

The Implementation of the Inlislite Application System in Improving the Quality of Digital-Based Services at the Probolinggo City Public Library

Veronica Sri Astuti Nawangsih ^{1*}, Eko Yudianto Yunus ¹, Firmansyah Dwi Prasetyo ¹

¹ Universitas Panca Marga Probolinggo, Indonesia

 veronica@upm.ac.id*

Abstract

This study explores the implementation of the INLISLite application system in enhancing the quality of digital-based services at the Public Library of Probolinggo City and examines the supporting and inhibiting factors influencing its application. Employing a descriptive qualitative approach, data were gathered through in-depth interviews, observations, and documentation, and analyzed using Miles and Huberman's interactive model. The findings reveal that INLISLite has effectively facilitated the transformation of library services toward digitalization, contributing to improved service quality. This improvement is reflected in the indicators of the DeLone & McLean Information Systems Success Model—system reliability, responsiveness, assurance, empathy, and tangible aspects—through features such as cataloging, membership management, circulation, digital guestbooks, OPAC, and reporting tools. However, several challenges persist, including limited IT-skilled personnel, unstable internet connectivity, and suboptimal reporting functionalities. Despite these obstacles, the implementation has been successful, driven by effective communication among librarians, users, and the Department of Communication and Information; the availability of adequate resources; adaptive and responsive staff attitudes; and a robust bureaucratic framework supported by clear standard operating procedures. In line with Edward III's policy implementation theory, the study concludes that INLISLite plays a significant role in the modernization and efficiency of digital library services, although continued improvements in infrastructure and human resource capacity remain necessary.

Keywords: Application System, Inlislite, Public Library, Digital-Based Services

ARTICLE INFO

Article history:

Received
February 03,
2025
Revised
March 19, 2025
Accepted
April 30, 2025

Published by

ISSN

Website

This is an open access article under the CC BY SA license

CV. Creative Tugu Pena

2774-4299

<https://attractivejournal.com/index.php/bse/>

<https://creativecommons.org/licenses/by-sa/4.0/>



INTRODUCTION

The use of digital technology in libraries has changed systems and services, allowing users to access digital technology quickly and easily. This change requires library managers to provide technology electronically through various media, so that technology becomes a necessity that has a positive impact. In addition, libraries are now able to automate user management and service activities, which

makes library modernization important to implement without requiring large costs. By utilizing library automation components according to Hartono in (Sari et al., 2023) including hardware (*hardware*) is a component of a technology system that can be seen, touched, and used in the development of library automation, with its supporting components. like: *computer, barcode scanner, printer* and others, as for the software (*software*) is a process or method of interaction between humans and computers that functions as a component that is not directly visible, with supporting components such as application programs that will be installed on a computer, as well as data storage devices (*storage*) with the existence of a collection of information that can provide information related to facts, and there is a network on the computer system to carry out data communication between one and another, and the library can automate various management and user activities. (*user*).

In the past, libraries as information providers relied on manual processes, but now they are slowly being helped by technological innovations in managing and presenting information. This technology supports the integration of activities, expands library networks, and eliminates repetitive work, so that librarians can focus on library development. This has an impact on increasing the quantity and quality of performance (Anindya & Wicaksono, 2021).

The use of this technology will also strengthen the image of the library and improve the user experience in using the service. Excellent service in a library can be interpreted as a service that not only focuses on fulfilling the basic needs of users, but also provides a better experience, where the quality of service (*service quality*) is the main key in attracting and retaining users (Sopa Rosa Lubis et al., 2024). In this context, the Probolinggo City Public Library is committed to providing optimal services by meeting service standards, providing supporting facilities, and adapting to the needs of users and this ever-evolving technology. It is also no exception that there are several fields that support each other to provide the best service, including the field of information services and the field of library material processing. The diversity of these fields works together to ensure sustainable and quality services.

Based on the researcher's initial observations, the Probolinggo City Public Library has implemented a library application system called *INLISlite*. This is to support its operations. *INLISlite* is a library application system that is integrated with each other and supports various operational functions, services and library management facilities, such as library materials processing (acquisition and catalog), membership management, borrowing and return services (circulation), guest book management, OPAC (*Online Public Access Catalogue*), and report making. This is the basis for making good library managerial decisions, so that the goals are achieved optimally through the use of quality systems, services, and human resources, which will then improve results in an integrated and integrated manner. (Perpustakaan et al., 2021). This application is also a development of the library automation program issued by the National Library of Indonesia since 2011, along with the distribution of server devices to district/city public libraries throughout Indonesia, specifically at the Probolinggo City Public Library.

Initially, the Probolinggo City Public Library used *software* LINSPro automation (*Library Information System*) which is a paid library automation

software developed by *Libtech-Innovation*, which is designed to help libraries manage and automate various administrative processes and library services. This system also includes various important features, such as managing collection catalogs, borrowing and returning books, member tracking, and reporting and data analysis. One of the main features *LINSPro* is a catalog management that allows libraries to organize various types of collections more efficiently, as well as an automatic circulation system that facilitates the recording of borrowing and returning collections. In addition, *LINSPro* is also equipped with a membership management system that helps librarians track member data and borrowing history. However, along with the development of technology and the need for libraries to reduce operational costs, many libraries, especially the Probolinggo City Public Library, have switched from *LINSPro* to use *INLISlite (Integrated Library System)*.

One of the main reasons for this shift is cost, as *INLISlite* is free software (*freeware*) and a light version provided by the National Library of the Republic of Indonesia, while *LINSPro* requires a license fee. The existence of *INLIS Lite* This is able to adapt to technological developments through the application of IT in the library sector. In addition, direct technical support from the National Library for updates and training makes *INLISlite* easier to manage, without requiring additional costs. *INLISlite* also offers integration with the national library network, allowing patrons to access collections from multiple connected libraries, and increasing the accessibility of information.

The ease of use features and simple interface make *INLISlite* more suitable for small to medium libraries that need an efficient solution without complicated technical training. In addition, *INLISlite* has been adjusted to national standards in library management, making it the right choice to ensure such conformity and library management in Indonesia. *INLISlite (Integrated Library System)* version 3 since 2018 until now, which means that in this version the application interface has been updated to be more user-friendly and easy to operate, this version has started to provide access *online*, allows users to browse the library catalog online, and features for reporting circulation and membership statistics are also added to assist libraries in data management and analysis. This is based on the Decree of the Head of the National Library of Indonesia in 2017 requiring all Library and Archives Services at the Provincial, Regency, and City levels in Indonesia to switch to using *INLIS Lite (Integrated Library System)* as a library automation system. With this policy, librarians at the Probolinggo City Public Library utilize various features *INLISlite* according to the task, including processing library materials (acquisition and cataloging), membership management, borrowing and return services (circulation), guest book management, OPAC (*Online Public Access Catalogue*), and report creation. By utilizing these various modules, *INLIS Lite* help improve the efficiency of library management and service quality, support the creation of a modern and integrated library system (Devianty, 2024).

In addition to libraries, information technology is now an important factor in various sectors in Indonesia, which continues to develop digital-based services. This change prioritizes efficiency and effectiveness, shifting work from being based on physical strength to intelligence and thinking skills. As a developing country, Indonesia is experiencing rapid progress in the field of information technology that

is changing people's mindsets and influencing global life.(Dewi et al., 2021). This rapid development shows that information technology has become an important factor in supporting the growth of various sectors, including libraries that are now continuing to develop digital-based services. Without automation systems and digital services, libraries find it difficult to meet the needs of the community who prioritize ease and speed of access to information. This condition can reduce the quality of service and reduce public interest in using library facilities. Therefore, it is important to conduct research on the application of technology in the field of libraries or digital library services to find out whether the technology applied can follow or meet user needs.

Previous studies include those conducted by Nailul Muna (2022). research entitled "Automation-Based Library Management at the Library and Archives Service of Demak Regency". This study uses a qualitative descriptive method to evaluate library management using an automation system at the Library and Archives Service of Demak Regency. Based on the results of the study, the implementation of automation increases efficiency in library management, although there are still several obstacles related to technical aspects and staff training that need to be improved to maximize the existing system. Intania Arver (2022) conducted a study entitled "Analysis of Library Services at the Riau Province Library and Archives Service". This study aims to evaluate the quality of library services at the Riau Province Library and Archives Service. The results of the study indicate that library services have had a positive impact on users, although there are several aspects that require improvement, such as resource management and the use of technology to improve services.

Furthermore, Tegar M. Husni (2022) conducted research with the title "The Impact of Using Applications *Inlislite* Towards Progress Library Services at the Library and Archives Service of Southeast Aceh Regency". This study uses a descriptive quantitative method to measure and describe the influence of the use of the application *INLIS Lite* on the quality of library services. Based on the research results, the use of the application *INLIS Lite* has a significant influence of 62.6% on improving the quality of library services, indicating a substantial contribution to advancing services in the library.

In addition, Khoirun Nisa (2023) conducted a study entitled "The Role of Library Experts in Improving Library Services by Using *INLISlite* at the Library and Archives Service of Lubuk Linggau City". This study uses a descriptive method with a qualitative approach to evaluate the role of library experts in maximizing the use of applications *INLISlite* to improve the quality of services in the library. However, the research results show that librarian expertise has a significant influence on optimizing the application *INLISlite*, which has an impact on increasing the effectiveness and efficiency of services in the library. In addition, Enggi Ainun Nabilla (2024) researched "Implementation of the Program *INLISlite* at the Jember Regency Library and Archives Service". This study aims to analyze the implementation of the program *INLISlite* in improving library services in Jember Regency. The results of the study showed that the implementation of *INLISlite* has had a positive impact on collection management and information access, as well as increasing interaction between users and librarians. In addition, this study also identified challenges faced in the implementation process, such as the need for

staff training and adequate technological infrastructure. These findings emphasize the importance of managerial support and ongoing training to maximize the potential *INLISlite* in improving the quality of library services in the area.

The success of a library can be measured through the optimization of its use by users. The legal basis that supports this is the Republic of Indonesia Law Number 43 of 2007 concerning Libraries, which regulates the obligation of libraries to provide collections according to national standards. This is stated in Chapter V Article 14 Paragraph 3, which requires libraries to meet the needs of users with quality collections. In addition, Chapter X Article 43 regulates the importance of utilizing information and communication technology in improving library services.

Presidential Regulation Number 95 of 2018 concerning Electronic-Based Government Systems regulates the application of technology in government systems, including libraries, to optimize electronic-based services. This regulation supports the implementation of a government system that is integrated with digital library services. In addition, Government Regulation Number 24 of 2014 concerning Library Management regulates the development of libraries based on information and communication technology. Article 19 Paragraphs (1) and (2) emphasize the need to develop a library service system that is integrated nationally and globally, in order to improve the accessibility and quality of library services at the community level. Overall, these regulations form the legal basis governing libraries in the context of the use of information technology to improve the quality of services and management of information resources.

The quality of library services is important to maximize the use of resources by users. According to Usmara in his research (Cesariana et al., 2022) explains that service quality can be understood as a statement regarding behavior and commitment that is formed from the results of considerations between hopes (expectations) and actual performance achieved. Through the application system *INLIS Lite* This is also expected to provide response time (*response time*), system reliability (*system reliability*), data accuracy (*data accuracy*), the use of system features and functions (*usefulness of system features and functions*), and ease of use (*ease of use*). According to Jogiyanto in his research, the quality of service (Dwijati, 2018) is the quality issued or produced by the application system *INLIS Lite* "In order for information to be useful, it must be *Reliability* (reliability), *Responsiveness* (responsiveness), *Assurance* (guarantee), *Empathy* (empathy), *Tangibles* (direct evidence)".

In an effort to improve the quality of service at the Probolinggo City Public Library, this study uses Edwards III Theory as an analytical framework. This theory provides an in-depth understanding of the key factors that play an important role in the successful implementation of public policies, including communication, resources, disposition, and bureaucratic structure. Effective communication between managers and users is vital to identify the needs of library users accurately. Adequate resources, both in terms of technology and human resources, are the main drivers of the smooth operation of the system. This disposition emphasizes support from management and stakeholders to strengthen policy implementation. Meanwhile, the right Bureaucratic Structure, active

participation of users in providing feedback plays an important role in the continuous improvement of the services provided.

Based on the background description above, the researcher is interested in knowing and studying in more depth how the Implementation of Application System *INLIS Lite* in Improving the Quality of Digital-Based Services at the Probolinggo City Public Library. Considering that in carrying out library materials processing activities (acquisition and cataloging), membership management, borrowing and return services (circulation), guest book management, OPAC (*Online Public Access Catalogue*), as well as the creation of reports with the application of the system *INLIS Lite* This is at the Probolinggo City Public Library, and in this case it is used to improve the quality of digital-based library services.

METHOD

This study uses a qualitative approach with a descriptive method which aims to describe in depth the implementation of the application system *INLIS Lite* in improving the quality of digital-based services at the Probolinggo City Public Library, as well as Describe the inhibiting and supporting factors for implementation Application System *INLIS Lite* in Improving the Quality of Digital-Based Services in the Public Library of Probolinggo City, with research locations chosen intentionally (*purposive*) because of the relevance of the research object, while the research informants consisted of 1 Head of Library Division, 3 Library Material Management Staff, 5 Service Staff, and 10 library users who were selected based on their direct involvement in the management and utilization of the application system *INLIS Lite*. In this case, data collection techniques were carried out through in-depth interviews to gather information from informants' experiences, direct observation of library service activities using the application system *INLIS Lite*, as well as documentation from relevant archives and reports, and all data obtained were analyzed using the interactive analysis technique of the Miles and Huberman model which includes the process of data reduction, data presentation, and drawing conclusions in a narrative and descriptive manner.

RESULT AND DISCUSSION

The Implementation of Application System *inlis Lite* in Improving the Quality of Digital-Based Services in The Public Library of Probolinggo City

Figure 1. Application Initial Menu Display *INLIS Lite*



a. Application System Implementation *INLIS LITE*

System implementation *INLIS Lite* in the Public Library of Probolinggo City has been running quite well. This is supported by various factors, including:

1) Communication

Communication is a critical factor in the success of policy implementation because it ensures that all parties understand the objectives and reduces the potential for errors. In the implementation *INLIS Lite* in the Probolinggo City Public Library, effective communication occurs between library staff, the Communication and Information Service, and users. Technical constraints are immediately reported and coordinated through an online group without waiting for a formal meeting, so that responses can be given quickly and accurately. In addition, communication also supports increasing staff understanding through regular evaluation meetings and sharing experiences. User participation as input providers also improves service quality. With structured communication and efficient coordination, managerial decision-making becomes more precise, the system runs optimally, and the quality of digital library services increases significantly.

2) Resource

a) Human Resources (Staff)

Implementation success *INLIS Lite* in the Probolinggo City Public Library is highly dependent on the quality and quantity of human resources. Quality includes technical competence, professionalism, and dedication of staff in managing digital services, while quantity relates to the adequacy of personnel to meet user needs. Staff acquire competence through technical training, independent learning from official sources of the National Library, and regular meetings *INLIS Lite* East Java level as a forum for sharing obstacles and solutions. Increasing human resource capacity is a major factor in optimizing services and the sustainability of implementing a digital library system.

b) Non-Human Resources (facilities or infrastructure)

Apart from human resources, the availability of adequate facilities and infrastructure is a crucial factor in successful implementation *INLIS Lite* at the Probolinggo City Public Library. According to Edward III in Suaib (2016), policies will not run optimally without the support of supporting facilities, even though the implementers have clear competence, understanding of tasks, and authority. Infrastructure support such as hardware (computers, printers), stable internet networks, software, and adequate maintenance budgets are the main requirements for the system to run effectively and improve the quality of digital library services.

3) Disposition

The disposition of policy implementers is a crucial factor in public implementation, which depends not only on the understanding of the task, but also on the commitment and attitude towards the policy itself. According to Edward III in Suaib (2016), a positive attitude of implementers encourages active involvement in achieving policy objectives, while a negative attitude is actually an obstacle. In the context of implementation *INLIS Lite* in the Public Library of Probolinggo City, the staff disposition shows a positive response, enthusiasm, and high adaptation to

the system. They understand the benefits of the system in improving service efficiency, including in aspects of library material processing, membership, circulation, visitor recording, OPAC, and report generation. Technical constraints such as server or network disruptions are handled through active coordination with the Communication and Informatics Service (Kominfo), reflecting a strong commitment to maintaining the smooth operation of digital library services.

4) Bureaucratic Structure

Bureaucratic structure in implementation *INLIS Lite* in the Public Library of Probolinggo City has been running in an organized manner, marked by a clear division of tasks between staff and the implementation of SOPs that serve as guidelines for implementation. Active coordination with the Communication and Information Service (Kominfo) strengthens the response to technical disruptions, while the mobile service policy and digitalization of registration and book lending indicate institutional support for expanding service access. This is in line with Edward III's view in Suaib (2016) that an orderly and non-fragmented bureaucratic structure is essential for policies to be implemented effectively.

b. Quality of Service

Quality of service in this context refers to the quality of service provided by the application system *INLIS Lite* for its users. To obtain relevant data related to the implementation *INLIS Lite* in improving the quality of digital-based services at the Probolinggo City Public Library, indicators are needed that can measure the level of success of these services. These indicators act as measuring tools to assess the effectiveness and efficiency of the system in meeting user needs.

1) *Reliability* (Reliability)

a) How to Operate *INLIS LITE*

The ability to provide fast, accurate, consistent and satisfactory service is an important aspect *INLIS Lite* as a data processing and service system to support work efficiency and effectiveness, as expressed by the First Expert Librarian for Public Library Services in Probolinggo City, that *INLIS Lite* has high reliability in supporting digital library services through accelerated processing of library materials, data automation, and barcode scanner-based borrowing and returning transactions to minimize errors, with monitoring features *real-time*, visitor recaps, and a backup system that ensures data security, making *INLIS Lite* superior to *LINS PRO* in stability, accuracy, and ease of use.

b) Utilization of Features *INLIS LITE*

The results of the study show that the features *INLIS Lite (Integrated Library System)* is utilized by library service staff, library materials management staff, and users at the Probolinggo City Public Library with various functions, namely as follows:

(1) Library Materials Processing Features

Utilization of library materials processing features in the system *INLIS Lite* proven to increase work efficiency at the Probolinggo City Public Library. The acquisition, cataloging, and inventory processes now only take 30–45 minutes, compared to manual methods that can take two hours. This system supports automatic label printing, call numbering, and systematic collection recording, as well as minimizing input errors. The combination of digital systems and manual

recording is implemented to maintain service continuity, especially when technical disruptions occur such as networks or servers.

(2) Membership Management Features

Membership management features in *INLIS Lite* in the Probolinggo City Public Library effectively accelerates the registration of new members. This stable and efficient system uses NIK to prevent data duplication, with simple requirements such as a photocopy of the Family Card and a formal photo. Membership cards can be printed immediately after systematic document verification. Responsive staff and adequate facilities support smooth service, so that users feel comfortable with practical and efficient procedures.

(3) Circulation Features

Utilization of circulation features in the system *INLIS Lite* improve the efficiency of book lending and returning services at the Probolinggo City Public Library. This system facilitates access to borrowing history, monitoring collection status, and recording late payments without fines. Support for RFID-based lending and systematic recording of violations accelerates transactions and reduces manual errors. Interviews show that this feature provides easy access to member data and previous transactions, and strengthens service reliability compared to manual methods.

(4) Guest Book Feature

Utilization of the guest book feature in *INLIS Lite* improve the efficiency of visitor attendance recording through automatic registration based on membership numbers, making it faster and more accurate than manual methods. The system runs optimally when the network is stable, while manual recording is still prepared as a backup when disruptions occur. Users consider the registration process fast and practical, although recording non-member visitors requires additional input. Limitations also arise for users who are less familiar with technology, such as children and the elderly. Overall, this system supports the management of attendance, membership, and library transactions efficiently and reliably.

(5) OPAC Features (*Online Public Access Catalog*)

OPAC system in *INLIS Lite* effectively facilitate independent library material searches, both in the library and online. However, delays in data updates cause book status discrepancies and difficulties for users in understanding classification codes. Therefore, regular data updates and user assistance are needed for the OPAC to function optimally. Interviews showed that the library has routinely conducted physical checks, data updates, and assistance. Recommendations for development include accelerating data updates, more user-friendly interfaces *user-friendly*, and easy-to-understand classification code guides.

(6) Report Generation Features

Utilization of reporting features in the system *INLIS Lite* demonstrates high reliability in the process of preparing daily, monthly, and annual reports. This system presents data automatically and in real time, making it easier for library staff to prepare reports quickly while reducing the potential for errors that usually occur in manual processes. The automatic backup feature also ensures that data remains available even in the event of technical disruptions, thus supporting the

smooth management of library administration and the preparation of official reports for related agencies. This significantly increases the efficiency and accuracy of library data management.

2) *Responsive*(Responsiveness)

a) How to Operate *INLIS LITE*

The ability and readiness of employees to provide fast and responsive service reflects their commitment to meeting user needs, with the main indicators being the willingness and skills in operating *INLIS Lite* to improve work efficiency, as explained in the results of an interview with Mrs. Novi Isnaini, S.I.Pust., that the responsiveness of library services is highly dependent on the ability of employees to operate the system and the stability of the internet network, where even though the system is able to respond to requests quickly, network limitations are still an obstacle that affects the comfort and smoothness of service access for users.

b) Utilization of Features *INLIS LITE*

The results of the study show that the features *INLIS Lite (Integrated Library System)* is utilized by library service staff, library materials management staff, and users at the Probolinggo City Public Library with various functions, namely as follows:

(1) Library Materials Processing Features

In processing library materials, employee responses to use *INLIS Lite* proven effective in supporting the smooth operation of the library. Staff who have received training are able to respond to user needs quickly and accurately, and immediately take corrective action when faced with technical obstacles. This application supports the processing process from acquisition to label printing with good responsiveness, where the processing team is quick to report problems and find alternative solutions to maintain smooth service. The ease of use of the application also allows staff to provide efficient and responsive service, so that library material processing operations run smoothly even though there are technical obstacles.

(2) Membership Management Features

Application utilization *INLIS Lite* In managing library membership, it shows high responsiveness of service staff. Officers provide fast, efficient and responsive service to new member registration constraints, with registration facilities via *WhatsApp* which facilitates access. Users appreciate the smooth procedures and fast creation of membership cards. Technical or administrative problems are resolved promptly without disrupting the user experience. Although the service is adequate, the friendliness and interaction of the staff need to be improved to make the atmosphere more comfortable. Overall, the service *INLIS Lite* continue to develop and be relevant in facing the challenges of the digital era.

(3) Circulation Features

Utilization of circulation features *INLIS Lite* shows excellent staff responsiveness in serving users. The process of borrowing, returning, and extending books is efficient with simple procedures and fast times. Staff actively provide information, reminders, and confirmation of extensions through *WhatsApp*, making it easier for users without having to come in person. The staff's quick response to technical problems and queues, as well as alternative solutions, maintains smooth service. The staff's polite attitude and clear explanations

increase user comfort. This circulation service is responsive and adaptive in utilizing technology to meet user needs.

(4) Guest Book Feature

Utilization of the guest book feature in *INLIS Lite* facilitate digital recording of visitor data. Although there were technical constraints such as errors in inputting non-member data and power outages, the library staff was responsive by providing alternative solutions, such as recording via *Google Form*. Data from the form is then integrated into the main system to maintain accuracy *database*. The staff's quick and adaptive actions ensured smooth service and reduced the impact of technical disruptions on the visitor registration process.

(5) OPAC Features (*Online Public Access Catalog*)

Utilization of features *Online Public Access Catalog* (OPAC) in the system *INLIS Lite* at the Probolinggo City Public Library shows the level of *responsiveness* good. Most users feel helped by the ease of accessing information about the availability and location of books independently through the OPAC. However, when facing obstacles, such as difficulty understanding the system or unclear collection information, users still need help from librarians. The responsiveness of staff in providing guidance or solutions is an important aspect that complements this digital service. The support of responsive officers is also an added value in increasing the efficiency and convenience of users in searching for library materials.

6) Report Generation Features

Utilization of report creation features in the system *INLIS Lite* support the efficiency of data recapitulation of borrowing, returning, membership, visits, and collections. Although there are occasional technical obstacles such as errors in circulation data recapitulation or catalog recording, library staff respond quickly by conducting manual verification or system updates. This step ensures that library users' access to collection information remains smooth and the service process runs optimally.

3) Assurance (Guarantee)

a) How to Operate *INLIS LITE*

This indicator includes the knowledge, competence, politeness and trust of staff in fulfilling service promises free from risk and doubt and plays an important role in processing library materials and library services through the system *INLIS Lite* to make it easier for librarians to access information and fulfill their needs, as explained in the interview results that the system *INLIS Lite* reflect indicators *assurance* through ease of access, service reliability, and guaranteed data protection, with complete features and an easy-to-understand interface that supports staff in providing accurate and reliable services, so that users can obtain information and library collections more effectively.

b) Utilization of Features *INLIS LITE*

The results of the study show that the features *INLIS Lite (Integrated Library System)* is utilized by library service staff, library materials management staff, and users at the Probolinggo City Public Library with various functions, namely as follows:

(1) Library Materials Processing Features

To ensure the system *INLIS Lite* remain optimally accessible to both users and staff, the Probolinggo City Public Library implements various steps in the aspects *assurance*, such as regular system monitoring, application updates, and cooperation with the Communication and Informatics Service (Kominfo). This system supports the process of processing library materials through acquisition, cataloging, and arrangement of collections that are integrated digitally. In addition, the use of trusted servers with routine maintenance is carried out to ensure data security and service stability. This effort shows the institution's commitment to maintaining the quality and sustainability of digital-based services.

(2) Membership Management Features

Membership management features in the system *INLIS Lite* designed to provide convenience, security, and efficiency for users in the registration and renewal process. This system is equipped with a strict data verification mechanism and encrypted storage of personal information, thus ensuring the confidentiality of user data. The registration process is carried out in a structured manner based on official identity documents, while membership renewal runs automatically according to library policy. These steps reflect quality assurance (*assurance*) in digital services, as well as building user trust in a reliable and secure system.

(3) Circulation Features

Internal circulation features *INLIS Lite* improve the efficiency of borrowing, returning, and renewing book services through barcodes and accurate digital recording. Despite technical constraints such as limited computers and internet connections, network maintenance and routine technical support maintain system stability. The implementation of barcodes speeds up administration and improves data accuracy, so that services remain optimal and strengthen user trust in the library's digital system.

(4) Guest Book Feature

Guestbook feature in *INLIS Lite* allows automatic and accurate recording of visits based on user categories such as students, college students, and the general public. Member and non-member data are managed separately with a customized filling mechanism, and the recapitulation results are presented periodically. Security and technical system support maintains data confidentiality and smooth operations, so this feature contributes significantly to the reliability of the library's digital services.

(5) OPAC Features (*Online Public Access Catalog*)

OPAC features on the system *INLIS Lite* facilitates users to access collection information online, both inside and outside the library. Searches can be done using keywords, lists of the latest collections, and the most popular books. Service support *WhatsApp* and book pick-up strengthens remote access, while assistance from librarians ensures inclusiveness of services. From a technical perspective, routine maintenance ensures data security and smooth access, thereby increasing user comfort and trust in the library's digital services.

(6) Report Generation Features

Report generation features in *INLIS Lite* accessed through an online hosted system with technical support from the Communication and Informatics Agency (Kominfo). Routine maintenance and monitoring are carried out to ensure the availability and reliability of services for library staff. This feature makes it easier

for librarians to compile a recapitulation of borrowing, returning, membership, visiting, and collection development data efficiently with the option of filtering data based on a certain period. The security of library user data is a top priority in maintaining the stability and smooth operation of the system, thus supporting more accurate data-based decision making.

4) *Empathy* (Empathy)

a) How to Operate *INLIS LITE*

Empathy (*empathy*) measures the willingness of employees to build good relationships, communicate effectively, provide personal attention, and understand customer needs, as well as how well librarians adapt to customer features. *INLIS Lite* which is used, considering *INLIS Lite* In the Library and Archives Service (Dispusip) of Probolinggo City, there are various features such as library materials processing, membership management, circulation, guest books, OPAC, and reports whose suitability depends on the abilities and needs of the users, as explained in an interview with the First Expert Librarian, that the empathy of librarians is very important, especially in helping users who have difficulty using features such as guest books and OPAC, by providing direct assistance so that services can be accessed more efficiently and comfortably.

b) Utilization of Features *INLIS LITE*

The results of the study show that the features *INLIS Lite* (*Integrated Library System*) is utilized by library service staff, library materials management staff, and users at the Probolinggo City Public Library with various functions, namely as follows:

(1) Library Materials Processing Features

The accuracy of the description of library materials in *INLIS Lite* is a priority to ensure that the information obtained by users is in accordance with their needs. Librarians compile collection metadata based on national standards and conduct repeated checks to minimize input errors. This process includes data verification, classification, and validation by specifically responsible officers. This approach increases the efficiency of collection processing and supports easy access through OPAC, which allows for fast and precise information searches based on various criteria.

(2) Membership Management Features

The membership process at the Probolinggo City Public Library went smoothly thanks to communicative and empathetic staff in explaining the registration procedure, data verification, and printing membership cards. An online registration option is also available to overcome administrative obstacles. This approach increases the efficiency and convenience of the service. The results of the library user's responses showed that the procedure was easy to understand, the service was fast, and the staff was responsive in providing solutions.

(3) Circulation Features

Utilization of circulation features *INLIS Lite* in the Probolinggo City Public Library is effective with staff providing clear explanations about borrowing procedures, returns, deadlines, extensions, and consequences of delays. This service makes it easier for users to manage their borrowing status efficiently. However, improving visual media such as posters or guides is needed to clarify the terms of service. Staff also enforce discipline with sanctions prohibiting borrowing

for delays, maintaining access to collections for other users. Overall, staff provide good circulation services, and the development of visual information media is expected to improve user understanding and compliance.

(4) Guest Book Feature

The use of the digital Guest Book feature at the Probolinggo City Public Library is considered efficient and easy to use, both by members and non-members. This system supports fast and accurate visit recording, and simplifies visitor data management. The presence of permanent staff is important, especially for users who are less familiar with technology. Overall, this feature improves the efficiency of visit administration and provides useful data for evaluating the quality of library services.

(5) OPAC Features (*Online Public Access Catalog*)

OPAC features on *INLIS Lite* at the Probolinggo City Public Library makes it easy for users to find information quickly and efficiently. Most users use this feature independently, with staff always ready to help when needed. Obstacles such as incomplete collection data and less smooth access sometimes occur. Users appreciate the ease and practicality of OPAC, although regular collection data updates are needed for accuracy. Responsive library staff provide guidance when users experience difficulties, so they are more confident in using the system. Feature development and data updates are expected to improve search services.

(6) Report Generation Features

Reporting features *INLIS Lite* support library management by recording collections and borrowing data *real-time*. The reports generated help librarians analyze data and make service decisions. Although disrupted by a hacking incident on the Diskominfo server, library staff remained responsive and kept service access running. Interview results showed that the reports were able to present complete data on collections, visitors, and borrowing. However, system stability and internet connection remain key factors for this feature to function optimally and support service efficiency.

5) *Tangibles* (Direct Evidence)

a) How to Operate *INLIS LITE*

Direct evidence (*tangible*) in *INLIS Lite* covers aspects *software, hardware, And brainware* which is supported by library facilities and infrastructure to improve the quality of service, where these three aspects support each other in operating the system optimally, as explained in the interview results that the operation *INLIS Lite* at the Probolinggo City Public Library has been running well thanks to adequate facilities and an online-based system that allows flexible access from various devices, with data security through librarian authentication, ease of searching collections through the OPAC feature, and automated reporting features to facilitate the preparation of recapitulations quickly and accurately, so that the entire system supports more effective and modern library management and services.

b) Utilization of Features *INLIS LITE*

The results of the study show that the features *INLIS Lite (Integrated Library System)* is utilized by library service staff, library materials management staff, and users at the Probolinggo City Public Library with various functions, namely as follows:

(1) Library Materials Processing Features

Utilization of library material processing features on *INLIS Lite* considered effective, supported by generally adequate facilities and infrastructure. The available hardware supports the digitization of collections, although there are still obstacles such as network disruptions, differences in specifications between fields, and power outages. Some staff still use personal devices, but this does not significantly hinder performance. Therefore, infrastructure maintenance, improving network quality, and providing uniform devices are important to maintain the efficiency and sustainability of digital processing services.

(2) Membership Management Features

Membership management features *INLIS Lite* has been utilized for the member registration process, although it is still combined with a manual form. This procedure is considered quite effective by the staff, and the membership card contains basic information such as name, membership number, and photo. However, from a visual perspective, users proposed design improvements to make it look more aesthetic, professional, and informative, including layout, color, and the addition of information such as address. This indicates the need to improve the visual quality of the card to support the image of a modern library service.

(3) Circulation Features

In-app circulation features *INLIS Lite* facilitate the process of borrowing and returning books through an organized and easy-to-operate interface. This system supports structured collection management and allows users to monitor book availability in real time. *real-time*. Interview results show that this feature has contributed significantly to improving the efficiency of library services and remaining inclusive for users who are less familiar with technology.

(4) Guest Book Feature

Guestbook feature in *INLIS Lite* facilitate the process of recording and analyzing visitor data, especially in compiling reports. This system groups visitors into three main categories, namely members, non-members, and groups, and provides filters based on membership types such as general, students, and students. This feature facilitates reporting for the member category because it can be combined with the gender variable. However, for the non-member category, reporting based on gender still requires manual filtering because the system does not provide this variable automatically.

(5) OPAC Features (*Online Public Access Catalog*)

OPAC features in *INLIS Lite* makes it easier for librarians to search and verify book collections through informative displays and easy-to-understand navigation. Most respondents considered this system fast and *user-friendly*, although some suggested improvements to the visual appearance. Criticisms included the design being considered too simple, as well as the need for improvements to typography, icons, and colors. This indicates the need to develop the OPAC interface to be more modern and support user convenience in accessing collection information.

(6) Report Generation Features

Report generation features in *INLIS Lite* considered quite helpful because it presents a simple and easy-to-understand display for library staff. Although the system has provided an automatic report format, in practice, staff still make manual adjustments to meet more specific reporting needs according to the

requests of related parties. This shows that the system supports basic efficiency in the reporting process, but additional flexibility is still needed from users to produce more comprehensive and relevant reports.

Inhibiting And Supporting Factors In The Implementation Of The Application System *inlis Lite* in Improving The Quality Of Digital-Based Services In The Public Library Of Probolinggo City

a. Inhibiting Factors in Implementing Application Systems *INLIS Lite* in Improving the Quality of Digital-Based Services at the Probolinggo City Public Library Application System Implementation *INLIS LITE*

Inhibiting factors are things that become obstacles so that implementation does not run optimally. To identify these factors in the implementation of the application system *INLIS Lite* in improving the quality of digital services, researchers conducted in-depth interviews based on four indicators of policy implementation, namely communication, resources, disposition, and bureaucratic structure. Based on the results of the interview with the Head of the Library Division, it was found that the main obstacles came from the aspects of resources and disposition of officers, which directly contributed to the suboptimal digital services, especially in the effectiveness of the use of the system *INLIS Lite*.

1) Resource

System implementation *INLIS Lite* still facing a number of obstacles in terms of resources. In terms of human resources, the unavailability of internal technical personnel causes the handling of technical obstacles to be completely dependent on the Communication and Information Service, which has an impact on the slow response to system disruptions. On the other hand, limited non-human resources such as unstable internet connections due to late payments and frequent power outages without backup power support (such as UPS or generators) also hamper service operations. These obstacles have a direct impact on the cessation of lending, returning, and accessing digital collections services, all of which depend on the system *INLIS Lite*.

2) Disposition

In the implementation process *INLIS Lite*, disposition factor becomes one of the important aspects that also influences the smoothness of digital services. Problems arise when the quality of attitudes and responses of officers do not fully reflect excellent service, especially in terms of communication with users, as explained in the interview results that the disposition of officers is one of the obstacles to implementation, where the lack of friendliness, responsiveness, and effective communication has an impact on decreasing user satisfaction and has the potential to hinder the optimization of the use of digital library services.

Quality of Service

Application implementation *INLIS Lite* in the Public Library of Probolinggo City faced technical constraints such as system disruptions, slow responses, and unstable data synchronization when there are many users. Supporting infrastructure is also limited, without a generator or UPS, causing services to stop when the power goes out. The current reporting feature is less informative because it only displays simple table data, making it difficult to evaluate services. Therefore,

the development of interactive reporting features (graphs/diagrams) and increasing system stability are needed to support the optimization of digital library services.

Application implementation *INLIS Lite* influenced by five indicators of service quality: *reliability, responsiveness, assurance, empathy, dan tangibles*. The main obstacle also lies in the aspect *tangible*, especially unstable internet network infrastructure. Network instability hampers system access, slows down library material processing, and *synchronization* data with *server* center. As a result, collection and transaction information is not always up to date *real-time*, reducing service effectiveness. Librarians emphasized the importance of network stability to support catalog searches, borrowing, and returning books so that library digital services run optimally.

b. Supporting Factors for Application System Implementation *INLIS Lite* in Improving the Quality of Digital-Based Services at the Probolinggo City Public Library
Application System Implementation *INLIS Lite*

Supporting factors are efforts or strategies undertaken to overcome various obstacles, so that implementation can run more optimally and effectively. In order to identify supporting factors for the implementation of the application system *INLIS Lite* in improving the quality of digital services, researchers conducted in-depth interviews based on four indicators of policy implementation, namely communication, resources, disposition, and bureaucratic structure. Based on the results of interviews with the Head of the Library Division, it was found that efforts to increase resource capacity and improve the disposition of officers were strategic steps in supporting the smooth running of digital services, especially in optimizing the use of the system. *INLIS Lite*.

1) Resource

To overcome obstacles in the implementation of application systems *INLIS Lite*, a supporting strategy is needed to ensure optimal service continuity. The main factors that support operational success include internet network stability, maintained electricity supply, and fast and precise technical support. Adequate infrastructure and responsive technical personnel are the main determinants in maintaining smooth system access, preventing disruptions, and accelerating recovery when obstacles occur. This condition is very important to ensure that digital library services in Probolinggo City run effectively and sustainably.

2) Disposition

In the face of technical obstacles to system implementation *INLIS Lite*, the disposition of officers, such as friendly, responsive, and professional attitudes, are key factors in creating quality services. Based on interviews, the attitude of officers has been proven to increase user satisfaction and system utilization. Therefore, ongoing training in information technology and public services is needed to support the successful implementation of the system and meet the needs of users.

Quality of Service

To support the implementation *INLIS Lite*, Probolinggo City Public Library emphasizes on system reliability and adequate infrastructure. System stability when used by many users, *synchronization* data *real-time*, stable internet network, and backup power support are the keys to the sustainability of digital services. The development of interactive reporting features based on graphs, diagrams, and data also facilitates evaluation and decision making. Regular system updates reflect

ongoing efforts to adapt technology to the needs of users. With a combination of reliable systems, strong infrastructure, and adaptive reporting features, *INLIS Lite* support the digital transformation of libraries effectively and sustainably.

Implementation success *INLIS Lite* in the Probolinggo City Public Library is greatly influenced by a reliable internet network. A stable connection supports smooth catalog searches, borrowing, returning books, and data synchronization. *real-time*. Efforts such as increasing *bandwidth*, use *fiber optic*, and system *dual Wi-Fi* become an important strategy in maintaining the quality of digital library services optimally.

CONCLUSION

The Implementation of application system *INLIS Lite* This is measured or analyzed with four indicators in George C. Edward III's theory, namely effective communication, availability of adequate human and non-human resources, appropriate, positive and adaptive disposition of implementers, and a bureaucratic structure that already has SOPs that can be used as guidelines and are organized. Implementation of the Application System *INLIS Lite* has also been optimally demonstrated through the optimization of the use of various main features such as library material processing, membership management, circulation, digital guest books, OPAC, and report generation. Furthermore, based on the DeLone and McLean service quality model, service improvements are also reflected in the fulfillment of five main indicators, namely *reliability*, *responsiveness*, *assurance*, *empathy*, dan *tangibles*. On the indicator *reliability*, system *INLIS Lite* demonstrate reliability in providing consistent, fast and accurate services, especially in managing collections, borrowing and returning transactions, and recording visitors online. *real-time* with low risk of error. From the aspect *responsiveness*, *INLIS Lite* able to respond to user needs quickly through efficient information search features such as OPAC, although still dependent on network stability. On the indicator *assurance*, this system provides data security, regular updates, and ease of use that builds user trust in the digital services provided. Meanwhile, *empathy* reflected in the proactive attitude of officers who help users operate the system, especially for librarians who have difficulty using the guest book or catalog search features. Finally, the indicator *tangible* seen from the modern physical and digital infrastructure and application interfaces. *user-friendly*, which supports the improvement of convenience and efficiency of service. This study also highlights the relationship between the operating process and the use of features. *INLIS Lite* as an element of novelty (*novelty*) in the implementation of digital service systems in libraries. Thus, the implementation of the application system *INLIS Lite* can improve the quality of digital-based services at the Probolinggo City Public Library.

System implementation *INLIS Lite* in improving the quality of digital library services cannot be separated from various inhibiting and supporting factors. The inhibiting factors found include limited human resources in the field of information technology, instability of the internet network, and limited reporting features in presenting informative data. Nevertheless, the implementation of the system continues to show success because it is supported by several supporting factors, such as effective cross-agency communication, availability of infrastructure, responsible disposition of implementers, and a bureaucratic structure that supports digitalization policies. Thus, the success of the implementation of the system *INLIS*

Liteis the result of synergy between organizational readiness and the functionality of information systems in supporting digital-based public services.

REFERENCES

- Agus Dwiyanto (2005:141). (20 C.E.). Peningkatan Kualitas Pelayanan publik Melalui CITIZEN'S CHARTER. *Andrew's Disease of the Skin Clinical Dermatology*, 12(April), 45–54.
- Al-Kofahi, M. K., Hassan, H., & Mohamad, R. (2020). Information systems success model: A review of literature. *International Journal of Innovation, Creativity and Change*, 12(10), 104–128.
- Anindya, E. F., & Wicaksono, Moch. F. (2021). Analisis Pemanfaatan Inlislite (Integrated Library System) Di Dinas Kearsipan Dan Perpustakaan Kabupaten Trenggalek. *Shaut Al-Maktabah : Jurnal Perpustakaan, Arsip Dan Dokumentasi*, 13(1), 67–84. <https://doi.org/10.37108/shaut.v13i1.441>
- Anto, R. P., Nur, N., Yusriani, Ardah, F. K., Ayu, J. D., Nurmahdi, A., Apriyeni, B. A. R., Purwanti, Adrianingsih, arita Y., & Putra, M. F. P. (2024). Metode Penelitian Kualitatif: Teori dan Penerapannya. In *Angewandte Chemie International Edition*, 6(11), 951–952. (Vol. 2).
- Cesariana, C., Juliansyah, F., & Fitriyani, R. (2022). Model Keputusan Pembelian Melalui Kepuasan Konsumen Pada Marketplace. *Jurnal Manajemen Pendidikan Dan Ilmu Sosial*, 3(1), 211–224.
- Charismana, D. S., Retnawati, H., & Dhewantoro, H. N. S. (2022). Motivasi Belajar Dan Prestasi Belajar Pada Mata Pelajaran Ppkn Di Indonesia: Kajian Analisis Meta. *Bhineka Tunggal Ika: Kajian Teori Dan Praktik Pendidikan PKN*, 9(2), 99–113. <https://doi.org/10.36706/jbti.v9i2.18333>
- Colarika, S., & Zahro, F. A. (2023). Konsep Dasar Dalam Sistem Informasi Manajemen Dalam Pendidikan. *ASCENT: Al-Bahjah Journal of Islamic Education Management*, 1(2), 51–60. <https://doi.org/10.61553/ascent.v1i2.58>
- Devianty, R. (2024). *Penggunaan database inlislite di dinas*. 2(5), 27–40.
- Dewi, D. C., Utami, V. Y., & Yusuf, S. Y. M. (2021). Jurnal Ranah Publik Indonesia Kontemporer. *Ranah Publik Indonesia Kontemporer*, 1(2), 1–12.
- Dr. Umar Sidiq, M.Ag Dr. Moh. Miftachul Choiri, M. (2019). Metode Penelitian Kualitatif di Bidang Pendidikan. In *Journal of Chemical Information and Modeling* (Vol. 53, Issue 9). [http://repository.iainponorogo.ac.id/484/1/Metode Penelitian Kualitatif Di Bidang Pendidikan.pdf](http://repository.iainponorogo.ac.id/484/1/Metode%20Penelitian%20Kualitatif%20Di%20Bidang%20Pendidikan.pdf)
- Dwijati, S. (2018). Upaya Meningkatkan Kualitas Jasa Layanan Informasi di Perpustakaan (Efforts to Improve the Quality of Information Services in the Library). *Buletin Perpustakaan Universitas Airlangga*, 1(2), 16–20.
- Evander Kaendung, Fanley Pangemanan, G. U. (2021). Implementasi Kebijakan Tentang Rencana Induk Teknologi Informasi dan Komunikasi di Kota Manado. *Dalam Jurnal Governance: Jurusan Ilmu Pemerintahan FISPOL Unsrat*, 1(2), 1–11.
- Jogiyanto, H. M. (2007). Model kesuksesan sistem teknologi informasi. *Yogyakarta: Penerbit Andi*.

- Mohammad Suryawinata, M. S. (2019). Buku Ajar Mata Kuliah Pengembangan Aplikasi Berbasis Web. In *Buku Ajar Mata Kuliah Pengembangan Aplikasi Berbasis Web*. <https://doi.org/10.21070/2019/978-602-5914-81-2>
- Mufiz, A. (2016). Pengertian Dasar Administrasi Publik. *Pengantar Ilmu Administrasi Negara*, 63.
- Peraturan Pemerintah Nomor 24 Tahun 2014 Tentang Pelaksanaan UU Nomor 43 Tahun 2007 Tentang Perpustakaan
- Peraturan Presiden Nomor 95 Tahun 2018 Tentang Sistem Pemerintahan Berbasis Elektronik
- Perpustakaan, P., Kabupaten, D. I., & Paser, P. (2021). 1, 2, 3. 2(11), 1931–1942.
- Sari, K., Islam, U., Raden, N., & Palembang, F. (2023). *Analisis Penggunaan Aplikasi Inlislite Dalam*. 2(2), 105–117.
- Sofia, F. T. J. E. K. (2010). Kualitas Pelayanan Publik Melalui Elektronik Government Di Dinas Kependudukan Dan Catatan Sipil Kota Bitung. *Fernando Takalamingan1Johannis E. Kaawoan2Sofia E. Pangemanan*, 2(2), 1–13.
- Sopa Rosa Lubis, Achiriah Achiriah, & Abdi Mubarak Syam. (2024). Implementasi Service Quality Dalam Pelayanan Perpustakaan di Dinas Perpustakaan Dan Arsip Kabupaten Deli Serdang. *Jurnal Ilmiah Dan Karya Mahasiswa*, 2(2), 286–297. <https://doi.org/10.54066/jikma.v2i2.1758>
- Suaib, M. R. (2016). *Pengantar Kebijakan Publik*.
- Sugiyarto, S., & Nola Tania, K. (2022). Peran Staf Administrasi Dalam Pendataan Hasil Produksi Di Pt Ryu Ei Kogyo Kota Tangerang. *Jurnal Sekretari Universitas Pamulang*, 9(1), 52. <https://doi.org/10.32493/skr.v9i1.18710>
- Surat Kepala Perpustakaan Nasional RI Nomor 602/HMP.02.00/I.2017 Perihal Himbauan Penggunaan Inlislite kepada Kepala Dinas Perpustakaan Daerah Provinsi/Kabupaten/Kota dan Kepala Unit Pelaksanaan Teknis Perpustakaan
- Tampubolon, M. (2023). Metode Penelitian Metode Penelitian. *Metode Penelitian Kualitatif*, 3(17), 43. <http://repository.unpas.ac.id/30547/5/BAB III.pdf>
- Undang-undang Nomor 43 Tahun 2007 Tentang Perpustakaan
- Yudistira, I. (2022). Budaya Organisasi Sekolah Dalam Penanggulangan Tawuran Antar Pelajar Di Kota Tangerang Selatan. *Metode Penelitian, November 2022*, 32–41.
- Yusri, A. Z. dan D. (2020). Reformasi Administrasi Publik. In *Jurnal Ilmu Pendidikan* (Vol. 7, Issue 2). [http://repository.lppm.unila.ac.id/24376/1/REFORMASI administrasi publik.pdf](http://repository.lppm.unila.ac.id/24376/1/REFORMASI_administrasi_publik.pdf)

Copyright Holder :

© Veronica Sri Astuti Nawangsih et al., (2025).

First Publication Right :

© Bulletin of Science Education

This article is under:

CC BY SA