Implementation of a Library Management System in a Malaysian Law Firm Library

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Abstract

This paper comprises a brief study of a law firm library in Malaysia, which has utilized an automated library system to organize its collection. The paper aims to demonstrate how the automated library system was implemented and to identify the statistics that can be generated through that system. The particular software used is the Applied Library System (ALS).

Keywords: applied library system, automated library system, law firm, library collection, LMS, reports, Malaysia

INTRODUCTION

The introduction of information and communications technology (ICT) in libraries has greatly assisted library staff with their work and facilitated the delivery of information to patrons. Indeed, studies by Amalia and Menanti[1] and Ramana[2] have demonstrated how effective ICT use has increased efficiency in library operations by eliminating repetitive tasks, introducing a diverse range of services, improving the overall quality of services, and increasing the motivation and morale of library staff.

This study focuses more specifically on library management systems (LMSs), which arose from the need to override problems associated with manual systems.[3] The use of an LMS can provide many benefits for library staff and patrons. For example, the adoption or implementation of an LMS can make a library more efficient by tracking the bibliographic records of its collection. Thus, locating a book held in a library's collection can be done easily by keying in information about the particular item. In an academic setting, library staff can issue books to students, maintain their records, and also check how many books have been issued to that student.[4] An LMS can also compute how many items are in a library's collection and thus facilitate a library's audit and report processes.

BACKGROUND OF THE STUDY

In Malaysia, law libraries have existed for more than five decades,[5] and they can be divided into two categories: academic and special. Academic law libraries are found at universities with law faculties, such as the University of

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[1] Suci Amalia and Asih Menanti, "Implementation of Using Library Card and ICT Based Library Service System in Increasing Reading Interest of Primary School Students at Tanjung Gading of Batu Bara Regency," Proceedings of the 2nd Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2017), *Advances in Social Science, Education and Humanities Research* 104 (October 2017): 211–16. DOI:10.2991/aisteel-17.2017.45.

[2] P.V. Ramana, *Information Technology Applications in Libraries* (Ess Ess Publications, 2004), 24–66.

[3] Miss. Minakshi D. Wankhede et. al., "LIBRARY MANAGEMENT SYSTEM: A Review," *International Journal of Advance Research and Innovative Ideas in Education* 9, no. 3 (2023): 2892–97.

[4] Acheampong Samuel, Ampofo Godfred, and Xu He, "Design and Implementation of Library Management System," *International Journal of Computer Applications* 182, no. 13 (2018): 18–25. DOI:10.5120/ijca2018917766.

[5] The law libraries at the University of Malaysia (UM) and the Universiti Teknologi Mara (UiTM) were established in 1972 and 1968, respectively.

Malaya, the National University of Malaysia, the International Islamic University Malaysia, and the Universiti Teknologi MARA. As for special law libraries, the focus is on a small professional patron base that includes lawyers, chambering students (who practice under a senior lawyer's supervision), and law librarians who sometimes visit other libraries to collect interlibrary loans or conduct research. Examples of this type of special law library are the Bar Council Library in Kuala Lumpur and law firm libraries.

This brief case study focuses on a law firm library in Kuala Lumpur—Khaw & Partners. Founded in 1999, this firm has a cohesive team led by partners with extensive hands-on experience representing individuals (foreign and local), Malaysian companies (private and public), and multinationals. With twelve lawyers, the firm handles various areas of law, including litigation, corporate, and conveyancing.

The firm's library was established over three decades ago for Khaw & Partners' precursor, Khaw & Hussein, which was formed in 1983.[6] Currently, a professional law librarian manages the library with assistance from an experienced part-time librarian. The library not only serves the firm's lawyers by directly providing them with a collection of print materials, such as books, journals, and reports, but it also serves as an information purveyor. The librarians conduct searches to meet the lawyers' information demands by consulting both online and print sources—the latter sometimes borrowed from other law libraries in Malaysia.

The firm's library collection has expanded to 4,700 available items, after a deduction of written-off materials. The librarians audit the collection twice per year. The reliability and currency of the library's print resources are quite good, as many are used daily, such as textbooks, law reports, court forms, and federal statutes. The library also subscribes to various online sources, including LAWNET[7] and LexisNexis. LAWNET is used for searching and locating federal statutes, while LexisNexis is a law report database that covers Commonwealth cases. Both librarians and lawyers in the firm use these two online databases frequently.

In 2005, the Khaw & Partners library began utilizing an LMS, the Applied Library System (ALS). The system allows the input of more than 6,000 bibliographic records. If any book is lost, the ALS allows the end user (library staff) to change the item status and ensures that records currently reflect the library's holdings. By any means, this has made the audit process more effective since it allows the comparison of a manual count with the ALS records. The ALS can also generate computerized reports when required, such as borrower records, book records, selected statistics, and other relevant data.

METHODOLOGY

This study has applied the methodology of a descriptive case study whereby the author has directly engaged with the study itself. According to Aggarwal and Ranganathan, a descriptive study is defined as one that is designed to describe the distribution of one or more variables, without regard to any causal or other hypothesis.[8]

OBJECTIVE

This study's primary aim was to describe how an LMS was implemented in the studied law firm's library and how the library has benefited from it.

FINDINGS

Before the existence of LMSs, library operations were based on manual recordkeeping, including the creation and maintenance of card catalogs and manual listings of a library's collection. The adoption of automated library systems, however, has drastically changed the library management field. For instance, LMSs have transformed manual circulation processes into automated ones. Other transformations have included the automation of user records, bibliographic records, vendor records, and other significant records that can be created, changed, organized, and stored indefinitely. The LMS can efficiently create a list of a collection for report or audit purposes.

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[6] For a history of the firm, see "About Us," Khaw & Partners, https://www.khawpartners.com.my/about-us/.

[7] For more on LAWNET, see https://www.lawnet.com.my/Home/Index.

[8] Rakesh Aggarwal and Priya Ranganathan. "Study Designs: Part 2 – Descriptive Studies," *Perspectives in Clinical Research* 10, no. 1 (2019): 34. DOI:10.4103/picr.picr_154_18.

Applied Library System (ALS) as an LMS

The Khaw & Partners library acquired an LMS almost twenty years ago—the Applied Library System (ALS), which, at the time, was an advanced LMS. The system was developed by Applied Computer Systems Sdn. Bhd., located in Petaling Jaya, which is no longer active.[9] The minimum hardware requirements for this system are not extensive when compared to those of current LMSs. To operate the ALS software, the minimum hardware required is a Central Processing Unit (CPU) Intel Pentium III supported with 500Mb. The ALS software does not require the download of any updates.

The main purpose of acquiring and implementing the ALS software was to facilitate the processes of circulating materials, retaining borrowers' records, generating a list of the library's holdings, and creating relevant reports to support library management. The ALS, however, does not include the capability to accept or generate MARC21-type records; it only retains essential information about a particular item when storing a record. Nowadays, most library systems utilize an LMS that allows the inclusion of bibliographic records that can be identified in a MARC21 format.

What is MARC21? MARC stands for Machine Readable Cataloging. MARC21 contains a format that encodes data elements required to describe, retrieve, and control various forms of bibliographic material.[10] The specifications of MARC21 include books, maps, music, and visual materials, among others. Between 1994 and 1997, the communities of CAN/MARC and USMARC worked together to combine those formats into one. MARC21 was published in 1999, and its name was used globally. The number "21" refers to the 21st century. The MARC record is organized into fields, which are identified by three-character tags.

The ALS software in use at the law firm does not provide any three-character tags in MARC21 format. The ALS only allows the direct input of information without creating a comprehensive bibliographic record, although it still captures essential bibliographic information, such as a book's title, series, call number, subject, author, supplier, etc. The task of retrieving information stored in the ALS is considerably easy. The system creates a barcode as a unique identification number, and the identification number can be produced once the bibliographic record is created.

Bibliographic records in the ALS system

Lazarinis explains that information about library collections is registered in a catalog to support the discovery and retrieval of specific items matching user requests.[11] He further explains that bibliographic records, also known as metadata, are a uniform description of the item's characteristics—for example, title, author, number of pages, and the item's main topics.[12]

Bibliographic records contained in a catalog aim to describe a document sufficiently to identify its uniqueness and specify where the item is located.[13] As indicated above, the bibliographic records in the ALS software contain the information that the librarian has input such that items are linked to a unique barcode number. The ALS software's capacity to preserve bibliographic information is simple yet easy to comprehend, even though the records do not follow the three-character tags of MARC21 format. Figure 1 shows the layout of a bibliographic record in the ALS software.

The layout of an ALS bibliographic record entry is somewhat different than those of other LMSs that comply with the MARC21 standard. However, the ALS bibliographic entry does share the following similarities with MARC21-compliant software:
- Title—Title of the work
- Author—Author of the work

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[9] The author made multiple attempts to contact the company by telephone without success.

[10] MARBI, "The MARC 21 Formats: Background and Principles" (Library of Congress, revised Nov. 1996), https://www.loc.gov/marc/96principl.html.

[11] Fotis Lazarinis, "Introduction to Cataloguing Classification," in *Cataloguing and Classification* (Chandos Publishing, 2014), 1–17.

[12] Ibid.

[13] Ronald Hagler, *The Bibliographic Record and Information Technology*, 3rd ed. (American Library Association, 1997).

Figure 1: Layout of an ALS bibliographic record

- Book ID—Reserved as a barcode assigned to the work
- Subject—Subject for the main heading of the work
- Call Number—Call number for the work
- Roman—Roman numbers represent the bibliographic record
- Rumi—Number of pages of the work
- Height—Measurement of the height of the work
- Series—Name of the series if the work is part of a series
- Publisher—Publisher's name
- Publication location—Place of publication
- ISBN—International Standard Book Number
- Date Purchased—Date the work was bought for the library
- Price—Total price paid for the work

The above categories contain some of the essential information included in any bibliographic record.

The end user (library staff) can choose a drop-down list in the upper-left corner as the preferred search method (Figure 2) to locate a specific bibliographic record. In general, end users prefer to choose the title field to check and locate the bibliographic record. The ALS is meant to be used by library staff, as it has never had an accompanying online public access catalog (OPAC). OPAC records can be viewed by users when they are not physically in the library. Nonetheless, the law firm's library is meant for internal use, and patrons are already familiar with the collection's arrangement. As part of his normal responsibilities, the librarian informs patrons about new sources via e-mail.

The librarians have also used the ALS to facilitate access to an index for Malaysian federal statutes, which they update regularly for internal use. The index was created in accordance with the call number and series fields of the ALS bibliographic record. For instance, the library classified the Arms Act (1960) as "A1" on the list of federal statutes for users to check. The statute classification is encoded in the ALS to track the record aligning with the Book ID (barcode) of the bibliographic record.

In general, Malaysian statutes are divided into principal acts, subsidiary legislation (PU(A) & PU(B)), and gazette notification. The principal act is for the main statute, whereas subsidiary legislation can be regulations, orders, or

Figure 2: Drop-down list of an ALS bibliographic record

rules related to the act. When an act is released (gazette notification) on the website of the Attorney General's Chambers (*Laws of Malaysia*),[14] LAWNET compiles the federal gazettes authorized by the Malaysian government.

Statistics as an Overview of the Library Collection

The ALS software can generate library statistical reports for the end user. The statistical reports can show the total number of books loaned, books written off/lost, books under repair, and the number of active and inactive users, among other relevant information. These reports are vital for the library in terms of its management. Indeed, Mundt has clarified that library statistics, from a historical viewpoint, are generally needed and used for strategic planning and decision-making at the operational level.[15] In the context of the Khaw & Partners library, one of the purposes of generating library statistics is to prepare the library's annual report for management. By combining library statistics with qualitative information, the annual report informs, monitors, and publicizes the library's role and demonstrates its value to the firm.[16]

The statistical report also serves as a piece of information when the library produces audit reports, which are prepared in June and December. The audit report shows the number of items held in the library, the number of books written off/lost, and the number of books loaned out. As shown in Figure 3, additional data is available that can be used for other purposes, including collection development. Tracking increases or decreases in the number of items held over time can also serve as a cue for the librarian to stay alert to the library collection's size.

The number of active or inactive members recorded in the ALS shows the total number of library users, which is currently twelve. This data needs to be consistent in the system, as it might affect the statistical report. Active library members are counted if they are still working in the firm, while inactive members are those who have left. The total number of active members may not necessarily correlate to the collection's size because the size primarily

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[14] See Attorney General's Chambers of Malaysia, Federal Legislation, https://lom.agc.gov.my/.

[15] Sebastian Mundt, "Standardizing Statistics of the Hybrid Library: Issues and Perspectives," *VINE* 34, no. 3 (2004): 107–12. DOI:10.1108/03055720410563469.

[16] G.E. Gorman, "Collecting Data Sensibly in Information Settings," *IFLA Journal* 26, no. 2 (2000): 115–19. DOI:10.1177/034003520002600206.
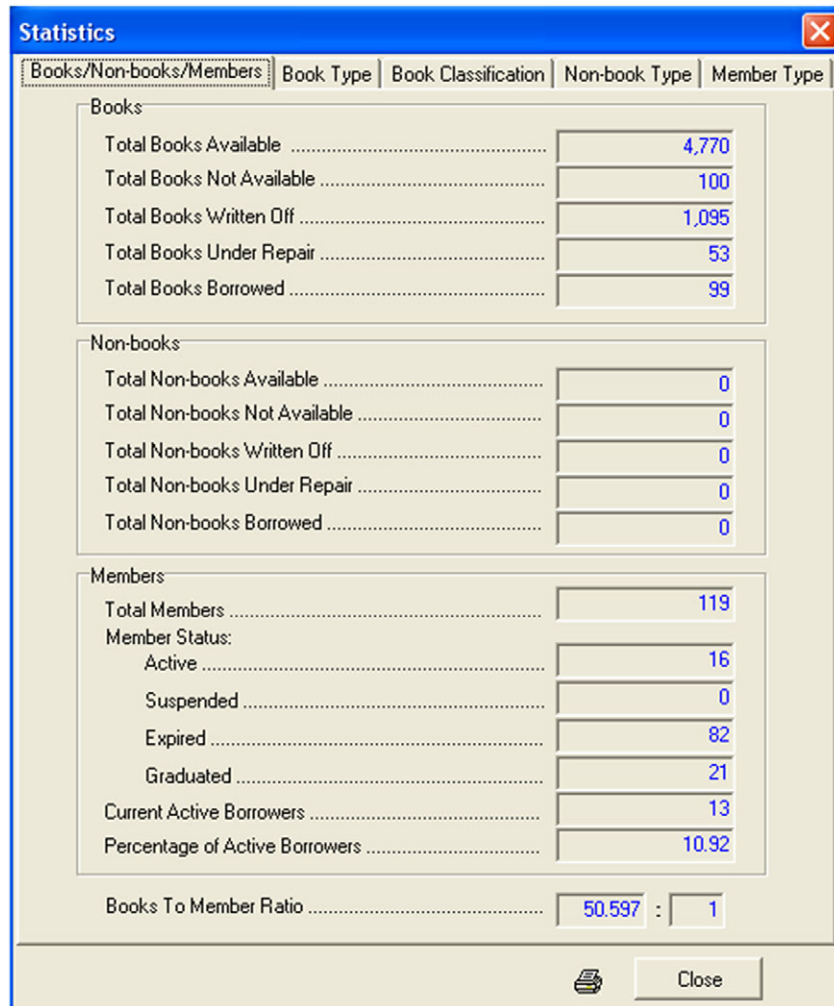
Figure 3: Dialog box of an ALS statistical report

depends on patron demand. For example, the attorney patrons may decide to continue subscriptions to print law reports and federal gazettes, even though the number of employees in the firm has decreased.

Registered Library Patrons

Onifade et al. have pointed out that user registration is meant as a process for establishing a data bank of information about library users.[17] Thus, a library that implements an automated LMS normally includes a registration module. The registration module allows the addition or removal of a library patron. Registering a library member will generally help circulate library materials. This information is particularly vital when a patron wants to request an interlibrary loan service.

The ALS has a module for registering new employees who have joined the firm. Locating or searching for a library member can be accomplished by using the library member field. Library member information consists of a member ID, name, member type, status, class, and the date joined. In this module, there are different user categories, including partners, lawyers, and pupils. Partners are typically senior members of the firm who have an ownership stake and share in the profits. They are responsible for managing the firm, making key business decisions, and

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[17] Fehintola Nike Onifade, Adeniyi Sowole, and Taiwo Aderonke Idowu, "Assessment of Library Registration between Fresh and Returning Undergraduate Students of the Federal University of Agriculture, Abeokuta, Nigeria," *Library Philosophy and Practice (e-journal)* (2015): 1137.

Figure 4: ALS registration of library patrons

maintaining client relationships. Partners also oversee the work of junior lawyers and may handle complex legal matters. Hence, lawyers (also called associates in many firms) handle the day-to-day legal work, such as representing clients, conducting research, drafting legal documents, and providing legal advice. They may work under the supervision of a partner but often have more autonomy as they progress in their careers. Pupils (or trainee solicitors in some jurisdictions) are law school graduates who are undergoing practical training before qualifying as full-fledged lawyers. They work under the supervision of experienced lawyers and partners, assisting with legal research, document preparation, and client interaction. The layout of the library registration module for new employees in the ALS is shown in Figure 4.

The law library's patrons have the same library rules applied to them. The total number of books a patron can borrow at once is ten for a period of two weeks. The ALS software will calculate fines in accordance with the rates charged for the number of days a book is turned in late. The minimum fine per book is RM0.50 (about US $0.11). Patrons are charged for lost items.

Library staff members are able to track an individual's borrowed books record via the "Current Books Borrowed" tab. The patron's history of borrowed books will also be accessible. This information reflects the patron's borrowing habits and provides insight into their interests and practice areas.

Books Borrowed by the Library User

A book record is usually stored in the library system after the acquisition process has taken place. Those records are very important for the library in terms of providing service to users within an organization. The system, which has already stored a book's record, can simply check out the book according to its barcode under the patron's account.

The ALS's circulation module allows the check-out and check-in of library materials, tracks the status of items, and monitors a user's account. In the circulation module, the library staff can check which books a patron has borrowed and their due dates. If a book is overdue, the library staff will send a reminder/notification via e-mail to the user. In the ALS, the library staff has a choice to check-out/check-in library materials under either a member ID or name provided under the drop-down list. To ease the process of circulation, the option to key in a member ID is quite handy, as it is faster than retrieving the record by name.

DISCUSSION

The study has revealed that the firm's library has an automated library system—in this case, the ALS software, which has facilitated library service since it was implemented almost twenty years ago. The ALS modules are quite similar to those of other automated library systems except for their collective inability to generate a three-character MARC21 tag. However, although the ALS software does not allow the creation of the three-tag MARC21 character, the ALS has a straightforward encoding system that produces a record considered to be quite similar to the MARC21 form. The bibliographic records that the ALS creates, which include an item's title, subject, ISBN, publisher details, and other essential information, are very effective and useful for the end user—in this case, the library staff.

The utilization of an automated library system can also provide the end user with relevant statistics, and the ALS is no exception. The study found that it can generate useful statistics, including information on a book's status—whether it is under repair, has been declared lost, or has simply been discarded. The firm's library conducts audits every June and December, and the ALS reduces the time required to prepare these comprehensive semiannual audit reports.

The ALS also helps library staff maintain patron records. As the number of internal users is not large, the registration of library members via the ALS is fast. For instance, when a new pupil joins the firm, the library will process their registration in less than five minutes. The retrieval method of a library member's record is convenient and easy via a drop-down menu. The ALS can generate a list of library members who are active or inactive, and library staff can easily track what a patron has borrowed, when books are due, and see if there are any fine holds on their account. Discharging/charging library materials can be accomplished by simply charging/discharging material under a user's member ID. A borrower is also able to reserve books either via e-mail or verbally, and the librarian can use the ALS software to place the reservation(s).

One of the drawbacks of the ALS is that it has not been promoted by other vendors and is not utilized in other local libraries since most use LMSs like OHA, Sierra, LIBSYS 10, or other prominent systems. This could be problematic if the ALS software becomes corrupted or disrupted in the future. Thus far, however, the library has had no problems with the software.

CONCLUSION

An LMS facilitates library service at various institutions. LMSs are meant to store and organize bibliographic records, track user and collection records with ease, reduce the time needed to input data, control access to the collection, and organize current patron records. The implementation of an automated library system also encourages a paperless environment, which is more efficient and eco-friendly than the traditional card catalog and patron library card. Fisher et al.[18] have stated that an LMS's core modules should be the internal catalog, OPAC, circulation, acquisitions, and serials for any type of library—public, academic, or special. These modules may be labeled differently in different systems, and there are indeed wide variations among LMS software.

The Applied Library System (ALS) software has been utilized successfully by the law firm's library for almost twenty years, and there have been no issues raised by the end-user (library staff) during that time. The ALS has an efficient record-keeping feature that is similar to most other LMSs. Even though the ALS does not include the ability to create records in MARC21 form, it is still viable and can store vital information, including the book title, call number, author, subject, ISBN, edition, volume, series, and publisher details.

In sum, the ALS is still a reliable LMS software for use in special and small library environments, such as that of Khaw & Partners.

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[18] Shelagh Fisher, Rachel Delbridge, and Siân Lambert, "Towards a Model System Specification for the Procurement of Library Management Systems: Results of a Feasibility Study," *Program* 35, no. 4 (2001): 339–54. DOI:10.1108/eum0000000006952.

Views of the Khaw & Partners Library

REFERENCES

Aggarwal, Rakesh, and Priya Ranganathan, "Study designs: Part 2 – Descriptive studies." *Perspectives in Clinical Research* 10, no. 1 (2019): 34. DOI: 10.4103/picr.picr_154_18.

Amalia, Suci, and Asih Menanti. "Implementation of Using Library Card and ICT Based Library Service System in Increasing Reading Interest of Primary School Students at Tanjung Gading of Batu Bara Regency." Proceedings of the 2nd Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2017), *Advances in Social Science, Education and Humanities Research* 104 (October 2017): 211–16. DOI:10.2991/aisteel-17.2017.45.

Attorney General's Chambers of Malaysia. *Federal Legislation.* Accessed January 3, 2025. https://lom.agc.gov.my/.

Clarke, Rachel I. "Breaking Records: The History of Bibliographic Records and Their Influence in Conceptualizing Bibliographic Data." *Cataloging & Classification Quarterly* 53, no. 3-4 (2014): 286–302. DOI:10.1080/01639374.2014.960988.

Fisher, Shelagh, Rachel Delbridge, and Siân Lambert. "Towards a Model System Specification for the Procurement of Library Management Systems: Results of a Feasibility Study." *Program* 35, no. 4 (2001): 339–54. DOI:10.1108/eum0000000006952.

Gorman, G.E. "Collecting Data Sensibly in Information Settings." *IFLA Journal* 26, no. 2 (2000): 115–19. DOI:10.1177/034003520002600206.

Hagler, Ronald. *The Bibliographic Record and Information Technology.* 3rd ed. (American Library Association, 1997).

Lazarinis, Fotis. "Introduction to Cataloguing Classification." *Cataloging and Classification* (2015): 1–17. DOI:10.1016/b978-0-08-100161-5.00001-4.

MARBI. "The MARC 21 Formats: Background and Principles." Library of Congress (November 1996). https://www.loc.gov/cds/PDFdownloads/marc/MARC21_Upd9.pdf.

Mundt, Sebastian. "Standardizing Statistics of the Hybrid Library: Issues and Perspectives." *VINE* 34, no. 3 (2004): 107–12. DOI:10.1108/03055720410563469.

Onifade, Fehintola Nike, Adeniyi Sowole, and Taiwo Aderonke Idowu. "Assessment of Library Registration between Fresh and Returning Undergraduate Students of the Federal University of Agriculture, Abeokuta, Nigeria." *Library Philosophy and Practice (e-journal)* (2015): 1137.

Ramana, P.V. *Information Technology Applications in Libraries*, 24–66. (Ess Ess Publications, 2004).

Samuel, Acheampong, Ampofo Godfred, and Xu He. "Design and Implementation of Library Management System." *International Journal of Computer Applications* 182, no. 13 (2018): 18–25. DOI:10.5120/ijca2018917766.

Wankhede, Minakshi D. et al. "LIBRARY MANAGEMENT SYSTEM: A Review." *International Journal of Advance Research And Innovative Ideas in Education* 9, no. 3 (2023): 2892–897.