

# The Effect of Digitizing Library Services and Facilities on User Satisfaction: Case Study at Cianjur Regency Regional Library

Amad Mutawali<sup>1</sup>, Sakti Alamsyah<sup>2</sup>, Unin Nibi Saputra<sup>3</sup>

<sup>1,2,3</sup> Master of Administration Science, Faculty of Administration and Humanities, University of Muhammadiyah Sukabumi, Indonesia

Correspondence Author: amadmutawali70@gmail.com

## ABSTRACT

Digitization of library services and facilities is a factor that can increase user satisfaction. The purpose of this study is to determine the effect of digitization of library services and facilities on user satisfaction. This research data is from users at the Regional Library of Cianjur Regency with a population of 1,000. The sampling technique in this study used a sample size  $web.raosoft.com$  with an error rate of 5% so that a sample of 287 respondents was obtained. Disseminating questionnaires is a method of data collection. This study used multiple linear regression analysis as its analysis method. The results showed that the digitalization of library services and facilities had a positive effect on user satisfaction, and the effect was 38.8% while 61.2% was influenced by other variables. The variable that has a dominant influence is library facilities, with an influence of 16%. The contribution of this study is to expand marketing management literature related to the digitization of library services and facilities in the context of organizations.

**Keywords:** *Library Facilities, Service Digitization, User Satisfaction*

## INTRODUCTION

In the current era of information technology, there have also been many opportunities for many libraries to be able to continue to improve existing services to continue to improve the quality of their services (Karadimce & Davcev, 2018). Precise, fast, and accurate service can also be a special attraction for library users so that each library can continue to strive to provide the best service (Harris et al., 2021). In line with the existence of Law No. 43 of 2007 concerning library services Article 14 paragraph 3 states that "every library develops library services by advances in information and communication technology". This development continues to be carried out so that library services can continue to be accepted in addition to providing satisfaction to library users.

From the existence of these regulations, libraries require to have certain standards to provide services, namely by improving the quality of their human resources (Martin, 2020). Libraries that have high standards are implemented with good service or performance, so it is expected that users will be satisfied and return to read books in the library. One proof of the advancement of Technology and Information is the existence of Electronic Libraries or digital libraries (Harisanty, 2019). A digital library is also the use of information technology used by an institution in carrying out a service (Yousaf et al., 2021). In Indonesia, digital libraries have also been implemented as a form of providing easy access to libraries.

The Regional Library of Cianjur Regency as an information center is also required to be able to provide maximum services expected by visitors, such as ease of access, providing accurate information, and efficient time for visitors in getting the information needed (Putra et al., 2018). Services as mentioned above are absolute obligations and need special attention in a service-oriented institution in this case the library (VanScoy, 2021). Where the library must make efforts to maintain and improve services in maintaining the loyalty of users (Caruana & Ramaseshan, 2015; Dick, 2015).

With the implementation of the Digital Library in the Cianjur Regency Blood Library, it is expected to be able to improve the quality of service to library visitors, both students and the general public. The Digital Library itself provides several services, namely the service of extending online book borrowing, *Online Public Access Catalogue* (OPAC) for searching book collections in the library, ordering books, submitting proposals for

book procurement, and uploading student scientific papers (Y. Zhang et al., 2020). With the online book loan extension service, it is hoped that it can help users to more easily extend book loans because there is no need to come to the library to make an extension, even with this book loan extension service, users can extend loans anywhere and anytime (Rennick, 2019).

However, in its application, there are several problems, namely some centralists are less friendly in providing services (greetings and greetings), the lack of implementation of a self-service system both in borrowing and returning books, the number of visitors, especially students who are not familiar with the OPAC (*Online Public Access Catalogue*) application, which causes most people to be more likely and happy to find information or books through other digital searches such as Google compared to those looking for reference materials in libraries (Hardyanto et al., 2018). In addition, other factors cause people to be less happy to visit the library including the lack of book collections, the number of books loaned is limited, the community's understanding is less about the library, or even the services provided by the library, not by the needs of users, this is shown by the number of users who complain of difficulties in browsing book collections or scientific works because the library has not yet facilitated more computing devices that can be used in accessing digital library services (Ostler et al., 2021). Moreover, when library visitors are crowded, users must queue to be able to search for books or scientific works. In addition, another problem that researchers found was the lack of valid information available in the OPAC (*Online Public Access Catalogue*) service with book collections on library shelves, because of this problem library visitors had difficulty in finding the collection of books they wanted. In addition, the outbreak of the *COVID-19* pandemic has had a major influence on the implementation of community activities, including people who want to visit the library and make their interest decrease (Padeiro et al., 2021).

To revive the library, namely by changing the library service system to be of higher quality (Jayasundara, 2021). This effort is one of the most optimal forms of effort given by the library in meeting the assumptions and needs of users to create satisfaction obtained by users. The assessment of library services depends on the user's point of view which is also a mandatory thing, where users will always assess the services provided by the library (*service is in the eyes of the beholder*) (Nunekpeku, 2020). However, this evaluation is very important and aims to convince users that what has been done deserves to be evaluated or assessed. The assessment given by users will affect the results obtained, namely how good the quality of services provided by librarians is, especially in the field of libraries and information so that libraries can determine what should be maintained and what needs to be improved to provide better services (Z. Zhang, 2019). Librarians in improving library services can only be known through input from users or users and are also the most important factor in achieving and improving sustainable library services based on user assessments.

Based on several studies on the effect of digitizing library services and facilities on user satisfaction, there are different results (research gap) between one researcher and another. Where the results of research conducted by (Laili, 2015) stated that there is a positive influence on the quality of library services and facilities on user satisfaction. But research (Pandita, 2017) states that there is no positive influence on the quality of library services and facilities on user satisfaction. So this study has the aim of determining the effect of digitizing library services and facilities on user satisfaction.

## Literature Review

### User Satisfaction

Satisfaction is the level of feeling after comparing perceived performance with his expectations, if what is felt is equivalent to his expectations then a person will feel satisfied. If what is felt exceeds his expectations then he will be very satisfied and if what is felt is less than his expectations then someone will feel no or less satisfied (Mutisya & Onyancha, 2021). Satisfaction is an assessment of the comfort and pleasure of fulfillment associated with consumption, including the level of under-fulfillment or over-fulfillment (Mannion, 2019). User satisfaction is defined as a condition in a person or group of people who have succeeded in getting something needed and wanted. User satisfaction can be fulfilled through the provision of services and the availability of information and comfort to user expectations (Kwon & Remøy, 2020). Realizing user satisfaction is not an easy thing to do because user satisfaction is difficult to measure and requires special attention. Stating that user satisfaction is the level of a person's feelings after comparing perceived performance/results with his expectations.

User satisfaction is influenced by service performance, response to user wishes, officer competence, access, easy, cheap, fast, and precise, collection quality, availability of retrieval equipment, and service time (Al Qarny, 2020). While user satisfaction is the perceived result of using products and services, equal to or exceeding the desired expectations (Islam et al., 2023).

### **Digitalization**

Digitalization is the process of converting from analog to digital using digital technology and data with an automatic operating system with a computerized system (Bouwman et al., 2019). Technology comes from the Greek word *technologia* according to Webster's Dictionary means "*systematic treatment* or handling something systematically, while *techne* is the basis of the word "Technology means expertise, skill, and science (Adeyinka, 2019). According to Gary J. Anglin also defines " technology is the application of behavioral and natural sciences and other knowledge systematically and systematically to solve problems. Another definition explained that the development of digital technology is the result of engineering human reason, mind, and intelligence which is reflected in the progress of science. Furthermore, it provides benefits in all aspects of human life (Flores et al., 2022).

### **Facilities**

Through its responsibilities and functions, the library provides information and materials to the user community for educational, research, cultural, and informational purposes (Nazim et al., 2021). The library building or special library room will accommodate this activity. In addition, the furniture and equipment used for this activity must be supportive. As a result, the quantity and quality of functional and functional infrastructure and equipment to support library activities, in addition to factors such as qualified staff and adequate collections and representative buildings also determine the success of library services (Kwon & Remøy, 2020). In this sense, library equipment or furniture refers to all library equipment used to support the smooth operation of the library, while library equipment refers to all library equipment used to support library tasks, such as typewriters, computers, microdevices, and *slide projectors* (Copeland et al., 2021).

### **Hypothesis Development**

Cianjur Regency Regional Library is an institution engaged in information service provider activities for the community as library users so user satisfaction needs to be a concern among library managers. Its existence is needed by the academic community, especially students who need information to support the lecture process, one important aspect that needs to be considered is the problem of *user satisfaction* (Shin et al., 2023).

### **Digitalization of Services to User Satisfaction**

User satisfaction is defined as the level to which an individual feels after comparing his perceived performance or results compared to his expectations. User expectations are the user's thoughts or beliefs about what he will receive if he receives or feels a service. User satisfaction is based on three factors, namely: suitability with community needs, the totality of providing services (offline and online), pleasure, and comfort. An important aspect related to user satisfaction is the digitization of services (Mora et al., 2021). Digitalization is the process of converting from analog to digital using digital technology and data with automatic operating systems and computerized systems). Digitalization of services in this study is defined as the assessment of users as consumers of the services they receive using information sources at the Cianjur Regency Regional Library.

### **H<sub>1</sub>: There is an effect of digitalization of services on user satisfaction**

#### **Library Facilities to User Satisfaction**

Facilities play an important role in improving the goals that the library wants to achieve. It should be considered, among others, the arrangement of the room, lighting, the location of the library, and the collection of library materials. Adequate library equipment and equipment will create a pleasant atmosphere for students, teachers, and other visitors (Nazim et al., 2021). The facilities of the library room, library equipment, and equipment, and a complete collection of reading books in the library will make users feel satisfied, this makes it

easier for users to find whatever they want (Riratanaphong & Limjaroensuk, 2021).

## H<sub>2</sub>: There is a positive influence of library facilities on user satisfaction

Based on a review of relevant literature and previous empirical evidence as previously described, a theoretical framework was developed that diagrammatically describes the line of thought that developed in this study. Broadly speaking, the theoretical framework of this study is to explain the direct relationship between the independent variable of digitization of library services and facilities with the dependent variable of user satisfaction.

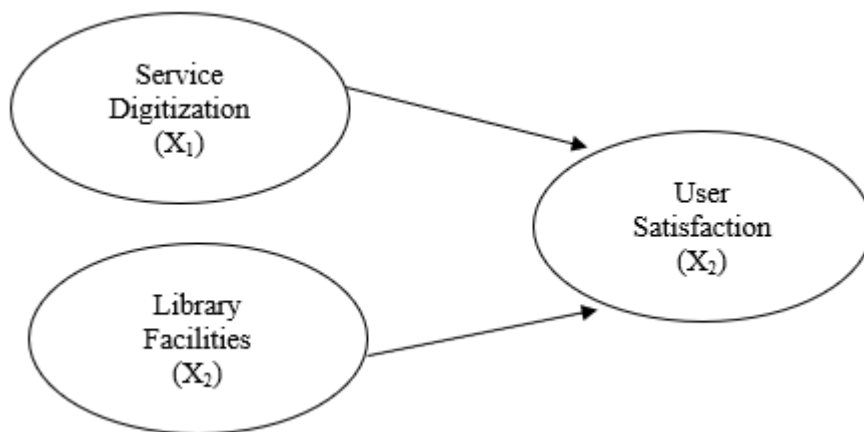


Figure 1. Research Method

## METHOD

The object of this research is the influence of digitization of library services and facilities that make cause user satisfaction to visit the library. Quantitative research which is based on positivism and used in this study to examine certain populations or samples, is the research approach used. To test the hypotheses put forward earlier, quantitative methods from statistics are used to collect data using research equipment (Sugiyono, 2019). Explanatory research such as the one conducted here seeks to look into the relationships between variables. Primary data or data collected directly from respondents through interviews and questionnaires were used in this study (Ghozali, 2016). The primary data of this study came from the distribution of questionnaires sent to respondents who were users of the Cianjur Regency regional library. The population of this study is 1,000 Cianjur Regency regional library users. The sample was taken using a web raosoft.com sample size with a data accuracy rate of 95% and a margin of error of 5%, so as many as 287 respondents were sampled in this study. Questionnaires were used to collect research data. The underlying premise of this approach is that respondents are users who visit both in person and online and that the information they provide is accurate and reliable. In this study, the questionnaire approach was applied through the delivery of surveys directly to respondents by researchers using *google forms*. Because the alternative answers were given on a Likert scale of 1–5 (1: very unsatisfactory, 2: unsatisfactory, 3: moderately satisfactory, 4: satisfactory, and 5: very satisfactory), the questionnaire used had a closed list of statements. To complete the analysis of this study, secondary data in the form of required data documents have been collected. The data will be analyzed using multiple linear regression analysis, and the stated study hypothesis will be tested. The dependent variable in this study is user satisfaction (Y), and the independent variable is the digitization of services (X<sub>1</sub>) and library facilities (X<sub>2</sub>). The multiple regression model developed in this study is represented by the following equation:

$$Y = a + b_1 X_1 + b_2 X_2 + e$$

## RESEARCH RESULTS AND DISCUSSION

### Characteristics of respondents

Respondents in this study were visitors to the Kabupaten Cianjur Regional Library or users who visited during the study. The identity of respondents in this study was based on gender and occupation. Female respondents outnumber men. While the respondents' jobs are students and general visitors. For more details, the characteristics of respondents can be seen as follows:

**Table 1.** Characteristics of Respondents

Information	Frequency	Percentage %
<b>1. Gender</b>		
Man	119	41,5%
Woman	168	58,5%
<b>2. Work</b>		
Student	182	63,4%
General visitors	105	36,6%
Sum	287	100%

### Classical Assumption Test

#### 1) Normality Test

The normality test determines whether the residual values are well distributed or not. Having regularly distributed residual values is an effective regression technique. In *Kolmogorov-Smirnov one sample normality test*  $p\text{-value} = 0.079 > 0.05$ , which indicates that the data are normally distributed.

**Table 2.** One Sample Kolmogorov-Smirnov Test

Unstandardized Residual	
N	287
Asymp. Sig. (2-tailed)	,079 <sup>c,d</sup>

#### 2) Multicollinearity Test

The value of Tolerance and its inverse Variance Inflation Factor (VIF) both exhibit multicollinearity. Generally, tolerance values above 0.1 or equal to VIF values below 10 are used as thresholds. Shown in the table below:

**Table 3.** Multicollinearity Test

Variable	Tolerance	VIF	Information
Service Digitization ( $X_1$ )	0,635	1,361	Multicollinearity-Free
Library Facilities ( $X_2$ )	0,635	1,361	

(Source: Data processing results, 2023)

#### 3) Heteroskedasticity Test

To check whether residuals from one observation and other data in a regression model have different variances, use the heteroscedasticity test. Good regression models do not show heteroscedasticity. To test whether there is heteroscedasticity between independent variables, a *p-plot* graph between the projected value of the dependent variable and its residual can be used. The scatterplot from Figure 2 below shows the points spread erratically, showing that there is no heteroscedasticity problem.

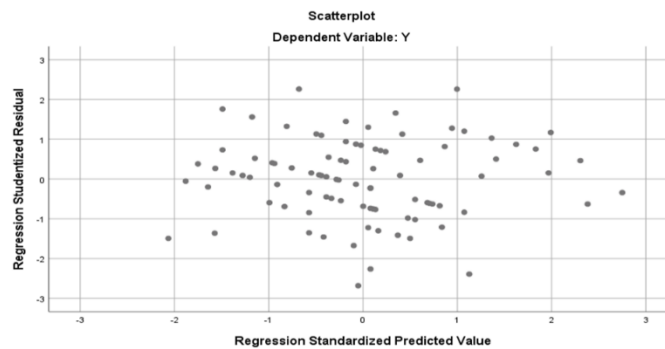


Figure 2. Scatterplot Heterokedasticity Test

4) Linearity Test

The test or analysis of the research study must be supported by clear reasons for the decision. The Significance value (Sig.) and alpha value can be compared to serve as the basis for choice in the linearity test. If the estimated value of F and Deviation from Linearity Sig. > 0.05 shows a substantial linear relationship between the independent and dependent variables, a linearity test should be performed. And if the estimated F value is greater than the F of the table and the Deviation value of Linearity Sig. 0.05, then there is no meaningful linear relationship between the independent variable and the dependent variable. The result of the linearity test is that the deviation from the linearity value is 0.849 > 0.05, which indicates that there is a significant linear relationship.

Table 4. Anova Test

	F	Sig.
<i>Deviation from Linearity</i>	0,641	,849

(Source: Data processing results, 2023)

Multiple Linear Regression Analysis Results

The results of the multiple regression test developed in this study are notated in the following equation:

$$Y = 29,033 + 0,593 X_1 + 0,760 X_2 + e$$

The variable of digitization of library services and facilities has a positive and significant influence on user satisfaction. With a p-value of digitizing services of  $0.029 < 0.05$ , and a p-value of library facilities of  $0.047 < 0.05$ . While the variable that has a dominant influence is library facilities, which is 0.160 or 16%. Test F sig value.  $0.032 < 0.05$ ; that is, there is a positive and significant influence of the free variable on the dependent variable and the R Square test obtained a value of 0.388 meaning that the variation of the free variable can explain user satisfaction by 38.8%, while 61.2% is influenced by other variables.

Table 5. Multiple Regression Test Results

Research Variables	B	Beta	t	Sig.
Service Digitization (X <sub>1</sub> )	0,593	0,097	1,655	0,069
Library Facilities (X <sub>2</sub> )	0,760	0,160	2,730	0,087
R Square = 0,388	F <sub>count</sub> = 4,850			
Adjusted R <sup>2</sup> = 0,026	Probabilitas F = 0,032			

Discussion

Digitalization of Services to User Satisfaction

Based on the findings of the study's statistical test, the variable of service digitalization has a significant influence on user satisfaction as indicated by the value of sig =  $0.029 < 0.05$  and the value

of the coefficient 0.593. The results of this study are in line with research (Yuliaty, 2014) which claims that the emergence of digital technology has a positive impact on increasing user satisfaction.

To ensure that users are satisfied with the services received, the digitization system at the Cianjur Regency Regional Library is very important. Users will find it easier to search for the desired reference. The better the digitization of services at the Cianjur Regency Regional Library, it will have a positive impact on the level of user satisfaction, and vice versa. The digitization of library services applied to the Regional Library of Cianjur Regency is good, as well as relieving and assisting officers in managing the library in completing their work, it's just that in providing services must be able to provide satisfaction to users, it so that users voluntarily give better assessments.

### **Library Facilities to User Satisfaction**

The results of statistical tests show that the variable of library facilities has a significant influence on user satisfaction. Where the p-value is  $0.047 < 0.05$  and the value of the coefficient is 0.760. The results of this study are in line with (Laili, 2015) who states that facilities have a significant effect on user satisfaction, and are not in line with (Pandita, 2020) who claims that library facilities do not affect user satisfaction.

Library facilities are closely related to user satisfaction. This result indicates that the existing facilities in the Cianjur district library are inadequate (incomplete). The more complete library facilities will certainly affect user satisfaction.

### **The Effect of Digitization of Library Services and Facilities on User Satisfaction in Cianjur Regency Regional Library**

Based on the results of simultaneous statistical testing, it shows that digitization of library services and facilities does not have a significant effect on user satisfaction at the Cianjur Regency Regional Library, with a value of sig.  $0.032 < 0.05$ . Where the influence was 38.8%, while 61.2% was influenced by other variables that were not studied. The results of this study are in line with (Laili, 2015) who states that the quality of library services and facilities has a significant effect on user satisfaction, and is not in line with (Pandita, 2017) who claims that the quality of library services and facilities does not affect user satisfaction.

Digitization of library services and facilities are two main elements that must be improved in today's digital era. The better the services provided and the more complete the library facilities will certainly affect the satisfaction of users in the Cianjur district regional library.

## **CONCLUSIONS**

The results of statistical test analysis show that digitization of library services and facilities does not have a significant effect on user satisfaction. Digitization of library services and facilities has an influence of 38.8% on user satisfaction, while 61.2% is influenced by other variables that are not studied. The results of this research are expected to contribute to the world of academia, and the regional library of Cianjur Regency as a place of research, and can be useful in adding and expanding knowledge for researchers. It is expected that this research will have an impact on the world of education, Cianjur Regency Government agencies, and Cianjur Regency regional libraries in maximizing the digitization of library services and facilities so that users are satisfied. It is hoped that this research can be a reference for other researchers who conduct research related to digitizing library services and facilities to user satisfaction. As well as suggestions for future research to involve many regional libraries, add respondents, and add other methods to strengthen quantitative data from the distribution of questionnaires.

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