

## SiPINTAR Mobile Library Application: Perceived Usefulness and Ease of Use

<sup>1</sup>Atty Sofiyanty\*, <sup>2</sup>Agus Rusmana, <sup>3</sup>Ute Lies Siti Khadijah

Fakultas Ilmu Komunikasi Universitas Padjadjaran, Indonesia  
Correspondance author: [atty.sofiyanty@unisba.ac.id](mailto:atty.sofiyanty@unisba.ac.id)\*

### Article

#### Article History

Received : 2023/08/01  
Reviewed : 2023/10/07  
Accepted : 2024/01/25  
Published : 2024/01/31

#### DOI:

[doi.org/10.29313/ethos.v12i1.3207](https://doi.org/10.29313/ethos.v12i1.3207)



This work is licensed under a  
Creative Commons Attribution 4.0  
International License

Volume : 12  
No. : 1  
Month : January  
Year : 2024  
Pages : 53-60

### Abstract

A smart system service called SiPINTAR is a smart service library application at Universitas Islam Bandung. This research aims to find out how SiPINTAR application is perceived by users based on the Technology Acceptance Method theory. This research employs a descriptive-qualitative research method. Data collection techniques are carried out by collecting information from several sources and then combining it with structured direct observations on the SiPINTAR application. The results of this study show that the convenience aspects of using SiPINTAR are easy to learn, easy to control, clear and easy to understand, easy to adjust, and easy to use. In addition, from the aspect of usability, it can facilitate work, speed up work, increase productivity, and enhance the effectiveness of users' activities. This research concludes that SiPINTAR application is very easy to use by librarians and library users. It also provides benefits for users in terms of a positive assessment and fulfilling all aspects of the assessment, which makes SiPINTAR application positively accepted.

*Keywords:* SiPINTAR, TAM, Mobile library

@ 2024 Ethos : Jurnal Penelitian dan Pengabdian Kepada Masyarakat, Unisba Press. All rights reserved

### Introduction

The development of technology in the current disruption period has become a necessity so that it spurs the creation of breakthroughs, including in the world of education, where the learning system is developing with the emergence of electronic learning systems (e-learning), materials presented in digital form, and learning meetings conducted online through electronic media. Libraries, as a means of supporting education, need to keep up with this development so that library information can be accessed anywhere and anytime by becoming digital libraries (Suharti, 2019). This is in line with the Law of the Republic of Indonesia No. 43 of 2007, Article 24, Paragraph 3, concerning libraries, which states that "higher education libraries develop library services based on information and communication technology" (Indonesia, 2007).

According to Priyanto in Prasetyo (2019), there is an impact of disruption on personnel who are not productive and do not want to keep up with technological developments, namely

(1) the increasing price of information sources; (2) the emergence of media sources of information; (3) conventional libraries are increasingly displaced; and (4) the shifting needs of users (Prasetyo, 2019). According to Masnezah in Suharti (2019), a digital library is a collection of large and organized pieces of information that are digitized in various forms to enable information searches anytime and anywhere through global communication networks and maximum use of information technology (Suharti, 2019).

According to Turban, a mobile application is used to describe an internet application that runs on smartphones or other mobile devices (Turban & all, 2012). Lee Cheng Ean (2012) in Surachman states several benefits of using a mobile library, namely reaching more and more users from the net generation, providing access to a wider collection, improving relationships with users, functioning as part of marketing services and resources owned by the library, increasing access and availability of resources for users (anytime and anywhere), and operating as part of organizational strategy (Surachman, 2014). SiPINTAR is a mobile library application developed by the Bandung Islamic University Library that can be used through cell phones and other compatible devices, making it easier for users.

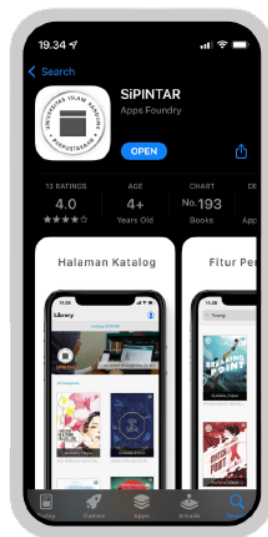


Figure 1. SiPINTAR Application

Figure 1 above is a view of the SiPINTAR application, which can be downloaded from the App Store or Google Store. The SiPINTAR application was built using the Java programming language and supported by the SQL Lite database. The Java programming language was chosen with consideration to present an application that is cross-platform, stable, and can be accessed easily by various devices. Meanwhile, the use of the SQL Lite database provides advantages in terms of efficient, lightweight, and self-contained data management, allowing the application to run well even on devices with low specifications (Tresnawan, 2023).

The Unisba Library SiPINTAR application, since 2019, has had a collection of 2343 titles and 4535 copies, and the number of registered members is 1535. The following is data from the SiPINTAR application through access as a librarian.

**Table 1**  
**Number of Books and Average Reading Duration**

<b>Borrowing Books</b>	<b>Readers</b>	<b>Average</b>
10.098	2144	2 hours 51 minutes

Source: SiPINTAR (2023)

Table 1 shows that the number of readers is 2144, and the frequency of borrowing books is 10,098 times. This proves that the SiPINTAR application is used by library users. Through this technological development, it is important to know the extent to which SiPINTAR is accepted by its users. The technology acceptance model (TAM) is one of the tools to determine the attitude of user acceptance of new technology, assessed by perceived usefulness and ease of use, which can affect interest in use (behavioral intention and actual usage) (Fatmawati, 2015).

The Technology Acceptance Model (TAM) was first introduced by Fred D. Davis in 1986. TAM was specifically created to model the effects of acceptance of information technology for users (Purwanto, 2023). This is in line with the results of research conducted by Djusar *et al.*, who found that a person's perception of interest in using technology can be categorized as perceived usefulness. Perceived usefulness is the belief of a person that, when using technology, he/she can obtain benefits and good results (Djusar, Taslim, & Toresa, 2020).

There are several elements in the user-friendliness aspect: (1) Easy to learn and easy to become proficient; (2) Easy to control; (3) Clear and easy to understand; (4) Flexible/easy to customize; and (5) Easy to use (Habib & Prasetyawan, 2016). Usability is a view of the extent to which technology can improve its performance. This usability aspect has several elements: (1) Make work easier; (2) Speed up work; (3) Improve job performance or productivity; (4) Enhance effectiveness; and (5) Be useful (Habib & Prasetyawan, 2016).

Previous research has been conducted on mobile library applications, among others, Arnila with the title 'Utilization of Information Technology Mobile Application Services "M-Library" in Libraries: Quantitative Study at Gadjah Mada University Library Yogyakarta' (Purnamayanti & Djunaedi, 2014) and "Aspects of Usability and Convenience for Candil (Maca Dina Digital Library) Application Users" by Rizkyana (Rizkyana & al., 2021). The purpose of this study is to determine and discuss how the SiPINTAR application fulfills the aspects of convenience, namely: (1) whether the SiPINTAR application is easy to learn by its users; (2) whether SiPINTAR is easy to control by its users; (3) whether the SiPINTAR application is clear and easy to understand by its users; (4) whether the SiPINTAR application is flexible or easy to customize by its users; and (5) whether the SiPINTAR application is easy to use by its users. This study also discusses how the SiPINTAR application fulfills the usability aspects, namely: (1) whether the SiPINTAR application makes the job easier or can help the user's work easier; (2) whether the SiPINTAR application can speed up the work of its users; (3) whether the SiPINTAR application can increase user productivity or improve job performance; (4) whether the SiPINTAR application increases the effectiveness of activities and help to achieve users' goals; and (5) whether the SiPINTAR application is useful for its users.

## Method

The research methods used are descriptive qualitative research and observation. The research was conducted by collecting information from several sources and then comparing it with the observations made. Observation is a way or technique for obtaining data and information by making direct observations in a structured manner about what will be observed, where the researcher observes how the application is operated and performs direct operations by positioning himself as an application user, then explores the experience as a user so that the assessment can be done completely, sharply, and visibly from the aspects of convenience and usability. After the researcher gets the data needed, a descriptive discussion is carried out that compares the collected data with the field data. The observation was carried out at the Bandung Islamic University Library.

## Results & Discussion

The SiPINTAR was created as a form of adaptation to this disruptive era, where the information needed is quickly obtained with just one touch of a finger on a smartphone, anytime and anywhere.

This study obtained data from observation as a primary source and documentation as a secondary source. After making direct observations, researchers obtained the research findings following the aspects according to the Technology Acceptance Model theory put forward by Fred Davis. Based on this theory, these aspects can be used as a benchmark for whether a technology, in this case, SiPINTAR, is well received by users or not.

The needs of library users in this era are not only about borrowing and lending books but also related to comfort, be it service friendliness, convenience, facilities provided, or the completeness of the collection, while satisfaction can be interpreted as the achievement of desires, expectations, or needs. According to Kotler, customer satisfaction is a feeling or impression that arises after comparing the performance obtained from experience to expectations of their wants or needs (Kotler & Armstrong, 2014).

The convenience aspect is the user's belief that when using technology, it can facilitate the activities he does. Ease of use can affect user behavior and actions. If the user hopes that the application can facilitate his needs in carrying out activities, the technology used must be more sophisticated. The aspects of convenience in question are as follows:

#### Easy to Learn and Easy to Master

During the disruption period, the use of smartphones in Indonesia was widely spread among the public. Therefore, the use of the mobile-based application SiPINTAR on smartphones or other compatible devices will not be hard, especially for students of the current generation, who are the main users of this application. They are familiar with such a thing, so they can use it easily without any difficulties.

Figure 2 below is a guidance video of the SiPINTAR application, which is often used in different activities at the Bandung Islamic University library. The video conveys information on how to download collections, collection searches, resumes, borrowing and returning book processes, and other conveniences for users.



Figure 2. SiPINTAR Guidance Video

In addition, the appearance of this application is very simple, so users can easily understand and use the existing features without any difficulties or feeling confused. Based on observations, feature testing can be done in just a few minutes. Users can immediately become proficient in using

this application because the application features are very easy to learn. Easy to master is one of the factors that makes users accept the application well. Purnamayanti and Djunaedi stated in their research that the appearance of the application affects the ease of use of the application (Purnamayanti & Djunaedi, 2014).

#### 1. Easy to Control

Apart from being easy to learn, the SiPINTAR application is very accessible and easy to control, which means that users can control and supervise usage, allowing them to easily carry out the desired process independently. In addition, librarians find it easy to control their work with this application. They can monitor the status of the book borrowing transaction through the SiPINTAR application, both automatically and manually. The application can help them control, check, and monitor the library books, which makes their work easier.

#### 2. Clear and Understandable

In addition to its simple appearance, features, and menus in SiPINTAR application are also very easy to understand. Users can easily understand the procedures of new member registration, borrowing, and returning book transactions, and other services needed. The language used is Indonesian, which makes it easy for users to understand the menu displayed.

#### 3. Flexible

The SiPINTAR application can be adjusted to developments that occur on an ongoing basis, both for improvements and the development of applicable regulations. The use of the SiPINTAR application can be adjusted to the user's needs. For example, SiPINTAR can be accessed easily from anywhere. Through SiPINTAR, users can borrow books or read the collections in the application (or offline), check current fines, return the books, and even request exemption letters for students who will graduate at their convenience. The flexibility offered is expected to be an added value for the services provided by the library. Library users are not limited to those who physically come to the library during working hours, but they can freely utilize library features anytime and anywhere based on their needs through SiPINTAR.

#### 4. Easy to Use

In general, the presence of technology is intended to create convenience for its users. The conveniences presented by technology are intended to create added value in terms of services. This added value is expected to be a positive value for users, which furthermore can make the SiPINTAR application well received by its users.

The convenience provided by the SiPINTAR application comes from the ease of learning the application itself, ease of control, flexibility, and ease of use. Hence, the SiPINTAR application can be said to have fulfilled the aspects of convenience in accordance with TAM theory. Apart from the convenience aspect in TAM theory, there are usability aspects that can affect technology acceptance, in this case, the SiPINTAR application. This usability aspect also plays an important role, where a technology must not only be easy but also useful so that users will continue to use it. The assessment of the SiPINTAR application from the usability aspect is as follows:

#### 1. Make Work Easier

In line with the aim of the presence of technology, namely making everything easy, the SiPINTAR application makes the work of both librarians and library users easier because the application simplifies the work processes. SiPINTAR simplifies the work of librarians, as they can update new collections, classify books, and serve book transactions digitally. In its operation, the SiPINTAR application is integrated with PT Gramedia so that librarians can directly review, book, purchase, and add collection updates to the system directly in the application and update the announcements. Book storage is no longer needed since the collection borrowed is a digital collection.

As for library users, this application facilitates their literature needs in particular, as there is a search menu and book classification integrated with the book borrowing transaction, which can be done directly and independently. In addition, users can also utilize other features easily and independently, such as requests for exemption documents for graduation requirements. Students only need to fill out a form on the application.

## 2. Make Work More Quickly

The advantage of technology, in addition to making everything easier, is that it accelerates. Many processes that require time can be shortened by technology. The SiPINTAR application has an impact on accelerating library management processes, such as circulation and service waiting times. Students, as library users in general, do not need to queue to be served by librarians. Librarians are no longer on standby full-time to service borrowing transactions. Librarians also do not have to return and put back collections on the shelf themselves, which makes them work faster and allows them to do other useful things instead, such as carry out scientific updates to improve library performance.

## 3. Improve Job Performance

The increasing ease and speed of service have an impact on library performance in terms of library management, librarians in terms of carrying out their duties and functions as managing actors, and users as end users. UPT Library becomes more productive when the number of users served increases in line with the main purpose of the library, namely as a means of supporting education. For librarians, by increasing the ease and speed of service, they can increase research and service development, thus creating service improvement and development that has an impact on enhancing the services provided. As for the users as end users, the speed of service can make them immediately sort out the collection needed, then borrow and use it right away. It means that the SiPINTAR application increases the productive time of the library users in terms of meeting their needs.

## 4. Enhance Effectiveness

The library, as a supporting facility that serves education, has certain targets. With this SiPINTAR application, the process of managing and utilizing the library can be right on target following the predetermined targets, where services can reach users anywhere at any time with appropriate, fast, and precise methods.

For users, the SiPINTAR application can greatly help them achieve the purpose of using the library: searching for collections is faster and more directed, the transaction process is easier, and they can use collections immediately. That way the SiPINTAR application can increase effectiveness.

## 5. Useful for Users

In the end, a factor that can determine the acceptance of a technology is its usefulness. If all aspects of the usability parameters above are met and the usefulness of the technology is proven to be beneficial to users, then the technology is considered positively accepted by users. The convenience aspect is the first aspect that must be met, especially in changing technology, because, in general, if the convenience aspect is not fulfilled, the usability aspect cannot be seen. In this case, it can be interpreted that if the SiPINTAR application does not fulfill the convenience aspect, users will feel that the application is difficult and cannot help them fulfill their needs or goals. They will feel reluctant to use the application, and if the application is not used, users cannot get the benefits of the application. When the convenience aspect is fulfilled, users will use the application and even use it repeatedly; that way, the usability aspect can be seen. Users will think that the application can be useful for the work being done; even further, it can increase user productivity and effectiveness. The results of this study are in line with the results of a study conducted by Utami and Hayurani, which states that the use of mobile applications is necessary to get good results (Utami & Hayurani, 2016).

## Conclusions

Based on the discussion above, the aspects fulfilled in the SiPINTAR application according to the Technology Acceptance Model SiPINTAR theory approach are perceived usefulness and ease of use. The aspect of perceived usefulness is achieved when the SiPINTAR application makes everything easy for its users, from the ease of learning the application itself to the ease of controlling everything needed and wanted, the ease of knowing how to operate the application, the ease of accessing services and setting services according to user needs, and the ease of using the application to reach users' goals and needs.

The aspect of ease of use is achieved when the SiPINTAR application can help users' work, making it easier, faster, and easier to complete. Thus, the performance of users is higher since their productivity increases, which has an impact on achieving their desired goals or increasing effectiveness. With the achievement above, it can be concluded that the SiPINTAR application is useful for its users.

The ease-to-use aspect, where the SiPINTAR application can help users work, starts by making work easier, because it is easy, the user's work will be completed faster which makes the performance of the user higher where user productivity increases, which has an impact on achieving the desired goals or increasing effectiveness. With the achievement of the above, it is said that the SiPINTAR application is useful for its users.

## References

- Djusrar, S., Taslim, & Toresa, D. (2020). Pengaruh Kemudahan, Kebutuhan, Kemampuan, Minat Terhadap Persepsi. *Ethos: Jurnal Penelitian dan Pengabdian kepada Masyarakat, Vol 8, No.2, Juni 2020: 242-247, 242-246.*
- Fatmawati, E. (2015). Technology Acceptance Model (TAM) untuk Menganalisis Penerimaan terhadap Sistem Informasi di Perpustakaan M Informasi Perpustakaan. *Iqra: Jurnal Perpustakaan dan Informasi, 9, 4-5.* Hämtat från [www.neliti.com](http://www.neliti.com)
- Habib, M. P., & Prasetyawan, Y. Y. (2016). Analisis Pemanfaatan Aplikasi Umslibrary Berbasis Android di Perpustakaan Universitas Muhammadiyah Surakarta. Hämtat från [www.neliti.com](http://www.neliti.com): <https://www.neliti.com/id/publications/209188/>
- Indonesia, P. N. (2007). Undang-Undang Republik Indonesia Nomor 43 Tahun 2007 Tentang Perpustakaan.
- Kotler, P., & Armstrong, G. (2014). *Prinsip-Prinsip Pemasaran* (12 uppl.). Jakarta: Erlangga.
- Prasetyo, A. A. (2019). Dampak Era Digital Terhadap Perpustakaan Sebagai Upaya Menarik Generasi Milenial. *Tibannbaru : Jurnal Ilmu Perpustakaan Dan Informasi, 3(2).*
- Purnamayanti, A., & Djunaedi, A. (2014). Pemanfaatan Teknologi Informasi Layanan Mobile Application M-LIBRARY Di Perpustakaan: Studi Kuantitatif Pada Perpustakaan Universitas Gadjah Mada Yogyakarta. Hämtat från <https://etd.repository.ugm.ac.id/penelitian/detail/76556>
- Purwanto, A. D. (den 26 July 2023). *Perpustakaan Digital Sebagai Alternatif Pencarian Informasi.* Hämtat från [www.academia.edu](http://www.academia.edu): [https://www.academia.edu/30546456/Perpustakaan\\_Digital\\_sebagai\\_Alternatif\\_Pencarian\\_Informasi](https://www.academia.edu/30546456/Perpustakaan_Digital_sebagai_Alternatif_Pencarian_Informasi).
- Rizkyana, D., & al., e. (2021). Aspek Kegunaan Dan Kemudahan Pada Penggunaan Aplikasi Candil (Maca Dina Digital Library). *Informatio: Journal of Library and Information Science, 221.* doi:DOI.org (Crossref),
- Suharti. (2019). Perpustakaan Digital Pendukung E-Learning Di Era Disrupsi. *Buletin Perpustakaan Universitas Islam, 2 no.1, 19-30.*

- Surachman, A. (2014). M-Libraries: Menghadirkan Layanan Perpustakaan Berbasis Mobile Technology”, makalah dalam Bimbingan Teknis Teknologi Informasi, Perpustakaan Nasional Republik Indonesia, UPT Perpustakaan Proklamator Bung Karno.
- Tresnawan, A. D. (den 20 Januari 2023). Wawancara terkait SiPINTAR. (A. Sofiyanty, Intervjuare)
- Turban, E., & all, a. (2012). *Turban, E., & at.all. (2012). , International Edition. New Jersey: Pearson Prentice Hall. Electronic Commerce: A Managerial Perspective.*
- Utami, S. P., & Hayurani, H. (2016). Peningkatan Pengetahuan Hiv/Aids Dengan Memanfaatkan Aplikasi Mobile Android. *Ethos (Jurnal Penelitian dan Pengabdian Masyarakat)*, 29-34.