The Impact of Technology-Based Self-Service on User Satisfaction in Indonesia's National Library Self-Lending

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Abstract

This study aims to determine the effect of technology-based self-service implementation on user satisfaction in the self-lending service at the National Library of the Republic of Indonesia using the Expectancy Disconfirmation Theory (EDT) model. The method used is explanatory quantitative research with 100 respondents who have used the self-lending platform machine at the National Library of the Republic of Indonesia. Measurement of research variables to determine the value of technology-based self-service Implementation and library satisfaction using a Likert scale. The data collection technique used was a survey, with data analysis through simple linear regression. The results showed that implementing technology-based self-service at the National Library of the Republic of Indonesia was classified as good, with a variable mean value of 3.35, which fell into the very high category (3.25-4.00). In addition, user satisfaction with implementing technology-based self-service is also very high, with an average value of 3.36, which means it falls into the very satisfied category. This study also found that the relationship between technology-based self-service and library satisfaction is relatively strong, with a Pearson correlation value of 0.461. The results indicate that the application of technology-based self-service significantly influences library satisfaction at the National Library of the Republic of Indonesia. Still, the influence is not dominant, with an influence value of 21.2%. Therefore, further research should be conducted to evaluate other factors affecting library satisfaction at the National Library of the Republic of Indonesia.

Keywords: *Technology-Based Self-Service, Self-Lending Service, National Library of the Republic of Indonesia.*

Abstrak

Penelitian ini bertujuan untuk mengetahui pengaruh penerapan layanan mandiri berbasis teknologi terhadap kepuasan pemustaka pada layanan peminjaman mandiri di Perpustakaan Nasional Republik Indonesia dengan menggunakan model Expectancy Disconfirmation Theory (EDT). Metode yang digunakan adalah penelitian kuantitatif eksplanatori dengan jumlah responden sebanyak 100 orang yang pernah menggunakan mesin platform peminjaman mandiri di Perpustakaan Nasional Republik Indonesia. Pengukuran variabel penelitian untuk mengetahui nilai penerapan layanan mandiri berbasis teknologi dan kepuasan pemustaka menggunakan skala likert. Teknik pengumpulan data yang digunakan adalah survei, dengan analisis data melalui regresi linier sederhana. Hasil penelitian menunjukkan bahwa penerapan layanan mandiri berbasis teknologi di Perpustakaan Nasional Republik Indonesia tergolong baik, dengan nilai rerata variabel sebesar 3,35 yang termasuk dalam kategori sangat tinggi (3,25-4,00). Selain itu, kepuasan pemustaka terhadap penerapan layanan mandiri berbasis teknologi juga sangat tinggi, dengan nilai rerata sebesar 3,36 yang artinya termasuk dalam kategori sangat puas. Penelitian ini juga menemukan bahwa hubungan antara layanan mandiri berbasis teknologi dengan kepuasan pustakawan tergolong cukup kuat, dengan nilai korelasi Pearson sebesar 0,461. Hasil penelitian menunjukkan bahwa penerapan layanan mandiri berbasis teknologi berpengaruh signifikan terhadap kepuasan pustakawan di Perpustakaan Nasional Republik Indonesia. Namun pengaruhnya tidak dominan, dengan nilai pengaruh sebesar 21,2%. Oleh karena itu, perlu dilakukan penelitian lebih lanjut untuk mengevaluasi faktor-faktor lain yang mempengaruhi kepuasan pustakawan di Perpustakaan Nasional Republik Indonesia.

Kata Kunci: Layanan Mandiri Berbasis Teknologi, Layanan Pinjam-Beli

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INTRODUCTION

The library is an information center that serves all levels of society, from children, teenagers, adults to the elderly, who still need information as one of their learning tools (Darmono, 2001). Libraries provide access to important knowledge and resources, and play a role in supporting the lifelong learning process. From book collections, journals, to digital resources, libraries continue to adapt to meet the information and education needs of the wider community. so that libraries must be able to carry out good information management.

As an information management institution and public service provider, the library is required to meet the satisfaction of its users. Quality service is the maximum effort made by the library to meet the needs and expectations of users and achieve user satisfaction. One of the efforts that can be made is implementing a Technology-Based Self-Service (TBSS) system. TBSS is the concept of applying information and communication technology in the form of services in the library that allow users to perform self-service by interacting with technological systems or devices.

TBSS uses hardware such as automatic lending machines, application software, user interfaces and integrated library management systems. The system is designed to improve the efficiency and convenience of library services. TBSS is widely implemented in various libraries, including university, public, and national libraries. (Beatson et al., 2006). Through TBSS, users can perform multiple activities independently, such as borrowing and returning books, searching for information, reserving facilities and interacting with digital collections, without requiring direct librarian assistance. Implementing TBSS in libraries improves operational efficiency and increases user satisfaction by providing a more flexible and responsive experience (Beatson et al., 2006). Implementing TBSS is a strategic step to improve service quality and meet library expectations in the digital age.

The National Library is a Non-Departmental Government Institution (LPND) that carries out government functions in the field of libraries. (Undang-Undang Republik Indonesia Nomor 43 Tahun 2007 Tentang Perpustakaan, 2007). The institution has a variety of strategic functions, including a guidance library, a reference library, a depository library, a research library, a preservation library, and a library networking centre. The National Library is located in the national capital. It plays a vital role in promoting and developing a network of libraries throughout Indonesia, intending to increase literacy and access to

information for the community.

The National Library of the Republic of Indonesia provides various services to meet users' information needs. One of its flagship services is the self-service lending platform, which has implemented the TBSS system. This system allows users to borrow and return books independently, without the assistance of librarians, using a desktop lending application. Implementing TBSS at the National Library improves service efficiency and allows users to conveniently access the library's collections. With TBSS, users will have more flexible access to library services, increasing their satisfaction and experience with library facilities.

A self-service lending platform is a system or process that allows patrons or users to borrow books independently without interacting directly with a librarian. The library provides automated machines or terminals for borrowing books using electronic interfaces such as touchscreens or computer buttons in this service. The purpose of the self-checkout platform service at the National Library of the Republic of Indonesia is to provide convenience and flexibility to users. This service allows users to access the library's collection and borrow items anytime without waiting or interacting with a librarian. This service enables users to manage their time and use library services more effectively. In addition, the self-service lending platform can also help to reduce the queuing or waiting time in the library, which is often a source of frustration for many users. The system makes the borrowing process quicker and more efficient and allows users to manage their borrowing. This service also benefits the library in terms of time and resource management. Librarians can focus on other tasks that require more attention.

The self-service lending platform began operating at the National Library in June 2020. In 2022, from January to December, a total of 19,506 users have utilized the self-lending service. This service is shaped like an ATM and can only be accessed using the National Library of the Republic of Indonesia membership card. This self-lending platform is located on floors 12 A, 21, and 22 and serves open and closed monograph collections.

This research used the Expectancy Disconfirmation Theory (EDT) theory by Richard L. Oliver in 1980. EDT is a theoretical framework that explains how satisfaction or dissatisfaction is formed after someone buys a product or uses a service by comparing their expectations of the actual performance of the product or service. This theory centres on the concept that customer satisfaction is achieved when performance matches or exceeds expectations. Conversely, dissatisfaction occurs when actual performance does not meet expectations. EDT

operates through the mechanism of confirmation or expectation dissonance. When actual performance exceeds expectations, customers experience positive confirmation or positive dissonance, leading to high satisfaction. If actual performance only matches expectations, customers experience modest confirmation. However, when performance exceeds expectations, customers experience negative dissonance, leading to dissatisfaction. This theory is instrumental in analyzing and measuring customer satisfaction in various contexts, including library services (Oliver et al., 1994).

Every individual expects satisfaction from the services they receive, including in the context of library services. Therefore, satisfaction is considered a valuable asset for every library. Satisfaction refers to the emotional response to evaluating the consumption experience of a product or service. In contrast, customer satisfaction is the overall attitude towards a good or service after its acquisition and use (Tjiptono, 2000). Satisfaction is a subjective assessment that a person feels towards an object or activity, and it involves the general view that users develop towards library services. The level of satisfaction or dissatisfaction arises in response to assessing the difference between prior expectations and the actual performance of library services after borrowing. Libraries can measure user satisfaction through the feedback they provide. This feedback can be valuable input for developing library service implementation and improvement. By understanding the extent to which the services provided have met or exceeded patron expectations, libraries can continue to develop strategies to increase patron satisfaction and provide better services (Tjiptono, 2000).

Factors that influence customer satisfaction include products produced as an initial stage of branding, service quality as the main pillar of satisfaction, emotional factors that create comfort through good attitudes, attractive advertisements with clear information and offers according to expectations, and ease of use of technology that facilitates activities and saves customers' time (Alvioletta et al., 2020). In the field of libraries, some factors influence user satisfaction. First, human resources are assessed based on the speed of service, the comparison between questions and those answered satisfactorily, and the level of recency of the answers given. Second, the collection of library materials must always be up-to-date and follow users' information needs so that they are not disappointed. Third, facilities and infrastructure, including tables, chairs, air conditioning, and adequate search tools (OPAC), so that users feel comfortable while in the library (Firma & Rahmah, 2012).

To achieve user satisfaction, the services available at the National Library of the Republic of Indonesia must meet their needs by implementing TBSS, making

it easier for users to borrow library materials independently. In implementing TBSS, several aspects can be assessed to achieve user satisfaction, including solving intensified needs, better than the alternative, and did its job (Meuter et al., 2000). User satisfaction is also related to implementing TBSS, which can be assessed in several aspects, such as conformity to expectations, interest in revisiting, and willingness to recommend (Tjiptono, 2000). By fulfilling these expectations, the library can significantly increase user satisfaction, making it a valuable asset in improving the quality of library services.

This situation provides an opportunity for the library to evaluate the performance of TBSS in lending services. With complaints from users, the library has the potential to make improvements and enhancements in services involving TBSS to meet the needs of users who feel less satisfied with the service. Satisfaction can be defined as a positive affective response to library performance that matches or exceeds user expectations. Therefore, user feedback is an invaluable tool to gauge their satisfaction level and identify areas for improvement. By utilizing this feedback, the library can continuously improve the quality of its services, including the borrowing service through TBSS. This improvement process involves thoroughly evaluating the existing system, adjusting it to suit the users' expectations better, and implementing innovative solutions to ensure that the service meets the desired high standards. The library can improve the user experience, make it more satisfying and efficient, and maintain and increase user trust in library services.

Tjiptono (2000) explained that library satisfaction is closely related to implementing TBSS, which can be assessed from several essential aspects. The first aspect is the suitability of expectations, including products, service processes, and supporting facilities obtained according to or exceeding library expectations. Second, there is an interest in revisiting or using TBSS again because it is considered a satisfying service and provides value and benefits for library users. Third, users are willing to recommend TBSS to others because it is considered satisfactory. TBSS is one of the solutions for improving user satisfaction, especially in self-lending services in the library. With an efficient and user-friendly way of working, TBSS is expected to increase user satisfaction with library lending services. Users who are satisfied with TBSS-based services tend to choose TBSS when borrowing in the future (Tjiptono, 2000)

Tjiptono (2000) added that determining satisfaction levels involves evaluating various aspects, including providing good service, responsiveness to customer complaints, and the ability to sort out wants and priorities. With agile and responsive services, libraries can ensure that TBSS meets users' expectations

and provides a superior service experience. Therefore, the effective Implementation of TBSS can be a strategic step in improving the quality of library services and users' overall satisfaction.

Implementing TBSS in the self-lending service at the National Library of the Republic of Indonesia has great potential to influence users positively. With TBSS, users can experience services that exceed their expectations, increasing their satisfaction, encouraging trust, and motivating them to continue using the service. Satisfactory service will make users feel valued and recognized, strengthening their loyalty to the library. However, implementing TBSS also has potential adverse effects if the system fails or crashes. In such situations, users may feel dissatisfied and lose interest in using TBSS. This problem can further impact their interest in visiting and borrowing books in the library. Therefore, the successful Implementation of TBSS in libraries depends on the quality of services provided, the ability to overcome system constraints, and adequate technical support.

Librarians and library managers need to ensure that all technical aspects of the TBSS are working correctly and that they are prepared to deal with any problems. By doing so, the library can minimize the risk of negative impact and maximize the positive impact on the user experience. Continuous improvement and regular evaluation of the TBSS system are also essential to maintain service quality and ensure that the library continues to meet the needs and expectations of its users.

Based on the results of preliminary observations made by researchers, the self-borrowing platform service at the National Library of the Republic of Indonesia has been widely used by users. However, users who have borrowed independently are not necessarily satisfied with the self-lending service. Based on the assessment of researchers, users and the self-borrowing platform manager, this service still has some significant shortcomings. These problems include errors in the operation of the TBSS system that lead to failures in self-lending through the machine. Some examples of common issues are: when the user scans the membership card, sometimes the card is not read by the self-lending service due to the different shapes of the old and new membership cards.

In addition, the disruption of the Internet network to the self-lending service machine and the inability of the machine to automatically update the book return status are also barriers. As explained by Meuter, Ostrom, Roundtree (2000), some of the inconveniences of users in using TBSS are when things like technology failure (problems occur in technology), process failure (problems occur in technology work process), poor design (unattractive design) and

customer-driven failure (problems arise with customers in using the machine). User dissatisfaction is a significant problem for the library. Therefore, there is a need for an in-depth evaluation of the users' judgement after the self-lending process through the self-lending service machine.

Several studies related to TBSS and user satisfaction with self-lending services have been conducted, such as those conducted Suryanto (2018) found that TBSS improved efficiency and convenience, leading to higher student satisfaction at SMA Negeri 5 Magelang Library. Wahyuni (2018) noted that users appreciated the ease and time-saving features of online self-service at Patria Artha University Library, boosting overall satisfaction. Prasetyo (2016) reported that RFID technology enhanced accuracy and speed of circulation services at UIN Sunan Kalijaga Yogyakarta Library, also increasing user satisfaction. Together, these studies suggest that self-service technologies—TBSS, online self-service, or RFID—boost user satisfaction by improving efficiency, convenience, and accuracy in library services.

Based on these studies, this study is interested in exploring self-lending services at the National Library of the Republic of Indonesia, considering that the National Library is a model library for other libraries and must demonstrate good service quality. It is hoped that this study can contribute to further understanding of the importance of self-service-based technology in improving the quality of library services and how its implementation can have a positive impact on user satisfaction and experience.

The National Library of the Republic of Indonesia and the staff must harmonize the steps to receive and follow the users' wishes. This evaluation activity is conducted so that users are satisfied with applying TBSS in the self-lending service at the National Library of the Republic of Indonesia. This effort is expected to improve the quality of the service and optimally meet the needs and expectations of the users.

Based on the above explanation, the researchers formulated the problems in this study as:

1. What is the value of implementing technology-based self-service in the self-lending service at the National Library of the Republic of Indonesia?

2. What is the level of user satisfaction with the application of technology-based self-service in the self-lending service at the National Library of the Republic of Indonesia?

3. How much does the application of technology-based self-service influence user satisfaction with the self-lending service at the National Library of the Republic of Indonesia?

METHODS

This research uses a quantitative approach with an explanatory type of research. This method uses an explanatory survey collecting data from research subjects and other sources (Sugiyono, 2022). The population in this study consisted of 19,506 users who had used the independent lending platform service in 2022 at the National Library of the Republic of Indonesia. The sample collection technique used in this research is purposive sampling. This technique selects samples based on the knowledge and experience of the users in using the self-service lending platform at the National Library of the Republic of Indonesia. By selecting respondents with specific experiences, researchers can gather more detailed and contextualized insights into the phenomenon being studied. The sample selection was done through preliminary observation to ensure that the sample met the predetermined criteria. The number of samples used in this study was 100 respondents, calculated using the Slovin formula with an error rate of 0.1 or 10%. This error rate is considered accurate and tolerable in social science research.

The quantitative approach allows researchers to obtain a clearer picture of how the self-service lending platform is implemented and how it affects library satisfaction. Using an explanatory survey, researchers can evaluate certain aspects of the service and identify areas that require improvement. The data collected from respondents will be analyzed quantitatively to produce reliable conclusions regarding the effectiveness and satisfaction of the self-lending service.

Primary data in this study was obtained through distributing questionnaires to parties relevant to the research topic. The researcher distributed questionnaires to users who had made independent loans through the self-lending service machine at the National Library of the Republic of Indonesia. This primary data is the core of the research because it is directly obtained from the experiences and responses of the users. In addition, secondary data was used to support the primary data. This secondary data is generally obtained from pre-existing written sources. In this research, secondary data includes books, articles, and other documentation related to the institution's history, the number of loans, and other relevant information (Siregar, 2017).

The main instrument used in this research is a questionnaire. This questionnaire contains several questions that respondents must answer in writing, making it easier for researchers to collect the necessary data following the

research limitations. The questionnaire questions used a Likert scale to measure respondents' responses accurately. A statement score of 1 means strongly disagree, a score of 2 means no, a score of 3 means agree, and a score of 4 means strongly agree. The average value of each respondent will be divided into interval classes, with details of Value 1.00 - 1.74 means Very Low, Value 1.75 - 2.49 means Low, Value 2.50 - 3.24 means High, and Value 3.25 - 4.00 means Very High.

After the statements on the questionnaire were collected, the data was placed in tabulated form and described by recapitulation of each variable. The research then proceeded with correlation analysis to ascertain the direction or intensity of the relationship between two or more variables. This analysis also helps determine the level of influence of the independent variable on the dependent variable (Priyatno, 2010).

Simple linear analysis is used to determine the extent to which the increase or decrease in library satisfaction at the self-lending service as the dependent variable is influenced by the increase or decrease in the variable of the application of technology-based self-service in the service as an independent variable. In this case, simple linear analysis uses Parson's formula. This analysis is carried out through simple linear regression, which includes the coefficient of determination test (R^2) and the Partial Significance Test (T-Test) to answer this research question (Sinambela & Sinambela, 2022).

The significance test was conducted to test the hypothesis and answer the third question of this study with the following hypothesis:

H_0: The Implementation of TBSS in the self-lending service platform has no significant effect on the level of library satisfaction.

H1: The Implementation of TBSS in self-lending service platforms has a significant impact on the level of library satisfaction.

The limits of the significance test results are as follows:

P-value $\leq$ 0.05: The results are statistically significant, indicating a fundamental relationship between the tested variables

Accepted: The null hypothesis (H_0) is rejected.

Rejected: The alternative hypothesis (H_1) is accepted.

P-value> 0.05: The results are considered statistically insignificant, indicating no substantial evidence to reject the null hypothesis, and the results may have occurred by chance.

Accepted: The null hypothesis (H_0) is accepted.

Rejected: The alternative hypothesis (H_1) is rejected.

RESULTS AND DISCUSSION

This section details the results of the data processing and discussion. The results of this study are presented in three main sections. The first section will discuss the librarians' assessment of implementing the Technology-Based Self-Service (TBSS). The second section will describe librarians' satisfaction with this service. The third section will assess the extent to which the implementation of TBSS influences librarians' satisfaction.

Implementation of technology-based self-service in the self-lending service at the National Library of the Republic of Indonesia

The TBSS implementation variable in the National Library uses 12 statement items specifically designed to examine different aspects of this service, with measurements carried out using SPSS software. The results of the data obtained are described below:

Table 1. Implementation of TBSS in the self-lending service

No	Statement	Mean	Description
1	The implementation of TBSS on the self-lending service machine makes it easier for me to make borrowing transactions at the National Library of the Republic of Indonesia	3,38	Very High
2	The instructions available on the self-lending service machine make it easier for me to make book-borrowing transactions	3,37	Very High
3	The borrowing receipt that comes out on the self-lending service machine after making an independent borrowing transaction helps me to find out information about the book that was successfully borrowed	3,32	Very High
4	The layout of the menu on the self-lending service machine makes it easier for me to borrow	3,30	Very High
5	The use of barcodes on books when scanned on the self-lending service machine makes it easier for me to borrow TBSS on the borrowing service, makes me not dependent on librarians when I want to borrow	3,34	Very High
6	TBSS on the borrowing service makes me not dependent on librarians when I want to borrow	3,28	Very High
7	The computer device used on the self-lending service machine can support borrowing faster	3,37	Very High
8	As long as the library is open, the presence of TBSS on the independent borrowing kiosk service allows me to borrow whenever I want	3,34	Very High
9	Self-lending service access times are following the library's opening and closing hours	3,35	Very High
10	The location of the self-lending service machine in the library room is currently very strategic and does not take up much space	3,49	Very High
11	Providing information on the maximum borrowing and late fines on the self-lending service machine screen can remind me to be orderly in returning books	3,37	Very High
12	The description of the information listed on the self-lending service screen is complete	3,27	Very High

Source: Field data 2023

Based on the table above, the recapitulation of the Technology-Based Self-Service (TBSS) implementation variables shows that the highest mean value is found in the statement item regarding the location of the self-lending service machine in the library room, which is very strategic and does not take up much space, with a mean value of 3.49. The lowest mean value is found in the statement item regarding the completeness of the information description provided on the self-lending service screen, with a mean value of 3.27. Meanwhile, the lowest mean score of 3.27 was found for the statement regarding the completeness of the description of the information provided on the self-lending service screen. Overall, the average score for the implementation of TBSS is 3.35, which means that the variable is included in the very high-value scale (3.25-4.00). This analysis indicates that library users' views on implementing TBSS in the self-service kiosk service at the National Library of the Republic of Indonesia can be classified as excellent and effective.

Several indicators and considerations support this conclusion. Firstly, the self-borrowing service benefits library users in their book-borrowing transactions because the TBSS system is easy to use and can save time. The strategic location of the APM machine in the library makes it easy for library users to access it without disturbing the layout. Secondly, the full description of information on the self-lending service screen provides clear guidance to users, increasing their comfort and confidence in using TBSS.

Technology-based self-service is a concept of implementing information and communication technology in the form of services in libraries that are delivered directly by library users through interactions based on technology systems or devices (Beatson et al., 2006). In this research, the implementation of TBSS, the theoretical model used the Meuter, Ostrom, Roundtree (2000) model. TBSS is a self-service that allows individuals to perform tasks or activities without direct assistance from staff or officers; consisting of 3 TBSS variable indicators such as being able to solve problems in an emergency (solved intensified need), better alternatives (better than alternative), saved time and TBSS works well (did its job).

The most significant average value on the statement of the location of the self-lending service machine in the library room is currently very strategic. It does not take up much space of 3.49, entering the third point indicator, namely did its job, which means that TBSS can really work well, such as the accuracy of calculating due dates and calculating fines or sanctions that can increase the trust of library users in TBSS. This study is very different from previous studies that discussed SLIMS services in school libraries, RFID-based book circulation

systems and designing an independent book return system in the form of a book drop in an independent library, while this study discusses the application of independent lending kiosk services at the National Library of the Republic of Indonesia.

Library User Satisfaction with the Self-lending Service

The user satisfaction variable on the self-lending service was measured using 15 statement items with the help of SPSS software. The following is a description of the data results obtained:

Table 2. Library User Satisfaction with the Self-lending Service

No	Statement	Mean	Description
1	Satisfied with the self-lending service because it helps me borrow books.	3,34	Very High
2	Satisfied with the menu display on the self-lending service machine screen	3,34	Very High
3	Satisfied with the modernity of TBSS in the self-lending service in serving loans.	3,30	Very High
4	Satisfied with the instructions on how to use the self-lending service machine listed on the self-lending service machine.	3,38	Very High
5	Satisfied with the punctuality of making independent loans using the self-lending service machine.	3,38	Very High
6	Satisfied with the notification on the self-lending service machine screen regarding the deadline for books borrowed.	3,41	Very High
7	Satisfied with the notification on the self-lending service machine screen regarding the status of books that can or cannot be borrowed.	3,39	Very High
8	Satisfied with the self-lending service because it has comfortable facilities, which makes me interested in continuing to use it.	3,39	Very High
9	Satisfied with the ability of TBSS, which allows me to do self-lending service independently and makes me interested in continued use.	3,29	Very High
10	Satisfied with the way the self-lending service works using TBSS, which makes me interested in continued use	3,39	Very High
11	Satisfied with the notification on TBSS when I cannot make an independent loan due to a problem, so it makes me interested in using sustainable.	3,31	Very High
12	Satisfied with TBSS, which is continuously improved if there are complaints or obstacles to its use so that it can make me interested in sustainable use.	3,34	Very High
13	Satisfied and recommend the self-lending service because it is effortless to use	3,38	Very High
14	Satisfied and recommend the self-lending service because it can be used anytime.	3,33	Very High
15	Satisfied with the existence of the self-lending service, highly recommended for sustainable use	3,41	Very High

Source: Field data 2023

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Tjiptono (2000) stated that research must evaluate several vital aspects of service delivery to determine the satisfaction level. The satisfaction of customers, in this case librarians, is closely related to the quality of the service provided. Good service must be agile in implementation, responsive to customer complaints, and able to sort and prioritize between customer desires and priorities.

The assessment of satisfaction is based on three main aspects. Firstly, fulfilling expectations includes the products, service processes and supporting facilities received. Satisfaction will increase if the services provided meet or exceed library users' expectations. Secondly, interest in return visits indicates that the service is considered satisfactory and offers significant value and benefit to users. When satisfied, users tend to be interested in using the service again. Thirdly, library users are willing to recommend the same service or product to others. A satisfactory service will encourage users to share their positive experiences with others, ultimately improving the library's reputation and attracting more new users.

Based on the recapitulation explained in Table 2, the average value for the variable "librarian satisfaction" was 3.36, which means the variable is included in the enormous scale category (3.25-4.00). The highest mean value was found in the statements 'I am satisfied with the notification on the screen of the self-service machine about the expiry date of the borrowed books' and 'I am satisfied with the self-service machine, highly recommended for regular users', with a value of 3.41 each. This data shows that users value the information displayed on the self-service machine screen and the service.

On the other hand, the lowest mean value was found in the statement, "I am satisfied with the TBSS capability that allows me to perform self-lending services independently and makes me interested in continuing to use it", with a value of 3.29. Although this score is still in the very high category, it shows little room for improvement in TBSS's ability to generate interest in continued use. These results indicate that user satisfaction with implementing TBSS at the National Library of the Republic of Indonesia is very high. Users are satisfied with the services provided, especially regarding notification and recommendations for continued use. This high level of satisfaction reflects the effectiveness of the TBSS implementation in meeting user expectations and needs. It shows the potential for this service to further improve the quality of user experience in the library.

The extent of influence of the implementation of TBSS on user satisfaction with self-lending services at the National Library of the Republic of Indonesia

Table 3. Correlation Test Results

Correlations		TBSS Implementation	User satisfaction
Penerapan TBSS	Pearson Correlation	1	.461**
	Sig. (2-tailed)		.000
	N	100	100
Kepuasan Pemustaka	Pearson Correlation	.461**	1
	Sig. (2-tailed)	.000	
	N	100	100
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Field data 2023

Based on Table 3, the correlation analysis shows that the significance value between the TBSS implementation variable and the librarian satisfaction variable is 0.000. This result follows the decision-making criteria, where if the significance value of both variables is less than 0.05, the two variables are stated to have a significant relationship. Correlation analysis is used in this study to determine the direction and intensity of the relationship between two or more variables, as well as to evaluate the level of influence of the independent variable on the dependent variable. The strength of the correlation between two variables is measured by Pearson Correlation, which has the following assessment categories:

0-0,24   = Very weak correlation (considered non-existent)

>0,25-0,5   = Fairly strong correlation

>0,5-0,75   = Strong correlation

>0,75-1   = Very strong correlation

(Priyatno, 2010)

From this analysis, the Pearson Correlation value obtained for the relationship between TBSS implementation and user satisfaction is 0.461. This value indicates a relatively strong and positive correlation in one direction between the two variables. This result means that an increase in TBSS implementation correlates with increased user satisfaction. In other words, the better the TBSS implementation, the higher the satisfaction felt by users.

Table 4. Significance Test Results

Impact	Significance Result	Impact Value	Description
TBSS Implementation ⟶ User Satisfaction	0,000	0, 212	Accepted

Source: Field data 2023

From the results of the significance value above shown in Table 4, it is known that there is a value of 0.000 and an influence value of 0.212. This result means that the TBSS implementation variable significantly influences user satisfaction because both variables meet the decision-making requirements with a significance value of less than 0.05. Thus, the null hypothesis (H$_0$) is rejected, and the alternative hypothesis (H$_1$) is accepted, indicating that the implementation of TBSS has an influence of 21.2% on user satisfaction.

However, the remaining 78.8% is influenced by other factors outside this study. This result shows that although the implementation of Technology-Based Self-Service (TBSS) significantly influences user satisfaction, its influence is not dominant. Various other factors play a role in determining user satisfaction with the self-lending services service at the National Library of the Republic of Indonesia.

Expectancy Disconfirmation Theory (EDT) can help to understand these findings. EDT explains that satisfaction or dissatisfaction occurs when there is a difference between initial expectations and the actual performance of a service or product. In the context of this study, the user expects TBSS services to increase the ease, efficiency and convenience of the borrowing process. The influence score of 21.2% indicates that implementing TBSS can meet some of the user's expectations, resulting in significant satisfaction. However, the fact that other factors influence 78.8% of satisfaction indicates a gap between user expectations and the actual performance of TBSS. Other factors such as interaction with librarians, quality of the collection, physical condition of the library and other additional services also play an essential role in shaping overall user satisfaction.

Thus, although TBSS is essential in improving patron satisfaction, libraries need to pay attention to and improve other aspects of the service to achieve optimal satisfaction. Continuous evaluation and adjustment of service strategies based on patron feedback is essential to meet patron expectations and ensure a more satisfying service experience. These findings provide important insights into the need for libraries to consider factors other than TBSS to improve overall

patron satisfaction. Improved service quality, staff training, and infrastructure improvements can also enhance patron satisfaction. By taking a more holistic approach, libraries can create a more satisfying environment for patrons.

CONCLUSION

The user's view on the implementation of technology-based self-service on the self-lending kiosk service at the National Library of the Republic of Indonesia can be said to be good and continues to increase from the results of visitor data using the self-lending kiosk service owned by the National Library of the Republic of Indonesia. It can be seen from the average value of the technology-based self-service variable of 3.35, which means that the variable is included in the very high scale value (3.25-4.00), with the enormous average value in the statement that the location of the self-lending service machine in the library room is currently very strategic and does not take up much space of 3.49.

The level of user satisfaction with implementing technology-based self-service in the independent lending kiosk service is very high, with an average value of 3.36. The result shows that user satisfaction with technology-based self-service is in the very satisfied assessment category.

The relationship between the TBSS implementation variable and user satisfaction has a strong correlation, as can be seen from the Pearson Correlation value of the two variables of 0.461, which means that the relationship between the two variables, namely the TBSS implementation variable and user satisfaction, is positive and in the same direction. Based on the results of the partial significance test (T-test) and the results of the coefficient of determination test, it was stated that there was an influence of TBSS implementation on user satisfaction in the self-service lending service at the National Library of the Republic of Indonesia of 21.2%. In comparison, other factors outside this study influenced the remaining 78.8%. This result shows that implementing Technology-Based Self-Service (TBSS) does not significantly affect user satisfaction with the self-service lending kiosk service at the National Library of the Republic of Indonesia.

REFERENCES

Alvioletta, V., Setyawan, tta, Muhammad Yusril Helmi, & Saputra, M. H. K. (2020). *Penerapan Metode Analitycal Hierarchy Process (AHP) Pada Penilaian Kepuasan Pelanggan Berdasarkan Pelayanan Divisi (Studi Kasus: CV Tirta Kencana)*.

Beatson, A., Coote, L. V., & Rudd, J. M. (2006). Determining Consumer Satisfaction and Commitment Through Self-Service Technology and Personal

Service Usage. *Journal of Marketing Management*, *22*(7–8), 853–882. https://doi.org/10.1362/026725706778612121

Darmono. (2001). *Manajemen dan tata kerja perpustakaan sekolah*. Gramedia.

Firma, A., & Rahmah, E. (2012). Faktor-Faktor yang Mempengaruhi Kepuasan Pemustaka di Perpustakaan Kopertis Wilayah X. *Jurnal Ilmu Informasi Perpustakaan Dan Kearsipan*, *1*(1), 110–115. https://doi.org/10.24036/492-0934

Hani Prasetyo. (2016). *Persepsi Pemustaka Terhadap Kualitas Pelayanan Sirkulasi Berbasis Teknologi RFID di Perpustakaan UIN Sunan Kalijaga Yogyakarta*. UIN Sunan Kalijaga.

Meuter, M. L., Ostrom, A. L., Roundtree, R. I., & Bitner, M. J. (2000). Self-Service Technologies: Understanding Customer Satisfaction with Technology-Based Service Encounters. *Journal of Marketing*, *64*(3), 50–64. https://doi.org/10.1509/jmkg.64.3.50.18024

Oliver, R. L., Balakrishnan, P. V. S., & Barry, B. (1994). Outcome satisfaction in negotiation: A test of expectancy disconfirmation. *Organizational Behavior and Human Decision Processes*, *60*(2), 252–275. https://doi.org/10.1006/obhd.1994.1083

Priyatno, D. (2010). *Teknik Mudah dan Cepat Melakukan Analisis Data Penelitian dengan SPSS*. Gava Media.

Sinambela, L. P., & Sinambela, S. (2022). *Metodologi Penelitian Kuantitatif: Teoretik dan Praktik*. Rajawali Pers.

Siregar, S. (2017). *Metode Penelitian Kuantitatif: Dilengkapi dengan Perbandingan Perhitungan Manual & SPSS*. Kencana.

Sugiyono. (2022). *Metode Penelitian dan Pengembangan (R&D)*. Alfabeta.

Suryanto. (2018). *Pengaruh Penerapan Technology Based Self- Service Terhadap Kepuasan Siswa Pada Layanan Peminjaman di Perpustakaan SMA Negeri 5 Magelang*. UIN Sunan Kalijaga.

Tjiptono, F. (2000). *Perspektif Manajemen & Pemasaran Kontemporer* (1st ed.). Andi Offset.

Undang-Undang Republik Indonesia Nomor 43 Tahun 2007 Tentang Perpustakaan (2007).

Wahyuni, N. (2018). *Persepsi Pemustaka Tentang Layanan Mandiri Online di Perpustakaan Universitas Patria Artha Makkasar*. Universitas Islam Negeri Alauddin.

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