

Practicality Of Cataloging Management Information System In The Library Of The Departemen Of Educational Administration

Amelia Putri^{1*}, Hade Afriansyah², Ahmad Sabandi³, Luthfiani⁴

¹²³⁴ Departement of Educational Administration, Padang Satate University, Padang, Indonesia

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ABSTRACT

This research aims to analyze the practicality level of a web-based catalog management information system to support the cataloging process in libraries. This research is part of the product trial phase in the Research and Development (R&D) approach using the Borg and Gall model. This study employs a quantitative method aimed at measuring the practicality level of the catalog management information system implemented in the Library. The research subjects were three experts at the validation stage and 101 students from the 2021 batch of the Department of Educational Administration at the product trial stage. The research instruments used were the validity questionnaire and the practicality questionnaire using the Likert Scale model. Based on the practicality test, a percentage of 94.35 was obtained, categorized as very practical. The research results show that the library catalog website has met the criteria as a practical management information system for users and is suitable to be used as a solution to facilitate visitors in searching for and accessing library information quickly, efficiently, and in a structured manner.

Corresponding Author:

Amelia Putri

Email: ameliaputri29072002@gmail.com

1. INTRODUCTION

A library is a place to collect, manage and provide library materials, which can be used to obtain information and learn. Cataloging is an important task for libraries because it helps in the management and search of library materials. According to Qalyubi (2007), cataloging is the process of processing bibliographic data contained in library materials into catalogs. According to Bakewell (1978), cataloging is the process of conducting or cataloging the entire library collection, including not only collection books, but all library materials, both books and other library materials. Libraries have evolved into modern libraries that use management information systems to help manage collections, services and access to information. Management information systems help manage collections more efficiently and simplify the cataloging process, increase user accessibility, and improve collection management efficiency. According to Davis (2010: 3) a management information system is an integrated human or machine system that presents information to support operations, management, and decision making in an organization. They allow the process of inputting, processing, and searching data to be automated, structured, and easily accessible by various parties. According to Lutfian (2009:1), library information systems help with data collection, cataloging, and circulation of library collections.

Based on the author's observations at the Library of the Department of Educational Administration, it was found that visitors still often experience difficulties in finding the collections needed. This is due to the unoptimal catalog system used, so that searching for information becomes ineffective and time consuming. This condition is also felt by library managers, who realize that the search for collections has not been integrated with an efficient system. To answer these problems,

the author developed a Cataloging Management Information System in the form of a library catalog website. This website is designed to support a faster, easier, and more organized cataloging process. In addition, this system allows flexible access to information because it can be accessed anytime and anywhere by users. With the catalog website, it is expected that the efficiency of library collection management will increase, as well as providing convenience in using the system.

However, the success of a system is not only determined by its functionality, but also by the level of practicality of its use in the field. A practical system will be easier to implement, speed up the work process, and increase user satisfaction. Practicality refers to the level of usability of a system or media and its ease of use by users. The purpose of the practicality test is to obtain information about how easy, efficient, and appropriate the product is to use in actual conditions. Hartono (2019) states that the level of practicality of a product is determined by the user's assessment of the ease and comfort of using the product. Furthermore, according to Nieveen (2007), practicality is one of the important components in evaluating system development, because it shows how easily and efficiently the system is used by users in the field. Borg & Gall (1983) emphasized that the practicality test aims to assess whether a product can function optimally in real conditions and provide real benefits to its users. Based on this description, the practicality test is an important stage in the development of information systems, including this cataloging management information system. The practicality test is carried out to find out whether the system is really easy to use, efficient in operation, and provides direct benefits for library users. The novelty of this research lies in the development of a website-based cataloging management information system that integrates ease of use, time efficiency, and information accessibility, and is tested for practicality directly by users in a library environment. The system is designed not only for functionality, but also for usability and comfort of use in the context of educational libraries. Thus, this research contributes to presenting innovative and adaptive solutions to collection management problems in information technology-based libraries.

2. METHOD, DATA, ANALYSIS

a. Type of Research

The type of research used in this study is quantitative research. Testing the practicality of a product that aims to reveal the level of product practicality after the trial process. This form of testing is part of Research and Development (R & D) research. The data collection technique used is by filling out a questionnaire sheet of practicality by the research subject. Data from research subjects are then processed to make decisions about the practicality of the library catalog website (Yanto, 2017). Practicality is the usability of the library catalog website that has been developed. To find out the level of practicality, researchers conducted product trials at the Library of the Department of Educational Administration. Furthermore, researchers also asked for responses from students as test subjects after they used this website, in order to get a more comprehensive picture of the practicality of the website.

b. Data Collection

The instrument used for data collection is a practicality questionnaire. This questionnaire was given to 101 students of the 2021 Education Administration Department. The cataloging management information system that was assessed for its level of practicality was in the form of a library catalog website. The preparation of this instrument aims to comprehensively measure the level of practicality of the library catalog website as a product developed in the study. The practicality instrument is arranged based on six indicators, namely ease of use, appearance, time efficiency, ease of maintenance, usefulness and ease of integration, with a total of 25 items.

Table 1. Practicality Instrument

Number	Indicator	Total Item	Item Number
1	Ease of Use	5	1,2,3,4,5
2	Interface	5	6,7,8,9,10
3	Time Efficiency	4	11,12,13,14
4	Ease of Maintenance	4	15,16,17,18
5	Usability	4	19,20,21,22
6	Ease of Integration	3	23,24,25
Jumlah Keseluruhan		25	

c. Data Analysis Technique

The data analysis technique used in this research is a practicality analysis technique. Practicality analysis is useful for knowing whether the product developed is practical and easy to use by users. The data processing steps are as follows:

1) Presenting data on the results of practicality in tabular form

- 2) Calculating the number of answer scores obtained
- 3) Calculate the results of practicality, with the following formula:

$$P = \left(\frac{\sum X}{N \times S} \right) \times 100\%$$

Keterangan:

- P = Percentage achievement
 $\sum X$ = Total score from all items
 N = Total items in questionnaire
 S = Maximum score

- 4) Conclude the results of the practicality analysis
 After the practicality score is obtained, it is then categorized by the level of practicality. To determine the criteria for the level of practicality, please refer to the table below:

Table 2 . Practicality assessment criteria

Score	Criteria
91%-100%	Very practical
71%-90%	Practical
51%-70%	Quite practical
31%-50%	Less practical
<30%	Very impractical

Sumber : Riduwan (2012:13)

3. RESULTS AND DISCUSSION

Result

a. Measured Products

The product information whose practicality is measured is the library catalog website. The following is an explanation of the appearance and features of the library catalog website

1) Main Page

The main page displays a description of the purpose of developing this website. Users are directed to access the library catalog through a link provided in the form of a blue button with the website address "amel-simperpus.com." At the bottom of the page, there is a caption that lists the name of the system developer and the year of website development as additional information.



Figure 1. Main Page Display

2) Login Page

The login page serves to limit access so that it can only be accessed by registered users. On this page, users are asked to enter a valid username and password as a condition of authentication. The login view is designed to ensure the security and convenience of the process of logging into the system.



Figure 2. Login Page Display

3) Dashboard Page

On the dashboard page, a data summary is displayed in the form of a blue information box displaying information on the number of users and a green box displaying information on the number of thesis collections available. Each box is equipped with an icon and a “More info” button that allows users to view more information.

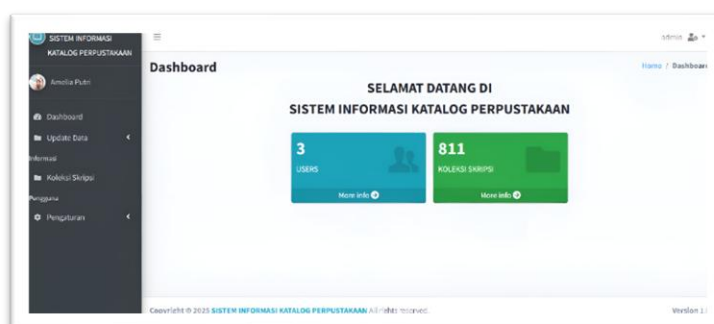


Figure 3. Dashboard Page Display

4) Collection Data Management Page

The collection data management page can only be accessed by admins and operators to maintain the security and accuracy of the data recorded in the system. In the picture, it can be seen that the operation column consists of four buttons, namely the view, barcode, edit and delete buttons. Above the table there is also an add thesis button. The add thesis button is used to add thesis collection data. The view button is used to view more detailed data. The barcode button is used to print a barcode that will be attached to each thesis that has been inputted into the system. The edit button is used to edit the thesis collection data. The delete button is used to delete thesis collection data.

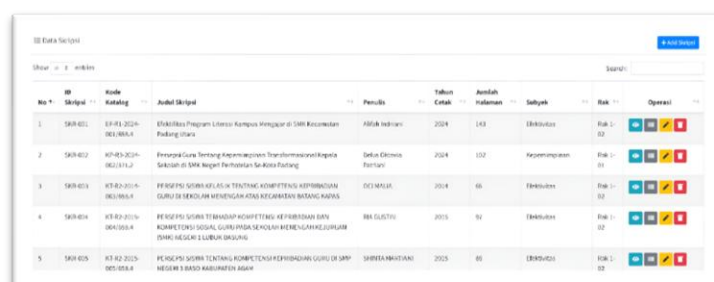


Figure 4. Collection Data Management Page Display

5) Data Input Page

The data input page is a page used to enter thesis data into the system. On this page there are a number of columns that must be filled in, such as catalog code, student name, NIM, thesis title, number of pages, and printing year. After all data is filled in completely and correctly, the user can press the “Save” button to save the thesis data into the system

database. This page is designed to facilitate the thesis data collection process in a structured, fast, and efficient manner.

Figure 5. Display of Data Input Page

6) Data Edit Page

The data edit page is a page used to update or change thesis information that has been stored in the system. On this page, there are a number of columns that must be filled in or adjusted, such as catalog code, barcode, student name, NIM, thesis title, number of pages, and printing year. After the data is updated completely and correctly, the user can press the “Save” button to save the changes into the system database. This page is designed to make it easier for users to update thesis data in a structured, fast, and efficient manner.

Figure 6. Display of Data Edit Page

7) Delete Data Page

The delete data page is a page used to delete thesis information that has been stored in the system and database. On this page, users can view thesis data details such as catalog code, barcode, student name, NIM, thesis title, number of pages, and print year before deleting. After ensuring that the data to be deleted is correct, the user can press the “Delete” button to delete the data from the system database. This page is designed to provide convenience and certainty for users in managing thesis data safely and efficiently.

aman-simperpus.com says
anda yakin akan menghapus skripsi ini ?

OK Cancel

No	ID Skripsi	Kode Katalog	Judul Skripsi	Nama Mahasiswa	NIM	Tahun Cetak	Jumlah Halaman	Status	Aksi
1	SKR-001	11-1-10001234	Analisis Program Linear Komplex Menggunakan Data Eksperimental Peningkatan	Adi Nugroho	12345678	2024	150	Ekstensi	View Edit Delete
2	SKR-002	11-1-10001235	Penelitian Dasar tentang Implementasi Teori dan Aplikasi Logika Matematika dalam Sistem Perencanaan dan Kontrol	Adi Nugroho	12345679	2024	100	Ekstensi	View Edit Delete
3	SKR-003	11-1-10001236	Penelitian Dasar tentang Implementasi Teori dan Aplikasi Logika Matematika dalam Sistem Perencanaan dan Kontrol	Adi Nugroho	12345680	2024	100	Ekstensi	View Edit Delete
4	SKR-004	11-1-10001237	Penelitian Dasar tentang Implementasi Teori dan Aplikasi Logika Matematika dalam Sistem Perencanaan dan Kontrol	Adi Nugroho	12345681	2024	100	Ekstensi	View Edit Delete
5	SKR-005	11-1-10001238	Penelitian Dasar tentang Implementasi Teori dan Aplikasi Logika Matematika dalam Sistem Perencanaan dan Kontrol	Adi Nugroho	12345682	2024	100	Ekstensi	View Edit Delete

Figure 7. Display of the Delete Data Page

8) View Page

The view page is a feature that displays complete information about the thesis that has been registered in the system. Through this page, users can view detailed information, such as catalog code, barcode, student name and NIM, thesis title, number of pages, year of printing, subject, thesis document link, and names of supervisors and examiners. All information is displayed in a neat and easy-to-read format, with no editing options. The purpose of this page is to provide easy access to thesis data as a whole.



Figure 8. View Page Display

9) Information Page

The information page is a display intended for students to see a list of theses that have been registered in the system. On this page, users do not have access to data management such as adding, editing, or deleting information. The Operations column only provides a "View" button, which functions to display detailed information about each thesis.

Data Skripsi									
Show 4 entries									
No	ID Skripsi	Kode Katalog	Judul Skripsi	Penulis	Tahun Cetak	Jumlah Halaman	Subyek	Rak	Operasi
1	SKR-001	EF-R1-2024-001/058.4	Efektifitas Program Literasi Kampus Mengajar di SMK Kecamatan Padang Utara	Miliah Indriani	2024	143	Efektifitas	Rak 1-02	View
2	SKR-002	KP-R3-2024-002/371.2	Persepsi Guru Tentang Kepemimpinan Transformatif Kepala Sekolah di SMK Negeri Perhentian Sei-Kota Padang	Delva Oktavia Perbasi	2024	102	Kepemimpinan	Rak 1-01	View
3	SKR-003	KT-R2-2024-003/058.4	PERSEPSI SISWA KELAS IX TENTANG KOMPETENSI KEPRIBADIAN GURU DI SEKOLAH MENENGAH ATAS KECAMATAN BUKANG KAPAS	OCI MALIA	2024	66	Efektifitas	Rak 1-02	View
4	SKR-004	KT-R2-2023-004/058.4	PERSEPSI SISWA TERHADAP KOMPETENSI KEPRIBADIAN DAN KOMPETENSI SOSIAL	RIA GUSTIN	2023	97	Efektifitas	Rak 1-02	View

Figure 9. Information Page Display

10) Users Data Page

The users data page can only be accessed by the admin to maintain the security and accuracy of user data recorded in the system. In the picture, it can be seen that in the Operations column there are three buttons, namely the add, edit and delete buttons. The add button functions to add user data. The edit button functions to change or update user data. Meanwhile, the delete button is used to delete user data from the system. This page is designed to make it easier for admins to manage user accounts based on access levels.

Users						
Data User						
Show 3 entries						
No	Foto	Username	Fullname	Alamat	Level User	Operasi
1		admin	Amelia Putri	Padang	Administrator	Add Edit Delete
2		operator	Pengelola Perpustakaan	Padang	Operator	Add Edit Delete
3		mahasiswa	Mahasiswa Departemen AP	Padang	Mahasiswa	Add Edit Delete

Figure 10. Users Data Page Display

b. Practicality results

In this section, the author describes the results of the practicality test of the developed system. The practicality test was carried out by distributing questionnaires to 101 respondents with a total of 25 items and six indicators, as shown in the following table:

Table 3. Results of the practicality test

Number	Indicator	Total Item	Score	Percentage	Criteria
1	Ease of Use	5	2413	95,5%	Very Practical
2	Interface	5	2439	96,5%	
3	Time Efficiency	4	1927	95,3%	
4	Ease of Maintenance	4	1800	89%	
5	Usability	4	1931	95,5%	
6	Ease of Integration	3	1399	92,3%	
Total		25	11.909	94,3%	

To determine the overall practicality level, calculations were performed using the practicality analysis formula as follows.

$$P = \left(\frac{\sum X}{N \times S} \right) \times 100\%$$

Keterangan:

P = Percentage achievement

$\sum X$ = Total score from all items = 11.909

N = Total items in questionnaire = 25

S = Maximum score per item (5) x number of respondents (101) = 505

$$P = \left(\frac{11.909}{25 \times 505} \right) \times 100\% = \left(\frac{11.909}{12.625} \right) \times 100\% = 94,3\%$$

Based on the calculation results, it is known that the product's practicality level reaches a percentage of 94.3%, thus it can be categorized as Very Practical.

Discussion

Based on the results of the practicality test, a percentage of 94.3% was obtained with very practical criteria. According to Riduwan (2012: 13), a product can be said to be practical if it has a practicality percentage of more than 71%. Thus, these results indicate that the system in general has met the practical criteria. However, there is one aspect with the lowest percentage, which is the ease of maintenance aspect, which only obtained a percentage of 89%, which is included in the "Practical" category. This percentage indicates that the indicator of ease of website maintenance still needs further attention and improvement. Website maintenance is a series of activities carried out periodically to maintain the performance, security, reliability, and relevance of the content of a website. The goal is to keep the website running optimally, free from technical glitches, and able to adapt to user needs and changing technological developments.

According to Pressman (2005), information system maintenance refers to a series of activities carried out to maintain, repair, and improve information systems to keep them functioning optimally and in accordance with user needs. Website maintenance is an important aspect in maintaining the security, stability, and performance of the system so that the website functions properly. Websites that are not routinely maintained are at risk of performance degradation, system damage, access disruption, and even becoming the target of cyber attacks. Therefore, regular website maintenance activities are required to ensure that the website remains in optimal condition. This maintenance includes several key activities, such as regular backups of data, both website files and databases, with the aim that data can be restored immediately in the event of technical errors or attacks that cause data loss. In addition, web hosting monitoring, system security checks, and system updates are also required on a regular basis. All of these activities aim to maintain stable website performance, protect the system from security threats, and ensure that website features always run well and in accordance with technological developments.

4. CONCLUSION

Based on the results of the practicality test, it can be concluded that the library catalog website has met the criteria as a management information system that is practical for users to use. the percentage is 94.3% with very practical criteria and feasible to use as a solution to make it easier for visitors to find and access library information quickly, efficiently, and structured. However, there is one aspect that still needs attention, namely ease of maintenance, which obtained the lowest percentage of 89%, this shows that although in general the system has been running well, maintenance activities still need improvement so that the performance, security, and reliability of the system are maintained.

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