of Indonesia state that an ideal library must have complete collections, adequate facilities, and an efficient and user-friendly service system. Apart from that, libraries must also adopt information technology to improve the accessibility and efficiency of services. In the current digital era, university libraries are expected to provide fast and easy access to information resources, both print and digital. Implementing a library automation system is one solution in improving management efficiency and the quality of library services.

Senayan Library Management System (SLiMS), a web-based open-source software, is an effective tool in automating library management. Previous research shows that

SLiMS is able to increase the efficiency and effectiveness of library operations in various institutions, including universities and schools. For example, the implementation of SLiMS at De La Salle Catholic University succeeded in improving user services, while at SMA Negeri 44 Jakarta, SLiMS accelerated the processing of library material collections.

However, the reality on the ground shows that there are still many libraries in Indonesia, including at the Department of Curriculum and Education Technology, Padang State University (Dep. KTP UNP), which have not adopted an automation system and still use a manual system. This manual system causes various problems, such as the time-consuming process of searching for books, lack of accurate inventory data, and the slow process of borrowing and returning books.

Based on observations and interviews conducted on October 2 2024 in the Literacy and Learning Resources Room of the Dep. UNP KTP, it was found that the library still uses a manual system in its management. To overcome this problem, the author developed a system automation SLiMS-based designed according to the needs of the Dep. library. UNP KTP. It is hoped that this development can provide an

effective solution in increasing the efficiency of library management and user services.

METHOD

The type of research used in this research is the research and development (R&D) method. Research and Development research is a research method used to produce a particular product and test the effectiveness of the product. This research uses a 4D development model.

This 4D development model is the result of development by Thiagarajan, Dorothy S. Semmel, and Melvyn I. Semmel in 1974. This model consists of four stages, namely define, design, develop, and disseminate (Thiagarajan et al, 1974).

The data collection instruments that the author used in this research were the Validation Instrument and the Practicality Instrument. The data obtained from the results of this research, it will then be analyzed using appropriate data analysis techniques, namely descriptive statistical data analysis techniques. Descriptive statistical data analysis technique is a method of data analysis to describe or describe the data that has been collected as it is without intending to make general conclusions or generalizations (Sugiyono, 2015).

This method was chosen because the data that will be displayed in this research is the presentation of data through tables, graphs and other images. Therefore, the analysis used in this research is descriptive analysis, which describes development results, validator responses, and trial results.

RESULTS AND DISCUSSION

This research aims to develop a SLiMS-based library automation system in the Department of Curriculum and Educational Technology, Padang State University (Dept. KTP UNP) using the 4D model (*Define, Design, Develop, Disseminate*). This automation system was developed to overcome the problems of manual library management which causes slow borrowing and return processes, difficulty finding books, and lack of accuracy of inventory data.

1.1. System Validity Test

The system was validated by two system experts. The first validator gave an average score of 100% ("Very Valid" category), while the second validator gave an average score of 84% after revision ("Very Valid" category). The validation results show that the system is in accordance with the development objectives, namely speeding up library processes and increasing the accuracy of data management.

1.2. Practicality Test

The practicality test involved library administrators and users as many as 36 respondents. The test results showed an average score of 4.75 (category "Very Practical"), with the highest scores in the aspects of attractiveness (4.78) and time efficiency (4.75). These results indicate that this automation system is easy to use and meets user needs.

1.3. Discussion

The developed automation system includes various features such as catalog search, bibliography management, circulation, reporting, and barcode printing. SLiMS implementation has proven effective in increasing the efficiency of library services. Validator and user assessments confirm that this system is valid and practical, in accordance with the opinion of Kesuma et al. (2021) that SLiMS is able to improve the performance of librarians and user services.

CONCLUSION

This research succeeded in developing a SLiMS-based library automation system in the Library of the Department of Curriculum and Educational Technology, Padang State University using the 4D model (Define, Design, Develop, Disseminate). This library automation system is designed to meet library needs, with main features such as catalog search, bibliography management, circulation, reporting, as well as barcode and membership card printing. This automation system is here to speed up the process of borrowing and returning books, make it easier to search for information, and increase data accuracy.

Validation results show that the system is "Very Valid," with an average score of 92% from two validators. In addition, the results of the practicality test obtained an average score of 4.75 (category "Very Practical"), which indicates that this system is effective, practical, and suitable for use to improve the efficiency of library management and user services in the Department. UNP KTP.

SUGGESTION

Based on the research results, the following are recommended:

1. It is hoped that the SLiMS-based library automation system developed can be put to good use by the Dep. library. UNP KTP, with regular evaluation to ensure sustainability and overcome potential problems in its use.
2. It is recommended to organize training for librarians and users so they can use this system optimally.
3. For further research, it is recommended to test this system in libraries on a larger scale or in other institutions to evaluate its practicality and effectiveness in various conditions.

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