

Evaluation of the Effectiveness of an Open Source Integrated Management Information Systems in University Libraries: A Case Study of Strathmore University Library, Kenya

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Abstract: In this age of information explosion no library is able to satisfy all the needs of its users due to various constraints. It is because of this phenomenon that the concept of library IMS has developed. To achieve this, those who are responsible for the libraries should take into account their active and passive users. Furthermore, not only the academicians who make use of the libraries but also those who do not make use of them should be considered. It is against this background that this study main purpose was to evaluate the effectiveness of the use of opens source Integrated Management Information Systems (MIS) in Libraries, Strathmore University as a case. The objectives of the study were: to determine the effectiveness of open source integrated information management system in use at Strathmore university library, to find out the users' attitudes towards the integrated management information system at Strathmore University Library', to find out the challenges facing the integrated management systems in Strathmore university and suggest recommendations that would help in improving the use of Koha at Strathmore University Library. The study utilized a case study and was carried out within Strathmore University. The study found out that the integration of information management system in the provision of library service is to a great degree perceived to be effective. However, there was need for improvement. The findings further revealed that, most members of staff and students have positive attitudes towards the use of Koha at the Strathmore University library. This implies that they would appreciate being trained to use it and support any efforts to improve the system. The study concluded that there were still enormous challenges in integration of the management information system in Libraries due some reasons for instance the constant change of software, internet failure and the lack of technology know how among some clients. The study recommended that there is need for continuous training to students and staff to keep then abreast of the technological changes of integrated information systems and innovative strategies of dealing with the challenges associated with Koha.

Keywords: library IMS, Libraries, Strathmore University Library

INTRODUCTION

Academic libraries are undergoing rapid change as they come to terms with, and seek to exploit for their users, the networked information environment. In less than two decades they have moved from the use of computers for what was called 'housekeeping' through mediated exploitation of commercial 'on-line' services to the present position where digitized information is an integral part of their stock-in-trade (Brophy and Wynne 1997). Strathmore University Library comprises of a new library complex with a floor space of 2500 square metres. There is also a university library reading room that has a floor space of 450 square metres. Strathmore University has integrated MIS in its library through the use of the Koha system.

Koha is the first open-source Integrated Library System (ILS) in use worldwide. Its development is steered by a growing community of libraries collaborating to achieve their technology goals. Koha's impressive feature set continues to evolve and expand to meet the needs of its user base. However the effectiveness of its integration at Strathmore University by staff and students has not been evaluated. This coupled by the need to come up with recommendations for its successful implementation necessitated this study.

LITERATURE

Karuppu [1] examined the potential of MIS (Management Information Systems) in academic libraries, with particular reference to the academic

libraries in Sri Lanka. The conclusion of the study was that MIS in libraries must respond to the needs of library managers, especially their role in determine efficiency, effectiveness and competitiveness. The study recommended that: Managers need to be trained in relevant skills (computing, statistics) so that efficient MIS can be established. Curriculum in library schools should address this need. Senior managers need to demonstrate serious commitment to promoting and maintaining efficient MIS.

The degree of professional status of any field is directly related to society's knowledge and appreciation of that field's work. Along with published research, the exchange of ideas and knowledge enriches the profession. Not every individual has the ability to stand before a crowd and speak effectively on information and records management. Every individual does, however, have the ability to communicate experiences, lessons learned, knowledge, and values. Practitioners should take whatever public-education opportunities present themselves to portray the achievements and benefits of information and records management in an accurate, engaging, and informative manner [2]. Using effective information and records management principles and practices, the professional provides service at the highest level of competence. One factor differentiating a professional from other employees of an organization is that a professional is able to separate professional responsibility and judgment from personal feelings and loyalty. This serves the employer's or client's best long-term interests. Anything less demeans the practitioner and, by extension, the profession.

Document management systems must include electronic records management functionality and be

capable of providing for the archiving of electronic records. In the United Kingdom, the Information Technology Strategy Board for both Houses has appointed a Document Management Systems Group to assist the development of a strategy for electronic information and records management; to review emerging standards; and to advise on proposals for document management systems [6].

The primary objective of libraries is to organize and provide access to information. This objective will never change, although the format and the methods that are used can change dramatically, providing new opportunities and challenges. Higher education, scholarship, technology and economics, which are all interrelated, play an important role in understanding the needs of libraries. A librarian who is aware of all of these three technologies can face the challenges of the new millennium [5].

For the information scientist, therefore, the library is only one of several sites for information storage and usage. Information scientists may study information stored in archives, switching centers (systems that establish connections between electronic communications, such as e-mail), or institutions such as schools and businesses. Information scientists work in such places as medical centers, computing companies, university and corporate research institutes, and indexing companies. They are concerned with a wide range of activities, from creation of computer file structures to experimental tests of interactive communication between computers and humans (Microsoft Encarta 2006). The figure 1 shows the relationship between the library and the user.

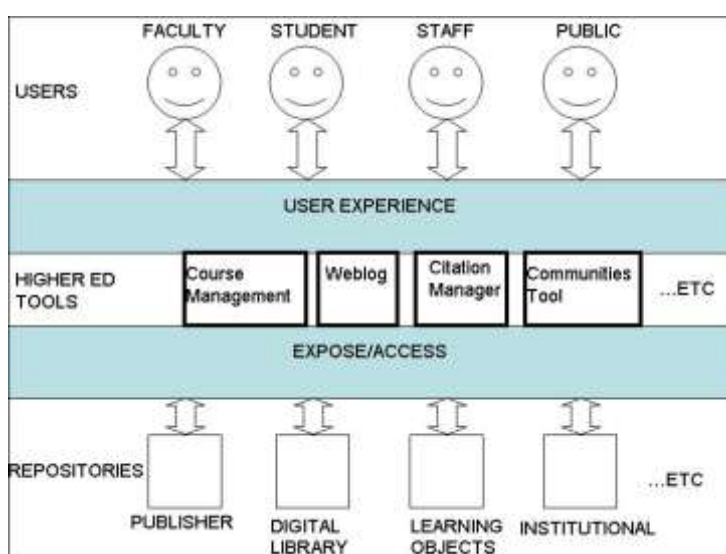


Fig-1 : Relationship between library and users
(Adapted from Mellon 2004) [4]

METHODOLOGY

The study utilized a case study. The design was appropriate in this study because it allowed the researcher to assess the research variables as they are and present them without distorting facts. The study covered Strathmore University. The University has integrated ICTs in most of its operations. Therefore it was an appropriate case that would help the generalization of the findings to reflect the state of integration of management information systems in academic libraries. The study targeted Strathmore University students and library staff. Multi-stage sampling was used where first stage was the selection of library staff for inclusion. The second stage involved the selection of students for inclusion. Stratified random sampling was used to select number of respondents per academic. A total of 30 respondents were sampled for the study, 20 students and 10 members of staff. Purposeful sampling method was used. The researcher prepared and administered two questionnaires. The first was administered to the library staff while the second was a likert scale to test students' attitude towards the effectiveness of the MIS. A pilot study was conducted to test the reliability of the instruments. The data obtained from the pilot study was tested using cronbach's alpha reliability test. A reliability of 0.80 was deemed acceptable [3]. The data obtained was coded and analyzed using descriptive statistics such frequencies and percentages. The results were presented in tables, cross tabulations, graphs and pie charts. The statistical package of Social science (SPSS) was used for analysis.

RESULTS

Effectiveness of the integrated information system:

In order to find out the effectiveness of the Integrated Information System (IIMS) the respondents were asked to rate the effectiveness of the system as effective, slightly effective, or not effective. The question was directed both to staff and students. The findings revealed that 70% of the members of staff rate the integrated management system as effective while 20% rate it as slightly effective with 10% rating it as not effective (Figure 2). These results imply that the Koha system is not perceived to be 100% effective. There is thus need to improve on its usage.

On the other hand, The findings showed that 60% of the students rate the integrated management system as effective while 30% rate it as slightly effective with 10% rating it as not effective (Figure, 3). The findings are consistent with the finds from the perception of the staff. However fewer students feel that Koha is effective. Generally, the trend shows that the degree of effectiveness differs and there is need for corrective measures.

Users' attitudes

The results of the study revealed that the students' attitudes toward the MIS was distributed on the five point likert scale but with the majority inclined to the affirmative attitude. The specific attitudes on individual items are presented in Table 1. The positive attitudes towards the use of Koha at the Strathmore University library is an indication that they would appreciate being trained to use it and support any efforts to improve the system.

Libraries Significance

When respondents were asked to state the significance of the library, a high proportion (80%) of respondents stated that it offers opportunity for remote access. A significant proportion (74%) said that it improves accessibility and wider access of different information while the rest stated benefitting them in gaining knowledge and skills and in information sharing (Figure 4).

Challenges facing the integrated Management system

To establish the challenges facing the integrated management system, the respondents were presented with an open ended question where they were asked to list the challenges facing the use of the integrated management system. The challenges were organized into themes and presented and those emerged were;

Network failure: The respondents also argued that constant network failure was an impediment in the provision of and integration of information technology in the management and provision of service in the university library.

Clients depend on IT specialists: The respondents observed that some of the clients who use the library have little or no knowledge of computer usage. This was thus a major challenge because such clients could not access materials electronically without seeking assistance.

Constant change of interface: The respondents further asserted that there were constant changes on the computer interface and thus the need for refresher training for members of staff. The challenge of interface change was singled out as affecting both staff and clients.

Mechanical break down and maintenance cost: The respondents also reported that the implementation of the integrated information systems depended on machines and more specifically computers. The constant breakdowns and invasion by viruses are thus a challenge the cost notwithstanding.

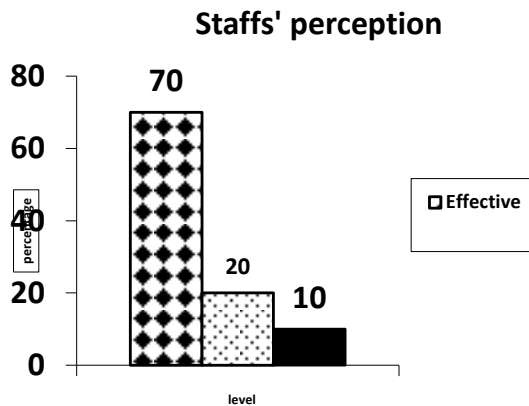


Fig-2: Staffs' perception of effectiveness

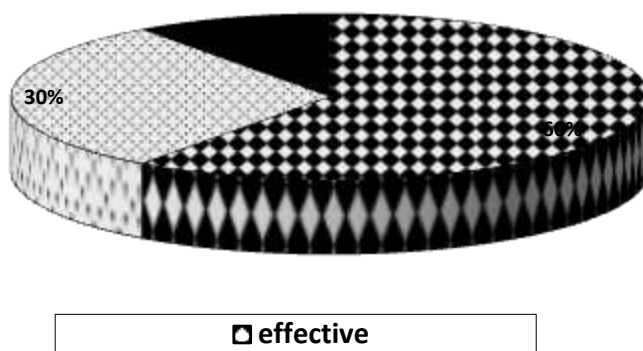


Fig-3: Students Perception

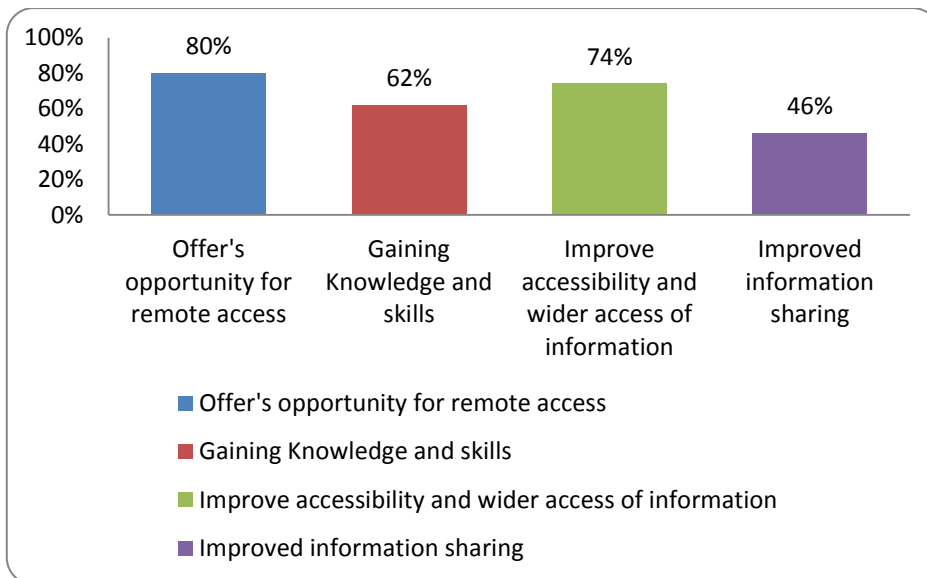


Fig-4: Significance of the library

Table 1: Students Attitudes Towards the integrated Information Management Systems

	Percentage Response
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STATEMENT	S.A	A	U	D.A	S.D
The integration of MIS has improved access to information in the library	60	20	10	5	5
The integration of MIS has improved storage of information in the library	69	21	7	2	2
The integration of MIS has improved retrieval of information in the library	80	10	0	6	4
The integration of MIS has improved general administration in the library	60	20	10	5	5
The integration of MIS has not made a significance gain in the management of the library.	5	6	4	10	75
The MIS is a waste of time	2	2	7	21	68
The MIS does not make a difference in the library	2	3	6	20	69

CONCLUSION

The study aimed at establishing the effectiveness of the integration of information technology in library service provision. The study focused on the use of Koha, which is open source software in use in the library. It was generally observed that the integration of information management system in the provision of library service at Strathmore University is to a great degree perceived to be effective. Nonetheless there is need for improvement. In addition, the majority of the respondents had positive attitudes towards the use of Koha at the Strathmore University library. This indicated the need of training for the users on the use and support in order to improve the system.

Libraries offer a wide range of databases access. Libraries having been established in various places that the student's community can access have greatly improved their ability to organize and synthesize information for their use. The free knowledge and skills that are given at the libraries have equipped users on a diverse range of aptitudes in access of information.

The most challenges facing the integration of Management information systems included net work failure. The respondents also argued that constant network failure was an impediment in the provision of and integration of information technology in the management and provision of service in the university library. The other challenge was that some of the clients who use the library have little or no knowledge of computer usage. This was thus a major challenge because such clients could not access materials electronically without seeking assistance. Moreover, there was reported a constant changes on the computer interface and thus the need for refresher training for members of staff. The challenge of interface change was singled out as affecting both staff and clients.

The study therefore concluded that, the integration of information management system in the provision of library service is to a great degree perceived to be effective. However there emerged a need for improvement. Most members of staff and students expressed a positive attitude towards the use of

Koha at the Strathmore University library. There was need to commence a training on the use of the system to improve on the service delivery. The integration of the management information system faces many challenges and there is therefore need to come up with strategies that would minimize the impact of the challenges to the users.

RECOMMENDATIONS

The following recommendations based on the research results and conclusions were that Strathmore University should introduce continuous training to both students and staff to keep then abreast of the technological changes of integrated information systems. Other institutions should use information management systems in their libraries (such as Koha) since this has been proved to be more effective and efficient. Strathmore University should look for innovative strategies of dealing with the challenges associated with Koha.

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