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Optimising Users' Information Needs and Satisfaction through the Use of Librarika Library Management Software in Federal Polytechnic Offa, Kwara State

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ABSTRACT

This study explores the adoption of Librarika library management software at the Federal Polytechnic Offa Library to address challenges related to user satisfaction, operational efficiency, and information accessibility. Traditional library systems are often limited by their manual processes and physical restrictions, which can hinder user engagement and satisfaction. This research aims to assess how the integration of Librarika can optimize library services and improve users' experience by facilitating faster information retrieval, efficient resource management, and enhanced user interfaces. The study employs a mixed-method approach, involving questionnaires and interviews with library staff to gain insights into the effectiveness of Librarika in meeting user needs. Findings suggest that the implementation of Librarika improves workflows, enhances resource accessibility, and aligns library services with evolving user preferences. Recommendations include developing the library system for multi-platform compatibility and integrating multimedia resources to support diverse learning needs. This study underscores the necessity for libraries to adopt digital solutions to remain relevant and effective in today's technology-driven educational landscape.

Keywords: Librarika, Library Management Software, Optimisation, Users' Information Needs, Users Satisfaction,

Introduction

Libraries are organized collections of information sources that are made accessible to user, either in physical or digital formats. Traditionally, access to these resources was limited to the library premises. However, with technological advancements, libraries have increasingly moved online, making their resources available to a broader audience (Dinesh et al., 2015). As libraries evolve, the old methods of maintaining them have become less effective. To ensure quick retrieval and dissemination of information and to improve services for users, it is essential to adopt modern technologies.

The primary purpose of libraries is to provide information resources and services to meet users' information needs (Adeniran, 2021). A library fails to fulfill its purpose if users are not satisfied with the resources and services offered. Therefore, user satisfaction is a crucial measure of library performance. To stay relevant, libraries must regularly assess their resources and services to ensure they align with the library's objectives and satisfy users. If users are dissatisfied, it suggests that there may be issues within the library's operations (Larson & Owusu-Acheaw, 2012). Information resources in a library encompass all types of printed materials (such as books, serials, pamphlets, and maps), most audio-visual materials (including discs, films, videos, and multimedia kits), broadcast resources, and electronic publications (like diskettes, CD-ROMs, and online resources).

Statement of the Problem

The Federal Polytechnic Offa Library in Kwara State faces challenges in optimizing users' information needs and satisfaction despite the availability of resources. The current traditional library management system may not efficiently cater to the diverse and evolving needs of users. Users may encounter difficulties in accessing resources, navigating the catalog, and retrieving information effectively. Additionally, the manual processes involved in borrowing and returning materials may lead to inefficiencies and delays, impacting overall user satisfaction.

Furthermore, there may be issues with resource organization and accessibility, limiting users' ability to find relevant materials efficiently. The lack of user-friendly interfaces and modern features in the existing library system may hinder the seamless integration of digital resources and online services, thereby limiting users' access to a comprehensive range of information sources. Moreover, there could be a gap in understanding users' preferences, behaviors, and information-seeking patterns, which may result in mismatches between available resources and users' needs. Without adequate insight into users' information needs and preferences, the library may struggle to provide relevant and personalized services, ultimately affecting user satisfaction and engagement.

Therefore, the central problem revolves around the need to optimize users' information needs and satisfaction at the Federal Polytechnic Offa Library by addressing challenges related to the existing library management system, resource accessibility, user experience, and understanding users' preferences effectively.

Objectives of the Study

The main objective of this study is to implement the use of librarika library management software to optimize users information needs and satisfaction in Federal Polytechnic Offa. The specific objectives are to:

i. integrate the use of librarika library management software in Federal Polytechnic Offa, Kwara state;

ii. examine the criteria for software selection in Federal Polytechnic Offa

iii. add books and users to the Federal Polytechnic Offa librarika library management software platform; and

iv. find out the challenges in the use of librarika library management software in Federal Polytechnic Offa, Kwara State.

Research Questions

The following research questions guided the study:

i. How will you integrate the use of librarika library management software in Federal Polytechnic Offa, Kwara state?

ii. What are the criteria for software selection in Federal Polytechnic Offa?

iii. How will you add books and users to the Federal Polytechnic Offa librarika library management software platform?

iv. What are the challenges in the use of librarika library management software in Federal Polytechnic Offa, Kwara State?

Literature Review

The Library Management System is a Library Management software for monitoring and controlling the transactions in a library (Ashutosh & Ashish., 2012). Library Management System supports the general requirement of the library such as the acquisition, cataloguing, circulation and other sections. Before the advent of computer in modern age there are different methods of keeping records in the library. Records are kept in the library on shelves and each shelf are labelled in an alphabetical or numerical order, in which the categories of books available are arranged on different position on the shelves and as well are recorded on the library manuscript and when any book is to be referenced the manuscript is being referred to, to know the position of such required book by the person that requested for the book. After the invention of computer different researchers have carried out various approach on an automated library management system in which this project is as well all about.

The first library management system to be reviewed is the KOHA library management system. Since the original implementation in 1999, KOHA functionality has been adopted by thousands of libraries worldwide, each adding features and functions, deepening the capability of the system. With the 3.0 release in 2005, and the integration of the powerful Zebra indexing engine, KOHA became a viable, scalable solution for libraries of all kinds. LibLime KOHA is built on this foundation. With its advanced feature set, LibLime KOHA is the most functionally advanced open source Integrated Library System in the market today. The major setback of this Library Management System is that it is a web based and as a result it is not security conscious because hackers could have the database hacked and access or modify the information of such user (www.koha.org).

Another Library Management System is the Capital's library software with the following benefits Increases support available for staff and users in any modern library service, provides efficiency, innovative system that's saves library time and improves the user experience.

A library management system usually comprises a relational database, software to interact with that database, and two graphical user interfaces (one for users, one for staff). Most integrated library systems, separate software functions into discrete programs called modules, each of them integrated with a unified interface. Examples of modules might include: Acquisitions (ordering, receiving, and invoicing materials); Cataloguing (classifying and indexing materials); Circulation (lending materials to patrons and receiving them back); Serials (tracking magazine and newspaper holdings); and the OPAC (public interface for users).

According to ISO 9241-11 (2018), for a product or system to be usable, users should be able to use it to achieve their goals in an acceptable amount of time and be satisfied with the results. The definition identified effectiveness, efficiency and satisfaction as attributes of usability. Punchoojit (2017) posited that users who cannot achieve their goals effectively, efficiently and in satisfactory manner with a particular LMS are likely going to seek for alternative solution to achieve their goals, that is why Jayaletchumi *et al.* (2014) stated that software usability is a key factor in the success or failure of a software product, because the users directly interact with the system interface and utilizes services offered by the system. Therefore, identifying issues with LMS seems to be necessary through usability evaluation, as such several studies on usability evaluation of interactive system have been carried out in order to improve the usability of software and to enhanced effectiveness and efficiency of employee. Suduc *et al.* (2010) noted that the reasons behind usability evaluation of any system are to have understanding of the user needs and improvement in order to provide a better user experience with a software.

Khajouei and Farahani (2020) evaluated the usability of an information system in hospital. The study identified problems related to satisfaction, learnability, error prevention, effectiveness and efficiency with the use of user and expert based method. Forty four usability issues were identified with information system in hospital and suggested a review of the system. Another study on evaluation of the usability of electronic record system in African by Kavuma (2019) revealed that the ease of learning was 71 %, effectiveness was 67 %, efficiency was 64 % and user satisfaction was 66 %. The study concluded that the ease of learning was good therefore affected the overall usability of electronic record system. Similarly, Khatun and Ahmed (2018) conducted a usability testing of Koha OPAC. The result of the task based empirical study from users' point of view indicated significant difference in the degree of performance and satisfaction between experienced and novice users, the study concluded that the software was difficult for new users therefore, suggested that designers and developers should improve on newer version.

There are many challenges with regard to management of ILS world over. It is in this light that Gbadamosi (2012) said that management ILS has faced varied problems and challenges which may differ from institution to institution depending on the disposition of the institution to ICT application, funding and technical expertise of the librarian anchoring the project. Chisenga (2014) postulates that challenges facing library automation projects in Sub-Saharan Africa include lack of budgets, inadequate ICT facilities, lack of ICT strategies, low skills levels of users, lack of qualified staff in ICT, lack of commitment by institutional management, and reluctance among staff to use ICT. Among the above-mentioned challenges, the most important is the lack of budget (money) to execute the project. Some institutions have abruptly stopped the implementation of library management software in their libraries simply because at some point they realized to their dismay that the entire project will be too expensive to finish. Budgets must therefore be drawn to cater for all stages of the systems' design, development, testing and deployment. There must be adequate budget lines that will cater for increase in prices of logistics such as servers, network infrastructure, and barcode scanners.

Similarly, Adeyinka, Neemah and Olanniyi, (2017) in a study on assessment of the Use of Koha Library Software in four Selected University Libraries in Nigeria. The findings revealed poor management 33(64.7%), inadequate infrastructural facilities 30(58.8%), and power failure (43 (84.3%)) are the three most important challenges. The rest were related to Software problems e.g. hanging, malfunctioning, inadequate infrastructural facilities etc which are as a result of poor internet facilities and bandwidth. Within the Zambian academic library context, Lungu and Mwamba (2010) found that in addition to the findings of Chisenga (2014), that there is a lack of motivation and enthusiasm by library management to embark on the implementation of library management software projects.

METHODOLOGY

This study employed a mixed-method approach, integrating both qualitative and quantitative research methods to comprehensively explore the adoption and impact of Librarika on library services. This design allows for triangulation, ensuring that the data collected provides a more in-depth understanding of the effectiveness of Librarika. The population for this study includes library staff at the units/sections with direct access to the librarika platform. The population of the library staff is ten (10) from different units of the library. Sampe is the subset of the population. For this study, complete or total enumeration was adopted for the study. That is, the population was adopted as the sample size. A purposive sampling method was used to select libraries and participants that have adopted or are in the process of adopting Librarika. The study used qualitative and quantitative approach; therefore, the study adopted the use of structured questionnaires which was distributed to library staff. Also, semi-structured interviews were conducted with selected library staff who have been directly involved in the adoption and implementation of Librarika. The aim will be to explore their experiences with Librarika, understand the challenges faced during implementation, assess the perceived effectiveness and impact on library workflows. The data collected were analysed using descriptive statistics (mean, frequency, standard deviation) to summarize the survey data. Thematic analysis was used to analyze the interviews and focus group discussions. Responses was coded, categorized, and analyzed to identify patterns, themes, and insights regarding the challenges, benefits, and overall effectiveness of Librarika adoption.

METHOD OF ADDING BOOKS TO LIBRARIKA PLATFORM

Smart Add

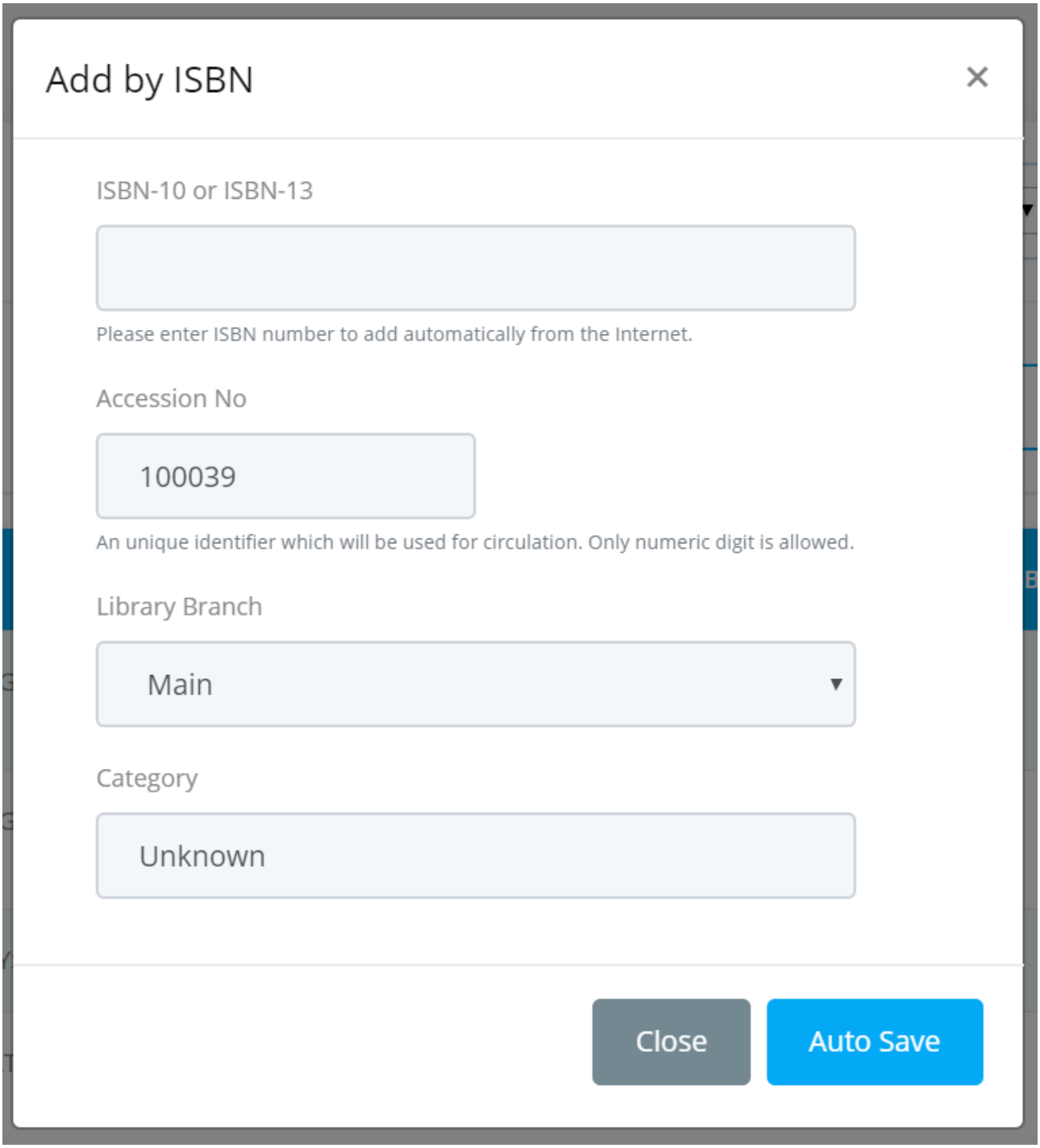
Smart add method lets you easily add book's information from the Internet. All you need is the ISBN number to catalog a new book.

Note: Please treat this smart add method as an added feature, not a complete replacement of the Manual Add method.

To use this method, please follow the below steps:

Please go to the Dashboard -> Catalogs -> Catalog Items section.

Click on the Smart Add button.



Enter the ISBN number of the book you want to add to your catalog.

Accession number is an auto incremental number generated by our system. However, you can provide your own accession number if you want.

Select the branch under which the book to be added.

Specify a category under which the book to be added.

Click the Auto save button.

System will automatically find the matching book from the Internet and add to your catalog.

If successful, system will show a confirmation message with the title name and view page link.

Manual Add

You can add item using our Manual Add method. This method is suitable when you don't find book using the "Smart Add" method.

To use this method, please follow the below steps:

Please go to the Dashboard -> Catalogs -> Catalog Items section.

Click on the Manual Add button.

System will display the add new item form.

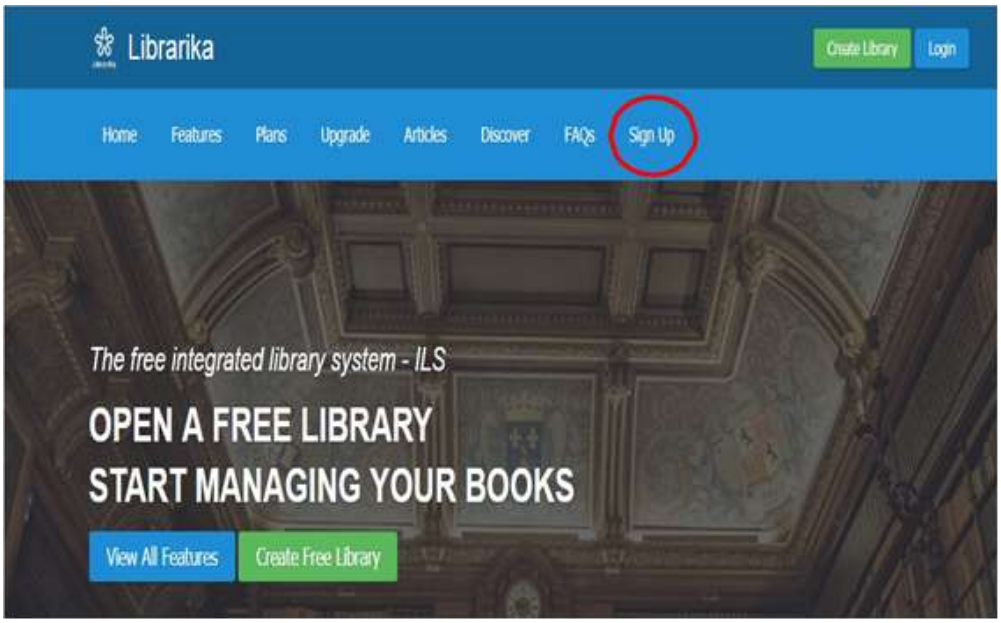
METHOD OF ADDING USERS TO LIBRARIKA PLATFORM ENROLLING STUDENTS & OTHER TEMPORARY LIBRARY USERS

The library can be joined in two different ways:

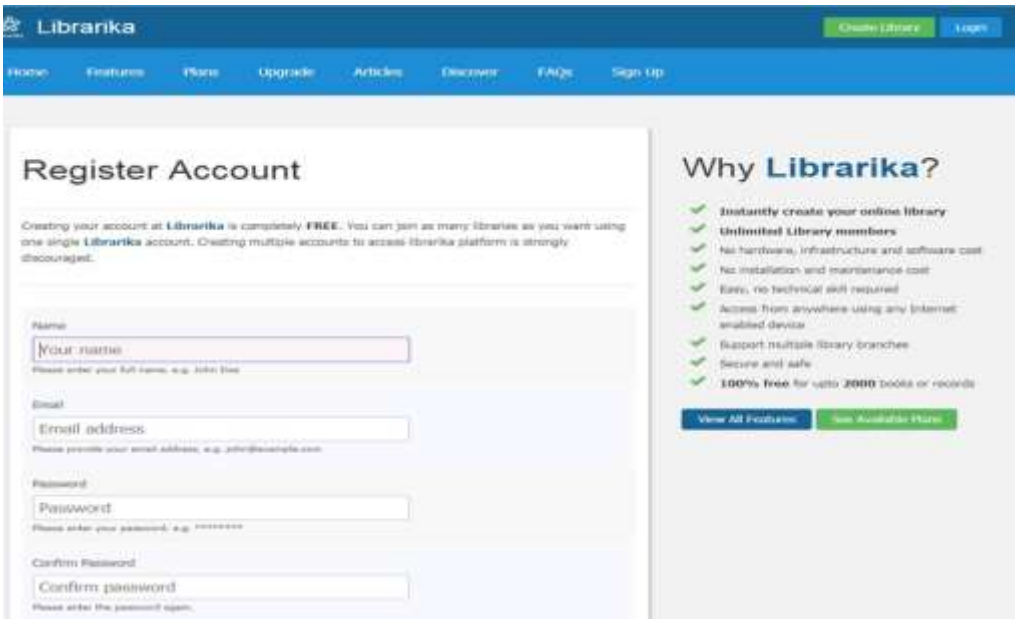
An Admin staff may invite or add another to the library who then becomes a member.

Alternatively, individuals can **sign up** their respective Librarika accounts and thereafter submit member access request to the Admin UWindsor Library by following the steps below:

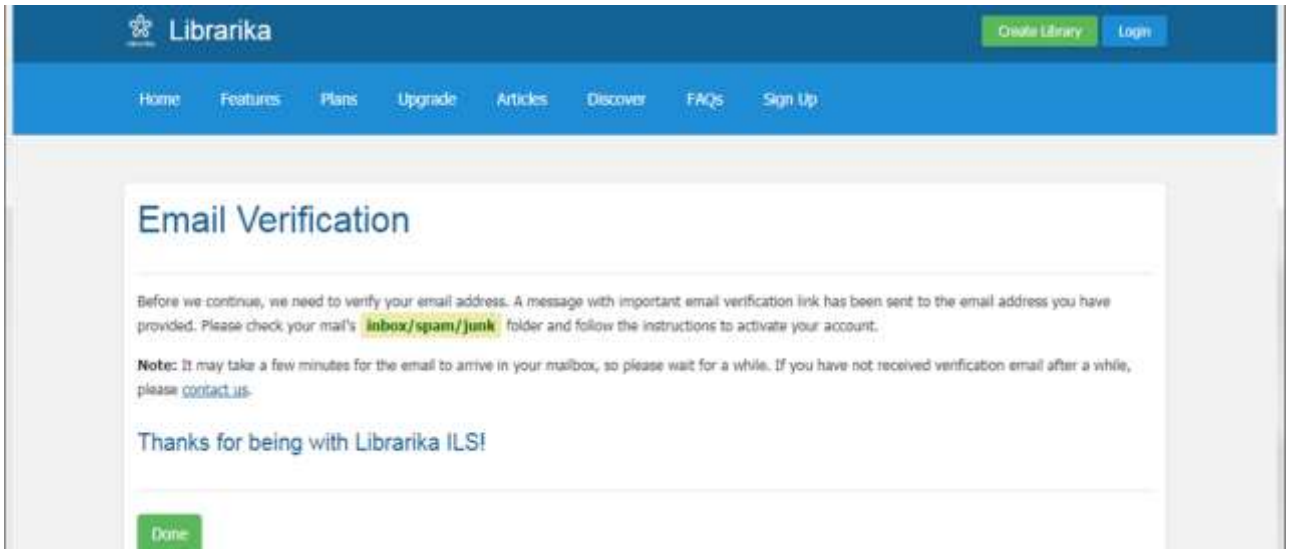
Search **Librarika.com** on your browser and **sign up** for a new account.

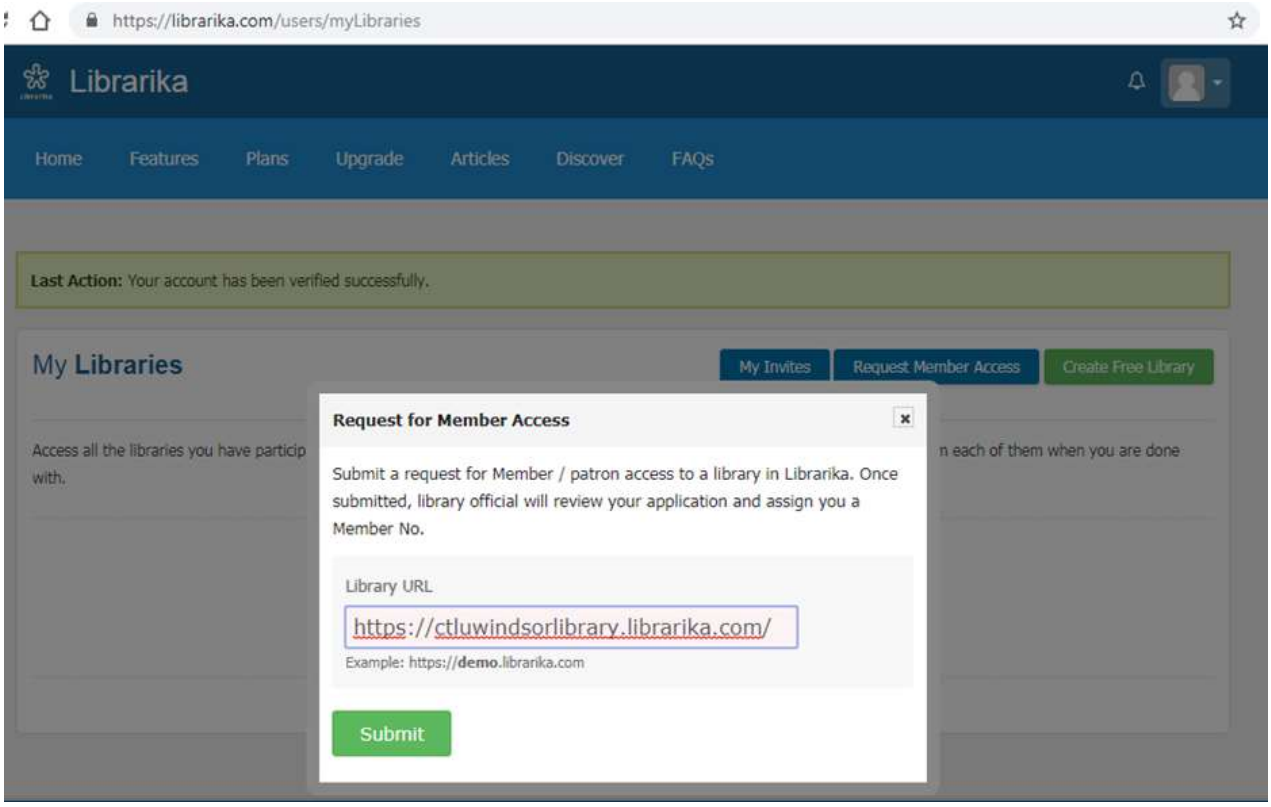


Enter your name, email address and password. Confirm password. Check the box “I am not a robot” and submit by clicking on the green ‘I agree’ button. See diagram below.

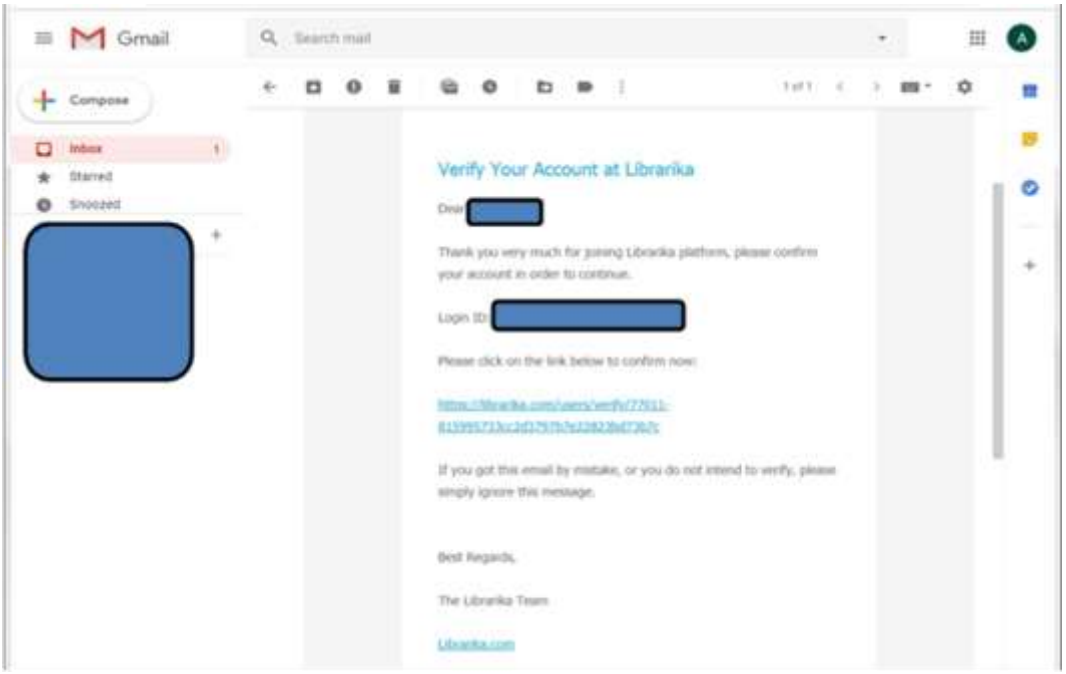


You will receive an email requesting verification almost immediately. Verify your email address. See samples below.

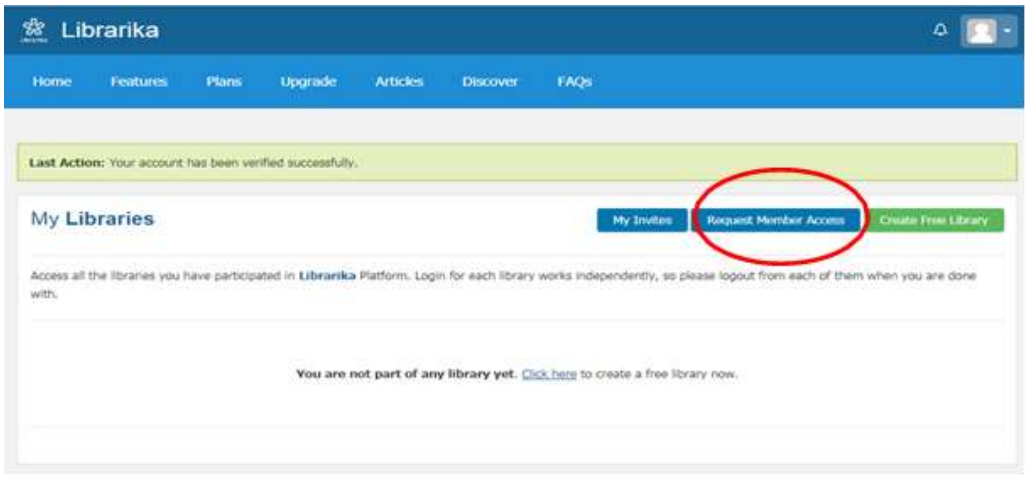




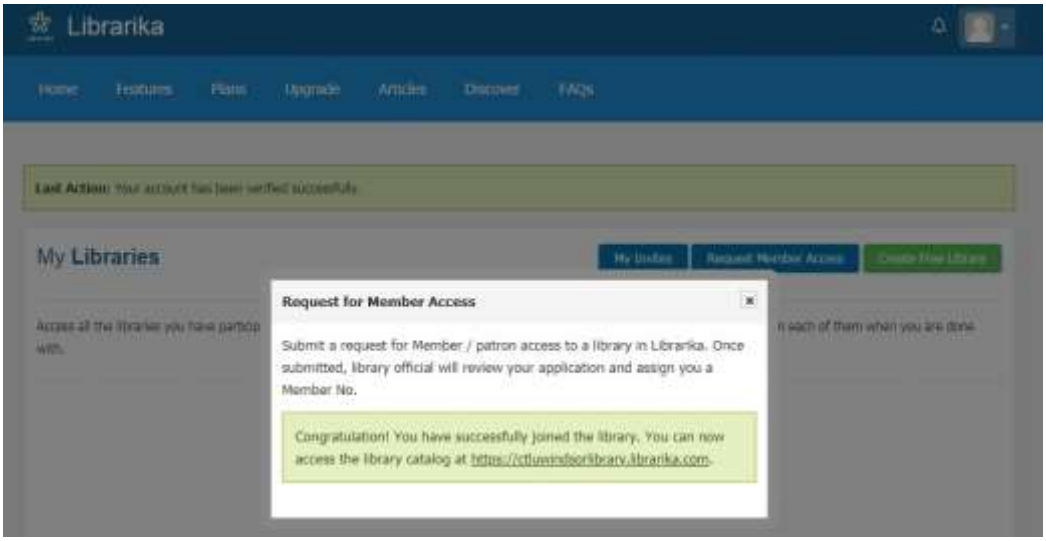
From **My Libraries** section as shown below, click on **"Request Member Access"**



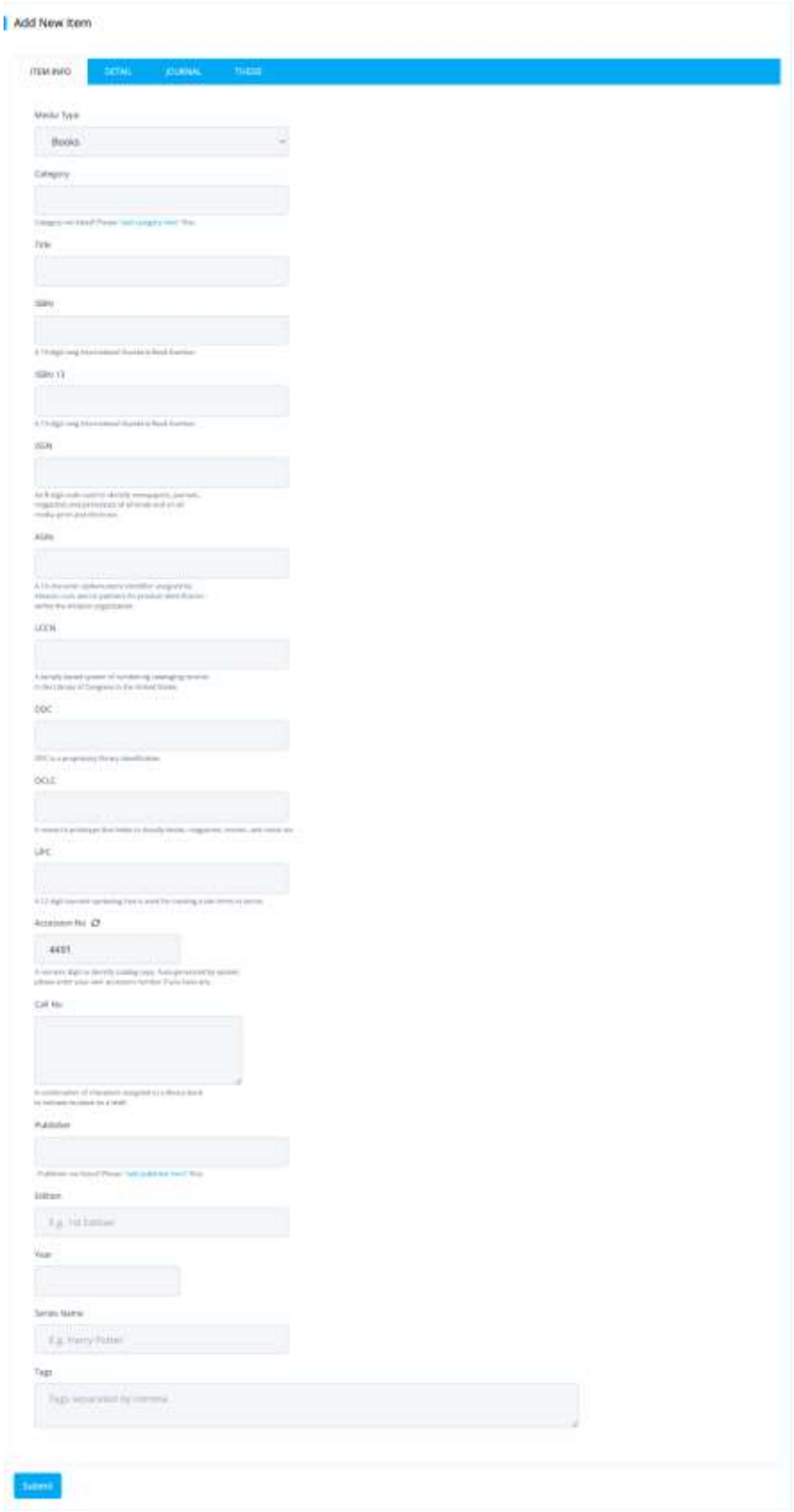
Enter the full URL of the library (https://fedpoffalibraryps.librarika.com/) and hit **Submit**.



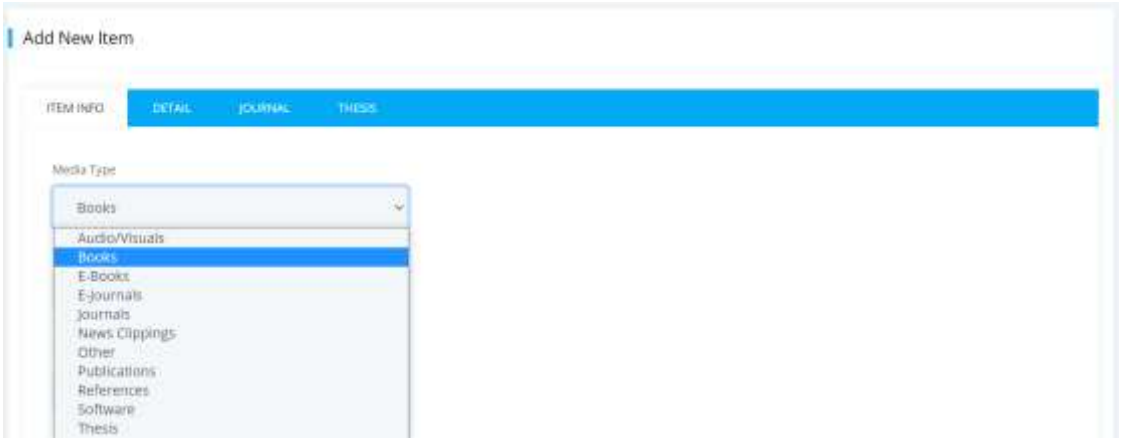
You will receive a confirmation message almost immediately. After this, you can access the CTL library URL and log in successfully.



Hurray! You can now sign out books from the database.



You can select different types of media according to your library preference from the Media Type dropdown menu.



Please select media type equals to Other while adding items that does not belong to any of the listed media types.

In Accession No field the accession number is auto generated by our system. However, you can enter your own or custom accession number if you want.

ASIN: In this field, please add the Amazon Standard Identification Number (ASIN) assigned by Amazon.com for item identification. Only alphanumeric characters (10-character) are allowed for this field.

LCCN: This field is intended for libraries with cataloged collections in the Library of Congress.

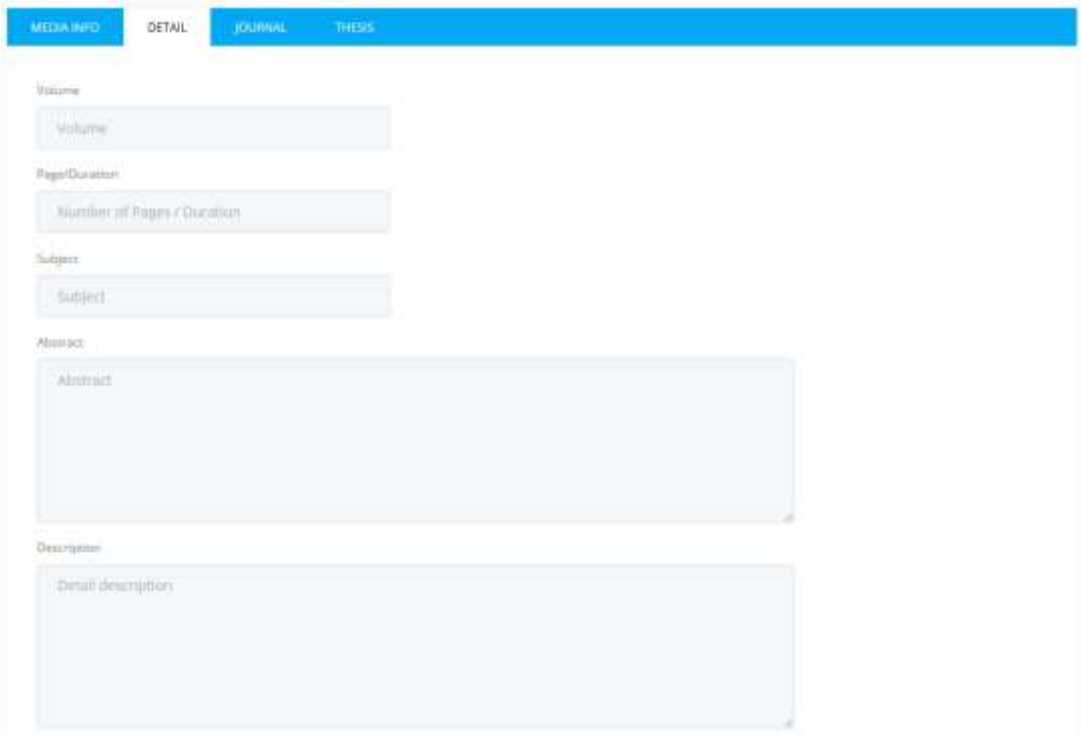
DDC: Dewey Decimal Classification (DDC) is a system used by libraries to arrange books by subject. It is the most widely used system for organizing library collections worldwide.

OCLC: OCLC numbers are particularly useful for books and other bibliographic materials that do not have ISBNs. These numbers link WorldCat's records to local library system records by providing a common reference key for a record across libraries.

UPC: Short for Universal Product Code, UPC is a barcode symbology consisting of twelve numeric characters that uniquely identify a company's individual product. It is widely used in most countries.

In the Tags field you can add single or multiple tags for the library catalog item. When adding multiple tags, please use a comma separator between them.

Also, one can add more details of your book by clicking on the Detail tab.



Staff evaluation Librarika

This section shows the responses on staff evaluation on the use of Librarika.

Table 4.4.1: Characteristics of Librarika (n = 10)

		Proportional mean	Test value		
Characteristics	Mean			*P*-value	Rank
Multi-user support	4.91	86.89	9.62	0.000*	1
User-friendly	4.52	78.68	8.73	0.000*	2
Flexibility	3.52	70.12	7.66	0.000*	3
Comprehensiveness	3.47	69.82	7.12	0.000*	4
Transparency (unrestricted use)	3.41	66.72	6.88	0.000*	5
Price	2.52	64.27	6.52	0.000*	6
Interoperability	2.48	63.92	6.22	0.000*	7
Expandability	2.42	59.14	5.54	0.000*	8
Active development status	2.26	57.24	5.32	0.000*	9
Multi-lingual support	1.32	49.46	4.47	0.000*	10

Table 4.4.1 presents a snapshot of different attributes, qualities as well as features inherent within Librarika and the level of satisfaction ranked by the respondents. Analysis reveals that majority of respondents (86 per cent) consider multi-user support and the user friendliness (78 per cent) as the key characteristics of Librarika. After the in-house operations of the library are automated, different modules of the ILMS have to be completed for the workflow. To get a clear picture of cloud-based ILMS, Librarika respondents were asked to rate the various modules.

Table 4.4.2: Different modules of Librarika

		Proportional mean	Test value		
Modules	Mean			*P*-value	Rank
OPAC	4.99	99.97	9.98	0.000*	1
Cataloguing	4.97	98.34	9.86	0.000*	2
Circulation	4.92	91.86	9.38	0.000*	3
Patrons	4.41	86.48	8.84	0.000*	4
Serials	2.48	67.42	6.82	0.000*	5
Acquisition	1.49	52.46	5.46	0.000*	6
Report generation	1.34	44.27	4.21	0.000*	7

Table 4.4.2 represents the opinion of users regarding the various modules and shows that Librarika offers one of the best modules in OPAC (99.97 per cent), cataloguing (98.34 per cent) and circulation (91.86 per cent). Prior to adopting any ILMS software, it is obligatory to have knowledge of the support services, maintenance and additions extended by the service provider to the end-user.

Table 4.4.3: Enhanced Features of Librarika

Enhanced feature	Mean	Proportional mean	Test value	*P*-value	Rank
Addition of new feature	–	–	–	–	0
Data confidentiality	–	–	–	–	0
No dues certificate	–	–	–	–	0
Table of contents	3.46	89.12	8.42	0.000*	1
Browser compatibility	3.24	79.12	8.12	0.000*	2
Tagging	2.48	76.24	8.04	0.000*	3
Full-text searching	2.42	74.24	7.34	0.000*	4
Patron services	2.29	71.76	7.15	0.000*	5

Useful links	1.42	62.14	6.21	0.000*	6
Shelf maps	1.22	56.24	5.62	0.000*	7
Multi-security layers	1.14	44.18	4.41	0.000*	8

Table 4.4.3 shows various enhanced features. A greater number of respondents felt that Librarika lacked enhanced features over open-source ILMSs; however, it had good tagging and table of contents display functions. Respondents selected table of contents display (89.12 per cent), browser compatibility support (79.12 per cent) and tagging (76.24 per cent) as highly ranked enhanced features of Librarika. Cloud-based ILMS software like Librarika offers numerous advantages. Through web-based computing, unlike desktop computing, the cloud-based platforms free IT staff from infrastructure maintenance, application development, software configuration and updating.

Table 4.4.4: Benefits of using Librarika

Benefits	**Rank**	**(%)**
Ubiquitous availability	1	96.0
Quick deployment	2	92.0
Smart add – Instantly add book using ISBN from the internet	3	88.0
Scalability	4	84.0
Biblio data integration with Open Library	5	81.0
Ease of software integration	6	76.8
Device diversity	7	74.2
Location independence	8	73.8
Online book reservations	9	72.5
Universal login (members/patrons)	10	71.7
Increased collaboration	11	69.7
Cost efficiency	12	68.4
User's review and ratings	13	62.8
Automatic updates	14	60.4
Environmentally friendly	15	59.8

Table 4.4.4. summarizes the various benefits from the adoption of cloud-based ILMS platforms in a library setting. Respondents ranked ubiquitous availability (96 per cent), quick deployment (92 per cent), smart add (88 per cent), scalability (84 per cent) and biblio data integration (81 per cent) as the primary benefits of adopting Librarika. Although cloud-based platforms are hyped as an IT total solution, there are many perils to the adoption of cloud computing-based solutions.

Table 4.4.5: Problems encountered while using Librarika

Problems	Rank	(%)
Security of data	1	94.0
Reliability	2	90.0
Lack of standards	3	87.0
Connection dependence	4	82.0
Loss of IT control and ownership	5	80.0
Data centre location	6	77.0
Lack of liability of providers	7	76.6
Regulatory compliance	8	76.1

Complexity	9	74.2
Privacy	10	73.8
Integration	11	72.5
Cost uncertainty	12	71.7
Lack of awareness	13	70.8
Over subscription of services	14	70.2
Data management	15	69.7
Service provider dependence	16	68.4
Internet congestion	17	66.2
Lack of suppliers with satisfactory credentials	18	64.8
Lock-in (switching costs)	19	62.8
Technology dependence	20	60.4
Skills	21	59.8
Unclear scheme in pay-per-use approach	22	53.5

Table 4.4.5 briefs the various problems that the respondents encountered during the course of using Librarika. It was found that security of data (94 per cent), reliability (90 per cent), lack of standards (87 per cent), connection dependence (82 per cent), loss of IT control and ownership (80 per cent) and data centre location (77 per cent) are some of the highly ranked barriers while adopting Librarika. Librarika has both merits and demerits. Respondents were asked to point out some possible improvements that could improve the confidence of other libraries in adopting this ILMS solution.

Summary of the Findings

1. The study revealed that prior to adopting any ILMS software, it is obligatory to have knowledge of the support services, maintenance and additions extended by the service provider to the end-user
2. The study discovered that Librarika offers numerous advantages through its web-based computing, unlike desktop computing, the cloud-based platforms free IT staff from infrastructure maintenance, application development, software configuration and updating.
3. It was further revealed that librarika enhanced features which may not be provided by the librarika service provider but can be offered in the library through the help of external web services.

Conclusion

It is an established notion that library automation via the cloud is an unavoidable phenomenon for libraries. Traditionally, libraries have tried to automate their system purchasing servers and software, installing, updating and configuring them. In analysis of the cloud-based ILMS, staff review the desirability of different features, modules as well as other conspicuous facets offered by Librarika. Each software product has its own design and defined workflows to meet its primary objectives. From the evaluative study, it was found that Librarika had specific characteristics of the commonly available open-source ILMSs. It is clear from the study that Librarika has a better library operations and services module. However, concerns over data ownership, migration and portability in the cloud are the major bottlenecks in its adoption. To adopt any cloud computing solutions in libraries, there is a need for well-defined regulations as well as transparent policies. The study can be used as a guideline by the libraries that are planning to adopt cloud computing- based solutions in the future.

Recommendations

Based on the findings, it was recommended that, the Management of Federal Polytechnic Offa should provide the following:

1. There should be modern information and communication technologies gadgets linked with the internet facilities to enable librarians to have access to various facilities attach to the software.
2. Also, provide opportunities for the librarians and information professionals to attend workshops/conferences.
3. Adequate power backup facility should be provided to solve the problem of power outage in the library.

4. The library management should provide adequate funds for the payment of annual dues to the vendors as well as upgrading the software to the latest version. There should be a provision of training and retraining on the use of software for staff managing the software regularly.

5. The Polytechnic Management should ensure that funds are made available for regular maintenance and upgrade of ICT facilities in their libraries.

References

Dinesh, R., Pravin, S., Aravindhan, M and Rajeswari,D. (2015). Library access system Smartphone Application using Android. *International Journal of Computer Science and Mobile Computing*, 4(3), 142-149.

Larson, G. A & Owusu-Acheaw, M. (2012). Undergraduate student's satisfaction with library services in a faculty Library in University of Education, Winneba. *Library Ghana. Philosophy and Practice*. 9-24

Adeniran, P. (2021). User satisfaction with academic libraries services." International Journal of Library and Information Science. 3, (10), 209 – 216.

Punchoojit, L., & Hongwarittorrn, N. (2017). Usability studies on mobile user interface design patterns: A systematic literature review. *Journal of Advances in human-computer interaction*. www.hindawi.com>journals>ahci

Suduc, A.M., Bizoi, M., & Filip, F. G. (2010). User awareness about information systems usability. *Studies in Informatics and Control*, 19(2),145-152.

Kavuma, M. (2019). The usability of electronic medical record systems implemented in sub-Sahara African. *JMIR Human Factor*, 6(1);doi:10.2196/humanfactor.9317

Khatun, A. and Ahmed, S.M.Z. (2018). Usability testing of open-source integrated library system: A task-based study of Koha OPAC interface. *The Electronic Library*, 36(8). doi:10.1108/EL-03-2017-0049

ISO 9241-11(2018). Ergonomics of human-system interaction- part 11: Usability: usability: Definitions and concepts. www.iso.org.>obp

Jayaletchumi, T., Sambantha, M., Suhaimi, B., & Mohd, N. (2014).Developing Usable Software Product Using Usability Risk Assessment Model. International Journal of Digital Information and Wireless Communications (IJDIWC), 4(1), 95-102.

Khajouei, R., & Farahani, F. (2020). A combination of two methods for evaluating the usability of a hospital information system, *BMC Medical Informatics*

Adeyinka, T. Neemah, D., Olaniyi, O.T., Ajala, M. S. & Adebisi, O. S. (2017). Assessment of the Use of Koha Library Software in four Selected University Libraries in Nigeria. *Journal of Applied Information Science and Technology*, 10 (2), 1-10

Ashutosh, T., & Ashish,S. (2012). Online Library Management System. *IOSR Journal of Engineering (IOSRJEN).* 2 (2), pp. 180- 186