EVALUATION OF FACTORS INFLUENCING THE ACCEPTANCE OF KOHA LIBRARY SOFTWARE IN SELECTED ACADEMIC LIBRARIES IN UGANDA.

A Thesis

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of Masters of Management Information Systems

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DECLARATION A

"This thesis is my original work and has not been presented for a degree or any other academic award in any University or Institution of Higher Learning"

ALI KOBA ELIZABETH Elizabeth

Name and Signature of Candidate

10TH DECEMBER 2013

Date

DECLARATION B

I confirm that the work reported in this thesis has been prepared by the candidate under my supervision.

Dr. Esther B. Lwanga

Name and Signature of Supervisor

Date: 10th December, 2013

DEDICATION

To my beloved mother Babirye Alice and my daughter Mukisa Frances Eldreda.

I love you beyond any expression!

ACKNOWLEDGEMENT

First of all, I am grateful and thankful to the Almighty Lord for the gift of life, protection, blessings, good health and the wisdom He has always accorded me throughout this journey of life. He enabled me to cope up with the challenges that I always encountered and above all enabled me to accomplish my studies and this thesis.

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ABSTRACT

The study aimed at evaluating the factors that influence the acceptance of Koha library software in academic libraries. The specific objectives included; (1) to determine the socio-demographic characteristics of respondents in terms of age, gender, highest level of education and number of years worked with the library; (2) to investigate how system productivity influences the acceptance of Koha library software in academic libraries; (3) to determines how ease of use influences the acceptance of Koha library software in academic libraries; (4) to ascertain how peer pressure influences the acceptance of Koha library software in academic libraries; (5) to identify how existence of resources influence the acceptance of Koha library software in academic libraries; (6) to establish whether there is a relationship between system productivity, ease of use, peer pressure and existence of resources and acceptance of Koha. Research devised self administered questionnaires which were constructed guided by prior research questionnaires prepared by Anderson and Schwager, Oye, Iaha and Ab.Rahim (2012) and Venkatesh, Thong and Xu 2012.) were used to collect data from a sample of 103 and 50 interviews were carried out from respondents who were purposively selected from International Health Sciences University, Uganda Christian University, Uganda Management Institute and Nkumba University libraries. Descriptive data analysis in terms of frequencies, percentages and means was carried out to analyze the demographic characteristics of respondents and to establish how factors influence Koha acceptance. Correlational data analysis using Pearson Product Moment Correlation was also carried out to establish the relationship between the factors; system productivity, ease of use, peer pressure and existence of resources and acceptance of Koha. The descriptive data analysis results indicated that most of the respondents were male with a percentage of 56.8%, majority of the respondents in the study were in the age category of 25-29 years 39.5%, libraries are dominated by Bachelors of library and information science holders with a percentage of 49.4%, majority of the respondents have worked with the libraries between 1-3 years and have a percentage of 44.4%. Most of the respondents rated productivity highly with a mean of 4.20 and the least ranked factor was Peer pressure with a mean of 3.12. Koha acceptance was observed in the four academic libraries where research was carried out. They are using almost all the modules to carry out library operations. Respondents ranked using the cataloguing module to catalogue information materials highly with a mean of 4.46 and using the acquisition module to make orders from vendors, budgets and get pricing information was ranked least with 1.07. Correlational data analysis indicates that the $H_0 1$, $H_0 2$ and $H_0 4$ were rejected with their levels of significance being 0.05 and below except $H_0 3$ whose hypothesis was accepted. $H_0 3$ was rejected because critical value was above the level of significance of 0.05. On the overall, factors and acceptance of Koha are significantly related with Sign. =0.000). Regression analysis was used to measure the strength of the relationship and results showed that factors significantly influence the acceptance of Koha with R=.632, P=.439 F=12.641, Sign=0.000 and the adjusted R square of .638. The factors influence the variations in acceptance of Koha by 63%. The remaining 37% is contributed by other factors among which include anxiety, domain knowledge and computer literacy.

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LIST OF ACRONYMS

ANSI	:	American National Standards Institute
CSS	:	Cascading Style Sheets
EIFL	:	Electronic Information for Libraries
FLOSS	:	Free/Libre/Open Source Software
FOSS ILS	:	Free and Open Source Software Integrated Library System
PHP	:	Hypertext Preprocessor
IHSU	:	International Health Sciences University
ILMS	:	Integrated Library Management Software
ILS	:	Integrated Library System
ICT	:	Information Communication Technology
IT	:	Information Technology
MARC	:	Machine-Readable Cataloging
NISO	:	National Information Standards Organization
NK	:	Nkumba University
OPACs	:	Online Public Access Catalogues
OSS	:	Open source software
RSS	:	Rich Site Summary
SQL	:	Structured Query Language
UCU	:	Uganda Christian University
UMI	:	Uganda Management Institute
UTAUT	:	The Unified Theory of Acceptance and Use of Technology
XHTML	:	Extensible Hypertext Markup Language

CHAPTER ONE

THE PROBLEM AND ITS SCOPE

Background of the Study

Libraries are among the early institutions to consider using information technologies. For example in 1958, the Library of Congress considered using computers and in the same year the Director of the National Library of Medicine (NLM) in the United States, Dr. Frank B. Rogers, began looking into computer use, and during the early 1960s, the NLM hired General Electric's Defence Systems Department to develop a new method of using computers for composition, storage, retrieval and printing services for Index Medicus which resulted in the development of MEDLARS (Medical Literature Analysis and Retrieval System) (Adams et. al. n.d.). The evolving information and knowledge-based economy with an increasing emphasis on the important role of information and knowledge has had an impact on every form of organization and every form of business in some way or another. This coupled with advances in technology has resulted in the need for substantial changes to be made in the strategic and operational levels on organizations. The use of information communication technology in libraries has become inevitable in the era of information explosion and wide spread use of digital information resources (Adeyomoye 2008).

Academic libraries in Nigeria attempted to automate library functions as far back as 1970; 1990 and the attempt still continues. TINLIB software was introduced in leading academic libraries including those of the University of Ibadan and Ahmadu Bello University library but due to some technical and organizational problems, no single academic library in Nigeria in general and in the Southwestern Nigeria in particular uses the TINLIB software today. Libraries in Nigeria are still on the race to make their services totally ICT- based. The MacArthur report of 2005 titled "developing strong university libraries in Nigeria", points out the need to develop effective information delivery system as a key component of university teaching and learning, and modern technology greatly enhances such system. The report also points out lack of appropriate funding system to acquire relevant information and

communication tools; lack of infrastructure to provide access to electronic information as some of the factors that hindered the development of strong University libraries in Nigeria. (Haliso, 2011)

Libraries in Eastern, Southern and Central Africa have not been left out on the adoption and use of ICTs in the provision of library and information services. University libraries in the sub-region especially those in South Africa have been leading the way in the adoption and use of ICTs in libraries in sub-Saharan Africa. Slowly the use of ICTs has spread to other types of libraries, that is; national libraries and public libraries (Chisenga 2004). However, there are disparities in the numbers of ICT facilities available and in the levels of ICT usage among the libraries within the same country and between countries in the sub-region (Boden and Diana, 1993). The disparities can be attributed to a number of factors, among them the lack of awareness about the opportunities provided by modern ICTs to libraries and several constraints faced by librarians/libraries when implementing ICT projects. To encourage users to accept and continually use digital libraries, library designers and managers need a good understanding of the factors that influence users' adoption. A user's intention to adopt a new technology such as a digital library is influenced by a variety of factors (Lee et. al., 2003). Among these factors, performance expectancy (PE) and effort expectancy (EE) of the new technology are widely accepted as the two key antecedents to adoption (Venkatesh et al., 2003). Researchers of technology adoption have identified two key user beliefs that influence adoption of information technology, which together make up the Technology Acceptance Model (TAM). Expectancy of the amount of effort required in using a technology (EE) and expectancy of the performance of the technology (PE) (Venkatesh et al., 2003). These two beliefs which represent different aspects of the perceived value of information are determined by a variety of factors including user perceptions of system characteristics, computer-related personal traits and general personalities (Hong et al., 2002; Venkatesh, 2000). For digital libraries, effort expectancy and performance expectancy are also confirmed as direct antecedents of user adoption intentions (Hong et al., 2002; Kim, 2006).

Digital libraries and electronic technologies have facilitated communication among the institutions of higher learning. However, there are still a number of factors that limit this development, including limited satellite time, connection costs and lack of band width. Uganda's power supply is unreliable in most parts of the country and almost non-existent in rural communities. Furthermore, education and training in the use and adaptation of information communication technology is needed as well as a policy and regulatory environment for effective delivery of information communication technology services in Uganda. (Magara 2002). In Uganda, thirteen University libraries have adopted Koha library software. These include Uganda Management Institute, St. Mbaaga Major Seminary, Nkumba University, Makerere University Business School, Uganda Martyrs University (UMU), Ndejje University, Kyambogo University, International Health Sciences University, Uganda Christian University, Kabale University, National Library of Uganda, Uganda Bureau of Statistics and Kampala International University libraries. They use the system to carry out the various library operations which include acquisition, cataloguing, circulation, OPAC, among others. They have learnt that the path to becoming a strong and interactive research library must start with accepting an integrated library management system; such as the FOSS Koha software. However, there are significant barriers to the development of modern ICT infrastructure in many libraries, including prohibitive license fees, inaccessible or outdated technology and lack of relevant IT skills for successful installation, maintenance and use (Kiwanuka and Bukenya, 2012).

Statement of the Problem

Technology acceptance in academic libraries in Uganda is reported to be low despite its significant benefits. Tibenderana et al. (2010) established motivating or inhibiting factors that influence the acceptance of technology. Attitude, self-efficacy, facilitating conditions, social influence, performance expectancy and effort expectancy were the mostly acknowledged factors considered to play a key role in shaping individuals' acceptance and usage of technology. Hence the need for the study to document empirically the relationship between the factors: productivity of

Koha, ease of use, peer pressure and existence of resources and acceptance of Koha library software in selected academic libraries in Uganda.

Purpose of the Study

The main purpose of the study was to evaluate the factor influencing the acceptance of Koha library software in academic libraries in Uganda.

Research Objectives

General: This study aimed at evaluating the factors influencing the acceptance of Koha library software in selected academic libraries in Uganda with reference to International Health Sciences University, Uganda Christian University, Uganda Management Institute and Nkumba University libraries.

Specific:

1. To determine the socio-demographic characteristics of respondents in terms of age, gender, highest level of education and number of years worked with the library.
2. To investigate how system productivity influences the acceptance of Koha library software in academic libraries.
3. To determine how ease of use influences the acceptance of Koha library software in academic libraries.
4. To ascertain how peer pressure influences the acceptance of Koha library software in academic libraries.
5. To identify how existence of resources influence the acceptance of Koha library software in academic libraries.
6. To establish whether there is a significant relationship between system productivity, ease of use, peer pressure and existence of resources and acceptance of Koha.

Research Questions

This study answered the following questions:

1. What are the socio-demographic characteristics of the respondents in terms of; gender, age, highest level of education and number of years worked with the library?
2. How does system productivity influence the acceptance of Koha library software in academic libraries?
3. How does ease of use influence the acceptance of Koha library software in academic libraries?
4. How does peer pressure influence the acceptance of Koha library software in academic libraries?
5. How does the existence of resources influence the acceptance of Koha library software in academic libraries?
6. Is there a significant relationship between system productivity, ease of use, peer pressure and existence of resources and acceptance of Koha?

Null Hypotheses (H_0)

$H_0$1. There is no significant relationship between system productivity and acceptance of Koha library software in academic libraries.

$H_0$2. There is no significant relationship between ease of use and acceptance of Koha library software in academic libraries.

$H_0$3. There is no significant relationship between peer pressure and acceptance of Koha library software in academic libraries.

$H_0$4. There is no significant relationship between existence of resources and acceptance of Koha library software in academic libraries.

Scope

Geographical Scope

The study was conducted from International Health Sciences University, Uganda Christian University, Uganda Management Institute and Nkumba University libraries. This was because they are among the academic libraries in Uganda that have accepted and are using the software to execute their library operations. International Health Sciences University (IHSU) is a private non-residential university in Uganda. Its main campus is at plot 4686 St. Barnabas Road, Namuwongo, South-east of Kampala. IHSU's campus is located on the top floor of the building that houses International Hospital Kampala. Its library has a collection comprising of over 20 online databases of journals and e-books. The annual subscriptions are maintained to ensure continuous updates to satisfy the users information needs as they work together to make a difference in health care through research and education.

Uganda Christian University is a private institution of higher education with approximately 8,000 students. Its main campus is located in the town of Mukono, approximately 26 kilometers from the capital city of Kampala, Uganda. The University's goal in teaching is to facilitate learning, not simply to help students pass exams. It aspires to be a centre of excellence in the heart of Africa. Uganda Christian University library provides the information resources required by the University staff and students for teaching, studying and carrying out research. It offers information literacy so as to help students develop the ability to recognize the needed information, locate, evaluate and use it in their future careers.

Uganda Management Institute is a government owned national center for training, research and consultancy in the field of management and administration in Uganda. It is one of the eight public universities and degree awarding institutions in the country. It is located on the Kampala-Jinja Highway, 2 miles (3.2 km) east of the Uganda's capital city, Kampala. Its aim is to strengthen the management and institutional capacity of the public, private and non-governmental sectors in Uganda and beyond by offering a blend of short and long courses for all management levels.

It facilitates conferences, seminars, workshops and provide research, consultancy and distance learning services. It has an established vision to be a world class management development institute and a stated mission to excel in developing management capacity.

Nkumba University is a non-profit, non-denominational institution providing an enabling environment for students to achieve competence, creativity, confidence and character so as to think critically and act responsibly in an increasingly competitive national and global environment. It is located 27 kilometers along Kampala-Entebbe Highway, which is 10-minutes drive from Entebbe International Airport. It has a library that houses a modern information technology training suite, an assortment of books and e-resources. It aims at providing the university community a wide access to information by incorporating information communication technologies in all library operations in order to enhance the position of Nkumba University as a centre of academic and professional excellence.

Theoretical Scope

The Unified Theory of Acceptance and Use of Technology (UTAUT), (Venkatesh et al., 2003) was used as the theoretical foundation of this study. UTAUT theory originates from eight acceptance and use of technology theories. The UTAUT aims to explain user intentions to use an information system and subsequent usage behavior. It holds that four key constructs (performance expectancy, effort expectancy, social influence and facilitating conditions) are the direct determinants of usage intention and behavior. It theorizes that intention to use a technology is influenced by the above four constructs. (Venkatesh et. al., 2003).

Content Scope

The study focused on evaluating the factors influencing the acceptance of Koha library software in academic libraries and determining the relationship between the independent variable (factors) and the dependent variable (acceptance of Koha in academic libraries).

Time Frame

The study was conducted for a period of twelve months, starting from January 2013 until December 2013.

Significance of the Study

To academic libraries

The research results will enable library designers, managers and librarians to have a good understanding of the factors that influence user's acceptance and subsequent use of the technology before they embrace the technology. This is crucial since the use of ICT in academic libraries has become inevitable in the era of information explosion and wide spread of digital information resources. Digital libraries have become an increasingly important way in providing library services to users.

To future researchers

This study was conducted so as to increase on the existing knowledge about the factors that influence the acceptance of technology. It will allow other academicians and researchers to undertake further research in the same field based on the findings of this study.

Operational Definitions of Key Terms

The key terms in the research topic were concisely defined by characterizing their functional use. For the purpose of this study, the following terms are operationally defined as follows:

Evaluation is the systematic determination of a subject's merit, worth and significance, using criteria governed by a set of standards.

Factors refer to elements that contribute to a particular result or situation.

Acceptance is the act of accepting, receiving what is offered, with approbation, satisfaction or acquiescence.

Koha is a web-based open source integrated library system with a database used world-wide by libraries.

Library software is an enterprise resource planning system for a library that separates 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)
- cataloging (classifying and indexing materials)
- circulation (lending materials to patrons and receiving them back)
- serials (tracking magazine and newspaper holdings)
- the OPAC (public interface for users)

Academic libraries are libraries attached to higher institutions of learning with the aim of disseminating and storing information to support the teaching and research needs of staff and students.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Introduction

This chapter comprises of concepts, opinions and ideas from previous researchers and reviewed related literature on the issues related to the topic under study.

Concepts, Opinions, Ideas from Authors/ Experts

Factors

These are elements contributing to a particular result or situation. With reference to this research, these factors included the elements that are influencing the acceptance of Koha library software in academic libraries and these include system productivity, ease of use, peer pressure and existence of resources

Koha

Koha is a Maori word meaning a special kind of gift, most accurately defined as a gift with expectation or donation. It is the first free and open source software library automation package. Its source code is available to the general public for use and modification from its original design. Koha was initially developed in New Zealand in 2000 by Katipo Communications Ltd. and first deployed for Horowhenua Library Trust. Currently it is maintained by a team of software providers and library technology staff from around the globe as open source software. Being open-source software, there is no one single vendor responsible for supporting users of the Koha suite of programs. The user interface modules in Koha are written in PHP; a web-oriented programming language and supports only international languages. It is operable in English, Spanish, Arabic and French with other languages being developed and translated by the community members and it is released under a GNU General Public License (GPL). Koha is a well-established free and open source software integrated library system (FOSS ILS) and is one of the most successful library FOSS tools currently (Kumar and Jasimudeen, 2012)

According to Egunjobi and Awoyemi (2012), Koha is a web-based open source Integrated Library System with a structured query language database used world-wide by libraries. It is an integrated library software with basic features needed to run a library like Online public access catalogue (OPAC), web-based circulation interface, user records management, online renewals and reservations of item by users and branches. Since the software is web-based it is easy to borrow a book in one branch and return it in another branch. It maintains the borrower's history, comments and tags. Users can comment and review books, tag them and view their reading history. They can also view their records and make purchase suggestions and customize search. A library can choose the fields they want on their search form. For example a search by author, title, subject and keywords. It is a comprehensive tool including modules for circulation, cataloging, acquisitions, serials, reserves, patron management, branch relationships and more, which makes it a more desirable system than software that offers merely cataloging capabilities. It was built using library standards and protocols that allow Koha to interact well with other existing workflows from different systems. Koha works with standards found through OPAC and is compliant with XHTML, CSS and JavaScript, making it's platform independent. It can be used for Linux, Unix, Windows and MacOS platforms. It is designed to be fully integrated into any website. You can tailor your catalog to fit special library concerns or to highlight different portions of your collection. Koha provides an RSS (Rich Site Summary) feature for new acquisitions, a patron use feature, which distinguishes it from other systems. Koha includes features for serials management and allows for multiple updates to occur simultaneously allowing library staff to work on Koha at the same time in different modules without worrying about kicking their coworkers off the system (Egunjobi and Awoyemi, 2012)

Koha has grown into a library management system that supports the wide-ranging needs of a busy and fast-growing library. It is used in very many libraries throughout the world. (Singh and Sanaman, 2012). Clark (2008) identifies Koha as open source software which is gaining a corresponding increase in interest among public, school and special libraries in the United States and Canada. It is a potential

resource for librarians in the behavioral and social sciences field. It is being used in provision of all library operations through its core module functionalities which include;

Acquisition module; Koha has a simpler and user-friendly acquisition module. This module assists librarians with both acquisitions and more generally with budget management. Koha has very simple and straight options in acquisitions administration. For example it has the currencies and exchange rates, budget heads, budget sources/funds, budget planning/allocation, vendors and managing suggestions by new patrons. Koha in acquisitions system preferences includes an acquisition policy for creating an item; currency and gist along with printing (Clark 2008).

Cataloguing module; this module enables library staff to capture details of all library items. It is a MARC compliant, meaning data entry and exchange is greatly simplified. This module provides various important options to make users aware and understand the overall functionality and its features to make effective workflow of the library by processing various types of materials such as audio, video, web pages, CD-ROMs and others like books, thesis, dissertation etc. The catalogue administration in Koha contains MARC (Machine-Readable Cataloging) bibliographic frameworks including Koha to MARC mapping, keywords to MARC mapping, MARC bibliographic framework test and authority types; classification sources which allows adding/editing of classification sources, classification filing rules and record matching rules. It processes items which are ready for technical processing and also allows copy cataloguing or importing of catalogue records. One can modify the records in Koha by editing bibliography from the search results on the cataloguing page. Koha has authorities for cataloguing and has cataloguing guides for bibliographic record cataloguing sheet, item/holdings record, cataloguing guide, handling on order items and holds which further automatically generate barcode (Clark 2008).

Circulation module; this module fully automates borrowing and item management, integrating with the OPAC such that users can see the items they are having. The circulation module in Koha has common functions and features used in

workflow by all types and size of library. This module enables the users an equal access to the resources of the library and also helps the staff to make decisions on the collection development, their maintenance, weeding out of unwanted or least used resources and the related ones. Koha also has functionality for checking items out, check out messages, check out warnings and email check out slips (Clark 2008).

Serials module; this module deals with the functionality related to publications, their subscriptions, their titles, registration, display of serials holdings in the online public access catalogue (OPAC) and many other related ones (Clark 2008).

OPAC/ searching functionality; Koha's Online Public Access Catalogue (OPAC) module provides a simple and clear interface for library users to perform tasks such as searching for, reserving items and suggesting new items. OPAC enhances the overall functionality of the library in terms of users, staff and resources. The catalogue for library holdings plays an important role in access and use of resources. Koha provides normal search key word option and advanced search/modify search options in OPAC interface and it provides for guided search. Koha has more enhanced/enriched content which enables tagging, including input on list/detail. It also enables comments and reviews. Through Zotero it allows to save and generate bibliography and customize RSS feeds. Patron accounts in Koha have the facility to view OPAC patron details, OPAC password change, OPAC reading history (Clark 2008).

Reporting functionality; Koha has a report wizard for custom report, acquisitions statistics, patron statistics, circulation statistics, serials statistics and loss items. Report generation function is very important in tacking the statistics of performance for each department in a library. Patrons with the most checkouts, most circulated items, patrons with no checkouts, items with no checkouts, catalogue by item type, lost items, average loan time and dictionary facility which offers flexible reporting options from pre-built report to guider reports wizard and SQL queries for maximum flexibility in Koha (Clark 2008).

According to Egunjobi and Awoyemi (2012), the major attraction for the adoption of Koha in running the library has among others basic features; the circulation module; is a web-based circulation interface that can handle issues, returns, transfers and user records management. It allows management of detailed information about each person that is registered as a library user, online renewals and reservations of item by users. Library patrons can self renew their checkouts and make reservations that reduces the traffic at the circulation desk and has freed some circulation staff for other duties, borrower history comments and tags. It has an advanced search module which enables users to comment and review books, tag them and view their reading history. They can also view their records and make purchase suggestions, customizable search which enables libraries to choose the fields they want on their search form.

Its acquisitions module contains options for orders from vendors, budgets, and pricing information. The serials module allows easy cataloguing of journals and users can view holdings information through the OPAC, book bag and virtual shelves. Users can have a virtual library where they keep books specific to their needs. It has a multi-lingual OPAC support that allows patrons to view the OPAC in different languages depending on the language chosen by the library. Overdue fines and notices which facilitate management of overdue fines and notice that can be sent to users by e-mail, barcode printing and reader which support the use of barcodes thereby removing the chances of human error, security module that provides effective security measures to protect unauthorized persons from accessing the system. For example, registered patrons are required to sign in with their user name and password to perform certain functions on the library database and reports and statistics that generate management reports and statistics in cataloging, acquisitions, serials and circulation (Egunjobi and Awoyemi 2012).

Library Software

The Library Software is also known as a library management system (LMS). It usually comprises of a software that interacts with that database and two graphical user interfaces (one for patrons and one for staff). Library software separates software functions into discrete programs called modules, each of them integrated

with a unified interface. Each patron and item has a unique identification in the database that allows the ILS to track its activity. Larger libraries use ILS to order and acquire, receive and invoice, catalog, circulate, track and shelve materials. Examples of modules include:

- acquisitions (ordering, receiving, and invoicing materials)
- cataloging enables cataloguing (manual or through import-procedures) of new documents and modifying of existing ones.
- circulation module (enables the checking in and out of documents, reservations, renewals etc.)
- serial module (enables cataloguing of serials, tracking magazine and newspaper holdings)
- patron management module (holds data about the patrons: patron number, contact information, images etc.)
- search module (enables searching and browsing in the catalogue)
- OPAC module (the Online Public Access Catalogue gives the patron an online public interface for users)

The modules are used to manage internal and external resources including tangible assets, financial resources, materials and human resources. It performs library automation and collection development tasks broken down into different modules that are focused on simplifying tasks such as acquisition, cataloguing and circulation commonly done in any library. It is built on a centralized database and normally utilizes a common computing platform and consolidates all library operations into a uniform and enterprise wide system (Thuraiyappah, 2012).

Academic Libraries

These are libraries attached to academic institutions above the secondary level, serving the teaching and research needs of students and staff. These libraries serve two complementary purposes: that is; to support the academic curriculum and to support the research of the university faculty and students. These libraries today are complex institutions with multiple roles and host related operations and services developed over years. As fountains of knowledge, they provide services to support

the leaning and research activities to their parent organizations. In this respect, they have long stood unchallenged throughout the world as the primary source of recorded knowledge and historical records. They decide what focus they take in collecting materials since no single library can supply everything. Librarians examine the needs of students and instructors as well as the priorities of the college or university when deciding what to focus on. The collection is often the basis of a special collection department and may include original papers, artwork and artifacts written or created by a single author about a specific subject. These libraries carry out various operations which include acquisition, cataloguing, charging and discharging of information materials, accessioning and serial management. It is through these operations that they serve the teaching and research needs of students and staff (Campbell, 2006).

Theoretical Perspective

This study was guided by the Unified Theory of Acceptance and Use of Technology (UTAUT) formulated by Venkatesh et al., 2003. The UTAUT aims to explain user intentions to use an information system and subsequent usage behavior. Venkatesh et al. (2003) reviewed the eight most prominent models/theories that predict behavioral intentions and usage and developed a unified model that incorporates elements of the previous eight models and empirically validated the resulting model. The eight models that described the constructs in UTAUT include: the Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975), Theory of Planned Behavior (TPB) by Ajzen (1991), Decomposed Theory of Planned Behavior (DTPB) by Taylor and Todd (1995). Technology Adoption Model (TAM) by Davis (1989), Combined TAM and TPB (C-TAM-TPB) by Taylor and Todd (1995), the Model of PC Utilization (MPCU) by Thompson, Higgins and Howell (1992), the Diffusion of Innovation Theorem (DOI) by Rogers (2003) and the Social Cognitive Theory (SCT) by Bandura (1986).

Technology acceptance theory is based primarily on the Theory of Reasoned Action (TRA), proposed by Fishbein and Ajzen (1975). It postulates that beliefs influence attitude which in turn shapes a behavioral intention to engage in a

particular behavior. TRA is psychologically based and assumes that individuals are rational and will make systematic use of information available to them. The major determinants of this model are; individual's perception, attitudes towards the behavior and social influence. This model serves as the foundation for explaining and predicting human behaviors. Davis et al. (1989) applied TRA to individual's acceptance of technology. The TRA was extended to the Theory of Planned Behavior (TPB) by Ajzen and Fishbein (1985). Theory of planned Behavior (TPB) was formulated due to the limitations found in TRA. Ajzen and Fishbein (1985) proposed the theory of planned behavior by adding the construct of perceived behavior control to TRA. TPB has been used and validated by many studies in prediction of individual intentions and behavior of technology adoption. Taylor and Todd (1995) criticized TPB and TRA that the models required individuals to be motivated to perform certain behavior. According to Taylor and Todd (1995) this assumption could have problems when studying consumer acceptance behavior. The findings show that this theory explains between 21% and 37% variance in technology acceptance and user behavior. Eagle and Chairken (1993) suggested that there were other variables such as habit, perceived moral obligation and self identity which could predict behavior intentions in the context of TRA model which were not addressed when TPB was presented. The authors urge that as a replacement for volition control limitation found in TRA, TPB does not show how people should plan and how planning relates to TPB. This too had an extension, the Decomposed Theory of Planned Behavior (DTPB) by Taylor and Todd in 1995.

Decomposed Theory of Planned Behavior (DTPB) was discussed by two separate efforts by including constructs from the Diffusion of Innovation (DOI) perspective (Taylor and Todd 1995). The DTPB is an improvement of the Theory of Reasoned Action (TRA). Constructs of DTPB include perceived usefulness, complexity, compatibility, subject norms, self-efficacy and facilitating conditions. In their study, Taylor and Todd (1995) wanted to examine the appropriateness of TRA, TPB and DTPB as models to predict consumer behavior. Using structural equation model, results from the study showed that TRA and TPB were capable to predict behavior but the decomposed version was better at explaining the behavior. This

theory explained between 21% and 25% variance in technology acceptance and use behavior. Sheppars et al. (1988) observed that in order for a theory to predict behavior, attitude and intentions, there must be agreed action, target, context, timeframe and specify. The biggest limitation of this theory is that it only applies to behavior that is consciously thought out before hand. This theory can only explain between 19% and 30% variance of technology acceptance and use behavior.

Technology Acceptance Model (TAM) was designed by Davis in 1989 to predict information technology acceptance and usage. TAM used the theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975) as its theoretical base. Davis emphasized user's behavior and perceived ease of use of the technology. The model was extended to design TAM2 by including subjective norm as an additional predictor of intention in a mandatory environment. Combined TAM and TPB (C-TAM-TPB) is an integrated model which combined the constructs of TPB with perceived usefulness from TAM. Taylor and Todd (1995) added two factors to TAM; subjective norm and behavioral perceived control to develop a more comprehensive and important determinants use of information technology. The authors suggested that their model provides enough usage for experienced and non experienced accounting for some amount of the variance in intentions and use behavior. In this case, C-TAM-TPB can be used to predict future usage behavior even when the person has had no experience. The model of PC Utilization (MPCU) was designed in 1991 by Thompson and others. It predicted the usage of personal computers (PC). The core constructs in MPCU model are; effect towards use, complexity, facilitating conditions, job-fit, long term consequences and social factor.

Diffusion of Innovation Theory (DOI) is heavily used in many disciplines. Designed by Rogers (1983), the theory has five constructs which influence technology adoption that is; compatibility, complexity, observability, relative advantage and trialability. Moore and Banbasat (1991) adapted DOI determinants and developed seven constructs for individual technology acceptance. The constructs are compatibility, ease of use, image, relative advantage, result demonstrability, visibility and voluntariness of use. Despite its low prediction levels that range

between 7% and 39%, the theory has been extended to sociology, public health, communication, geography, education, education and many other disciplines, thereby surpassing several other models in that context. DOI theory tried to explain the innovation decision process factors which determine the rate of adoption and categories of adopters. The theory helps to predict the likelihood rate of adoption of an innovation. However, it was urged that the theory does not provide evidence on how attitude evolves into acceptance and rejection decisions and how innovation characteristics fit into this process. Social Cognitive Theory (SCT) was developed by Bandura (1986) to study human behavior. Compeau and Higgins (1999) used it to study computes usage. It included constructs of affect, anxiety, outcome expectation-performance, outcome expectation- personal and self efficacy.

It was from that review that with improvements, Venkatesh et al. (2003) integrated the eight models into UTAUT. Based on the constructs from the enumerate theories, Venkatesh et al., (2003) proposed a unified theory called UTAUT. This theory holds four key constructs/ determinants of intention and usage, that is; performance expectancy, effort expectancy, social influence and facilitating conditions, including four moderators of key relationships which are gender, age, experience and voluntariness of use. Empirical results of the UTAUT theory revealed that it was able to account for 70% of variance in usage intention (Venkatesh et al., 2003; Shaper & Pervan, 2007). This result to a large extent performed better than that of any of the original eight theories and their extensions (Venkatesh et al., 2003)

Performance Expectance (PE) in the UTAUT theory is defined as the degree an individual user believes that using the software will help in improving his/her performance. It was derived from a combination of five similar constructs including perceived usefulness (TAM/TAM2 and C-TAM-TAB), job-fit MPCU, extrinsic motivation (MM), outcome expectations (SCT) and relative advantage (DOI) (Venkatesh et al., 2003). Performance expectance was reported as the most influential among all the UTAUT in predicting behavioral intentions and remains

significant at all points of measurement regardless of environmental settings (Venkatesh et al., 2003).

Effort expectancy (EE) is the degree of ease the user feels with respect to the use of the software. This construct has theoretical foundation from the three constructs from different theories that relate to effort expectance (Venkatesh et al., 2003). These are perceived ease of use (TAM/TAM2) by Davis (1989), complexity (MPCU) and ease of use (DOI). It is generally believed to have a significant influence on technology acceptance as well as perception of usefulness. In validation of the UTAUT, effort expectance was significant in both voluntary and mandatory usage contexts although only for the first period of usage. Since practice increases one's comfort with software, effort-oriented constructs logically would become less salient after learning hurdles are overcome.

Social influence is defined as the degree to which an individual user perceives that it's important for others to believe he/she should use the software. Three constructs from six theories capture the concept of social influence (Venkatesh et al., 2003). The constructs are; social factors (MPCU), subjective norm (TRA, TAM2, TPB and C-TAM-TPB) and the image (DOI). It includes consideration of the person's perception of the opinion of others, his or her reference group's subjective culture and specific interpersonal agreements with others, as well as the degree to which use of an innovation is perceived to enhance one's image or status in one's social system (Venkatesh et al. 2003).

Facilitating conditions (FCs) are defined as the degree to which a user believes that an organizational and technical infrastructure exist to support use of the software. (Venkatesh et al., 2003). They represent organizational support and include the constructs of perceived behavioral control, facilitating conditions and compatibility from prior models. The theoretical foundation of facilitating condition is derived from four theories/ models used by Venkatesh et al.

2003. The effects of the above four constructs of the theory on behavior intention to use technology are moderated by gender, age, experience and voluntariness to use technology.

Conceptual Framework

Figure 2.1 provides a framework for a scheme factors which the research operationalized in order to achieve its objectives.

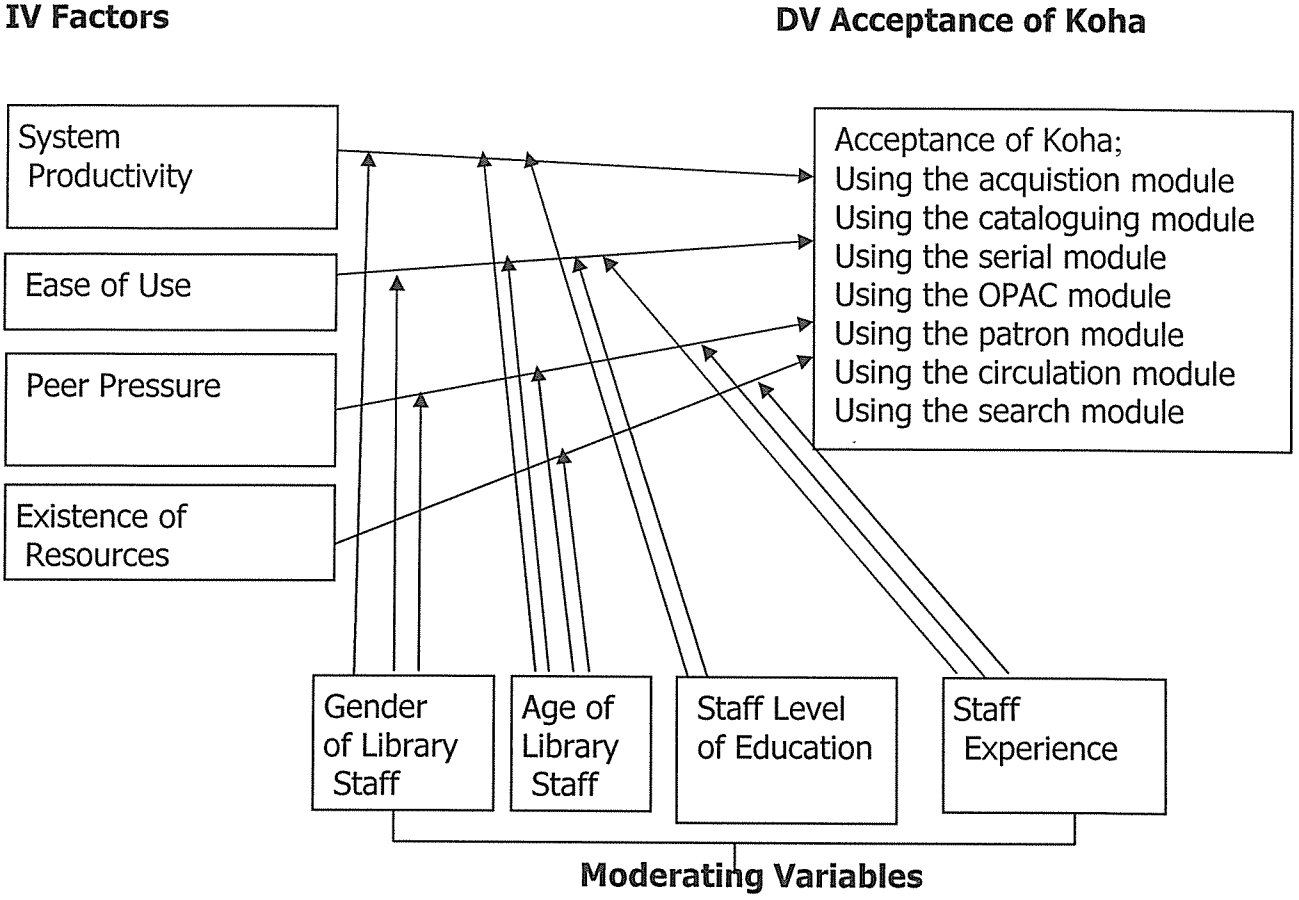

Figure 2.1: **Conceptual Framework of the Study:** Factors influencing the acceptance of Koha library software in academic libraries adopted from Fig. 1.1 using the UTAUT model by Venkatesh et al. 2003.

The conceptual framework depicted four major factors namely; system productivity, ease of use, peer pressure and existence of resources all conceptualized to influence the acceptance of Koha in academic libraries. System productivity influences acceptance of Koha library software in academic libraries in that academic libraries have to first consider whether Koha is useful and if it will improve on the quality of the library's work. Whether using Koha gives staff greater control over the library's work, whether Koha enables the library to accomplish tasks more quickly, whether it supports critical aspects of the library, it increases the

library's productivity, whether it improves job performance, allows the library to accomplish more work than would otherwise be possible, whether it enhances effectiveness on the job and whether it makes it easier to do my job.

Ease of use will influence the acceptance of Koha in academic libraries in that libraries will have to first consider whether Koha can easily be used. Peer pressure is one of the driving forces of behavior intention to accept Koha in academic libraries. Staff is always influenced by their social groupings to use Koha. Social pressure is one of the determining factors that influence Koha acceptance and use in academic libraries. Therefore the behavioral intention to use and subsequent use of Koha in academic libraries will depend on social influence and sometimes subjective norms and one's status. Also from the conceptual framework, availability of resources influence the acceptance of Koha library software in academic libraries in a way that academic libraries will have to first confirm whether the required resources to operate Koha are available and these include; technical team to assist with Koha difficulties, specialized instruction regarding Koha is available to the library and that the required facilities are available among others. The effects of the above factors are moderated by the staff gender, age, level of education and their experience.

Related Studies

The Technology Acceptance Model (TAM2) an information systems theory that models how users come to accept and use a technology suggested that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it. Notably perceived usefulness (PU) which was defined by Davis (2000) as the degree to which a person believes that using a particular system would enhance his or her job performance. Over the past decade many studies have shown perceived usefulness as the strongest determinant of usage, according to Davis. Researchers found that employees are more likely to use a technology if they believe that it is useful for their particular jobs. When a new technology is introduced into the marketplace, only a small number of farms mostly the large and innovative ones will adopt the technology initially. This is because the possible payoff of the new technology is uncertain and because potential adopters

need time to learn how to use the new technology and evaluate its worth. As early adopters benefit from using a new technology, more and more farmers are attracted to it, increasing the speed of adoption exponentially (Chandra and Singh , 1992).

In Dulle, Minish-Majanja and Cloete (2010), an assessment was made to determine how the researchers believed the library software facilitates the accessibility and dissemination of scholarly content. Results from this investigation showed most of the respondents were quite optimistic regarding open access publishing in improving both accessibility as well as dissemination of scholarly output. Over two thirds of the respondents either agreed or strongly agreed that open access publishing was superior to the conventional subscription based scholarly publishing in many aspects. The findings also support the observation that despite that many researchers having not previously published in open access outlets, the majority of the respondents had expectations of future publishing in open access outlets. This implies that the future adoption of open access is highly dependent on the expected benefits and productivity of the software in improving accessibility to and dissemination of scholarly content.

Previous research established that perceived ease of use is an important factor in influencing user acceptance and usage behavior of information technologies. Ease of use is the second component in the classic study by Davis (1989) and is generally believed to have a significant influence on technology acceptance as well as perceptions of usefulness. In validation of the UTAUT, effort expectance was significant in both voluntary and mandatory usage contexts, although only for the first period of usage. Since practice increases one's comfort with software, effort-oriented constructs logically would become less salient after learning hurdles are overcome. TAM assumes that beliefs about usefulness and ease of use are always the primary determinants of information technologies adoption in organizations. According to TAM, these two determinants serve as the basis for attitudes toward using a particular system, which in turn determines the intention to use, and then generates the actual usage behavior. Ease of use refers to the extent

to which a person believes that using a system would be free of mental efforts (Davis, 1989).

Dulle, Minish-Majanja & Cloete (2010) research study examined their views about their expected difficulties or ease of software outlets' usage by providing a number of statements to the respondents for rating themselves against their ability to use open access in scholarly communication. The results from their research noted that more than half of all respondents believed that they were unlikely to face difficulties in using open access outlets to access or publish scholarly output. Finding it easy to access scholarly content was agreed or strongly agreed to by the majority of the respondents (76.5%) while the least (61.3%) of the respondents agreed or strongly agreed that they understood implications of publishing in open access outlets. The above results were comparable to a similar study that established that among 125 scientists 21% believed that the interaction with open access publication systems is clear and understandable, 18% thought that it was easy for them to become skilfull at publishing their work in open access outlets (Deoghuria and Roy, 2007). The findings by the cited study were contrary to the current findings and other similar studies (for example, Kohne, Schoop and Staskiewicz, 2005; Louho, Kallioja and Oittinen, 2006; and Butler and Richardson, 2008) which report high proportion of the respondents to have significantly expressed less effort expectancy towards the usage of new technologies. Despite over 60% of the respondents in that study believed that they were unlikely to face difficulties in using open access outlets to publish their research findings, to a large extent most would find it easy to use open access outlets in accessing rather than disseminating information through open access. Basing on these results, it is necessary to design more user friendly open access platforms for researchers' ease of publishing research output.

With reference to social influence in UTAUT, peer pressure includes consideration of the person's perception of the opinion of others, his or her reference group's subjective culture and specific interpersonal agreements with others, as well as the degree to which use of an innovation is perceived to enhance one's image or status in one's social system (Venkatesh et al. 2003). People tend to

adjust their beliefs according to the group they are in. Individuals are also influenced by the majority; when a large portion of an individual's referent social group holds a particular attitude, it is likely that the individual will adopt it as well (Ash, 1951). The original TAM presented by Davis (1989) ignored the aspect of social influence related to adopting and utilizing a new technology. Davis already observed that in order to make a decision, individuals are influenced by their colleagues and that subjective norm was an important area for further research. Various scholars included social influence factors in their technology acceptance research approaches (e.g. Thompson et. al., 1991; Moore and Benbasat, 1991). But most consensus have been reached about the construct of subjective norm as main representation of social influences (Venkatesh et.al. 2003)

In addition, social influence of physicians is primarily peer influence. However, research shows that the influence effect is greater when those exerting influence have the ability to reward the desired behavior or punish non-behavior (Warshaw 1980). In public accounting, social influence comes from both peers and superiors. In this context, Loraas and Wolfe (2006) found that perceived support from others and encouragement from supervisors was associated with intention to use technology. Similarly, Curtis and Payne (2008) varied the attitude of a remote superior and found this to have an overriding influence on intention to use software on an audit engagement. Although social influences have been incorporated in prior models and have been suggested to be critical determinants in the early stages of use (Venkatesh and Davis 2000; Venkatesh et al. 2003), such social influences have primarily been treated as external pressures exerted by peers and superiors such that they sway an individual's perceptions related to system use.

In Dulle, Minish-Majanja & Cloete (2010) study, the researchers were provided with a number of statements about social influence and were asked to indicate the extent to which such factors would influence them to publish in open access outlets. The results regarding how researchers' use of open access is influenced by social factors. It was noted that all social influence factors were considered by more than two thirds of all respondents as important or very

important determinants for their publishing in open access outlets. However, researchers' peers and colleagues influence were found less important when compared to others. These results implied that employers and/or research funding bodies in the study area stood a better chance of accelerating the adoption of open access at respective universities than fellow researchers' influence. Similar findings were reported by other previous studies. A study by Deoghuria and Roy (2007) for example, indicated that out of 125 scientists, 64% and 20% considered their funding agencies' and employers' influence respectively as crucial determinants for their publishing in open access. Peers' influence has also been negated by the majority of the respondents as a motivation for their publishing in open access outlets (Deoghuria and Roy, 2007; Hess et al, 2008).

In Dulle, Minish-Majanja & Cloete (2010) study, five factors relating to infrastructure and technical support (facilitating conditions) were assessed basing on the respondents' perceptions to determine the possible effect of such factors on scholars' usage of open access. It was noted that less than half, 50% of all the respondents strongly agreed or agreed that their institutions provided adequate facilitating conditions for them to publish in open access outlets. Only the availability of guidance for effective usage of the Internet to access information was supported with slightly more than a half (55.3%) of the respondents. The overall results from this study imply that most of the facilitating conditions for researchers to effectively use open access outlets for scholarly communication were inadequate. For example, while only 42.4% of the respondents either agreed or strongly agreed to have the necessary knowledge to publish in open access outlets, 57.7% either disagreed or strongly disagreed or they were not sure of having such knowledge. Slow Internet speed and inadequate skills to access and publish in open access were also cited by the respondents as the main cause for researchers' less effective usage of open access and the Internet in general to enhance scholarly communication. This further supports the above observations with respect to inadequate facilitating conditions to enhance researchers' effectively exploitation of open access opportunities. Supporting the above observations, a further analysis revealed that none of the universities in the study had adequate bandwidth to meet the actual demand of its

user population as a result of high connectivity costs. Similarly, users' access to documents uploaded in the respective university websites is expected to be difficult due to the low uplink connectivity of these institutions. A similar study by Deoghuria and Roy (2007), also revealed that 45% of scientists claimed to have knowledge of publishing in open access outlets while 10% said they would need specific assistance (to computer or library personnel) in order to publish their works in such outlets. Limited availability of facilitating conditions, both infrastructure as well as technical know how have also been cited as among the reasons for the low uptake of open access in most developing countries (Muthayan, 2003; Hirwade and Rajyalakshmi, 2006; McCulloch, 2006). It is thus necessary to improve the technological and human factors in Tanzanian public universities in order to improve adoption of open access. The improvement of facilitating conditions [e.g. provision of training on online publishing] will also raise researchers' Internet self-efficacy, which is also considered to be on the lower side as noted in the following section.

Academic libraries in Nigeria attempted to automate library functions as far back as 1970; 1990 and the attempt still continues. TINLIB software was introduced in leading academic libraries including those of the University of Ibadan and Ahmadu Bello University Library but due to some technical and organizational problems, no single academic library in Nigeria in general and in the Southwestern Nigeria in particular uses the TINLIB software today. Libraries in Nigeria are still on the race to make their services totally ICT- based. The MacArthur report of 2005 titled "Developing Strong University Libraries in Nigeria," points out the need to develop effective information delivery system as a key component of university teaching and learning, modern technology greatly enhances such system. The report also points out lack of appropriate funding system to acquire relevant information and communication tools; lack of infrastructure to provide access to electronic information (Haliso 2011).

Siddike, Munshi and Sayeed identified major factors militating against effective adoption of ICT in Bangladeshi university libraries as inadequate funds, lack of trained personnel on ICT and lack of awareness of ICT potentials by users. Fifteen

surveyed university libraries suffered frequent power outage and poor attitude of staff towards library automation. Ten surveyed university libraries of Bangladesh face negative attitude of university management on ICT. They also identified the following factors to have influence on effective adoption of ICT in the university libraries of Bangladesh, which were: administrative factors; administrators, policy makers and government executives were not fully aware of the importance of ICT as well digital technologies. Moreover, information professionals failed to make its importance clear.

Summary of Gaps Identified from Related Literature

Though much was wrote on technology acceptance, basing on the literature reviewed as well as the past studies documented, evaluation of factors influencing the acceptance of Koha library software in academic libraries has not been researched on particularly in International Health Sciences University, Uganda Christian University, Uganda Management Institute and Nkumba University libraries. The constructs under the independent variables (system productivity, ease of use, peer pressure and existence of resources) were not the exact constructs studied in the previous studies and the literature in past studies did not dwell on factors influencing particularly Koha acceptance in Uganda.

CHAPTER THREE

METHODOLOGY

Introduction

This chapter explains the methods and techniques which were used while gathering, analyzing, interpreting and presenting data. It contains the research design, the research population, the sample and sampling procedures, instruments for data collection and the procedures for data gathering and analysis.

Research Design

This study employed a descriptive research design which enabled the researcher to establish the relationship between the factors and adoption of Koha library software in academic libraries. It elicited responses from the sample that was used to establish the relationship between the variables, testing of hypothesis, developing of generalization and use of theories that have universe validity.

Research Population

The research population refers to the entire group of people considered as the subject of the research. The research targeted a population of 140 respondents and these consisted of ICT and library staff members of International Health Sciences University, Uganda Christian University, Uganda Management Institute and Nkumba University who had interacted with the software.

Sample Size

The Sloven's formula was used to determine the minimum sample size.

The formula was $n = \frac{N}{1+N(e)^2}$

Where n was the sample size, N was the target population and e was the level of significance which was equal to 0.05.

Therefore $n = \frac{140}{1+140(0.05)^2} = \frac{140}{1+140(0.0025)} = 103$

According to the formula, a sample size of 103 respondents was taken from the target population.

Table 3.1 below shows the categories of respondents of the study: libraries, ICT and library staff.

Table 3.1: Respondents of the Study

Libraries	**Target Population**		**Sample Size**		
	ICT Staff	Library Staff	ICT Staff	Library Staff	Total
International Health Sciences University	4	24	3	15	18
Uganda Christian University	4	31	3	25	28
Uganda Management Institute	4	24	3	15	18
Nkumba University	4	45	3	36	39
Grand Total	16	124	12	91	103

Source: Field Data

Sampling Procedures

A sample of 103 respondents was selected through purposive sampling techniques. The technique was chosen in order to get the research respondents who have interacted with the software in question because this research involved having respondents who had knowledge about the software. The researcher selected only those people who have interacted with the system and these were the librarian and information technology staff of the four institutions.

Research Instruments

The researcher used questionnaires and interview as research instruments to gather data. The questionnaire comprised of two sections; the first section contained the socio demographic characteristics of respondents and the second section elicited information about the factors that influence the acceptance of Koha library management software in academic libraries in the perspective of UTAUT. The questions were rated on a five point Likert scale, where 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree. The construction of the questionnaire was guided by prior research questionnaires prepared by Anderson and Schwager, Oye, Iaha and Ab.Rahim (2012) and Venkatesh, Thong and Xu (2012).

Validity and Reliability of the Instrument

Content validity was ascertained by subjecting the research instruments to some research experts and administrators who have knowledge about the software. Also the supervisor was consulted to go through the questionnaires and interview guides, item by item to rate the validity of the questions at a rating of one to five where four and five indicated the item was valid and consistent with the study. Also a content validity index formula CVI=R/N by Amin (2005) was used for each item to test their validity. Where R was the number of items declared valid and N was the total number of items. The items declared valid were 43 and the total number of items in the questionnaire was 49. Therefore CVI=43/49 =0.878

Data Gathering Procedures

Data collection was done in accordance to the following steps:

1. An introductory letter was obtained from College of Higher Degrees and Research, Kampala International University to solicit approval to conduct the study from International Health Sciences University, Uganda Christian University, Uganda Management Institute and Nkumba University libraries.
2. After approval, the researcher proceeded and printed out one hundred ten (110) questionnaires and fifty interview guides.

3. The researcher proceeded to collecting primary data using self administered questionnaires and interview guides.
4. Respondents were briefed about the purpose of the study and were requested to sign the Informed Consent Form as a way of consenting to participate in the study.

During the administration of the questionnaires

1. Questionnaires were distributed to the respective respondents to answer all questions.
2. The researcher requested the respondents to fill the questionnaire within a period of one week (26th July to 2nd August 2013)
3. Almost all the questionnaires from the four libraries were answered and returned in the specified time frame except a few questionnaires which were later not filled.

After the administration of the questionnaires

The data gathered was edited to check for errors and omissions, categorized to facilitate analysis and coded such that data can be transformed into a form understandable by computer software (SPSS). Data was finally entered into the computer using the Statistical Package for Social Sciences (SPSS) for generation of frequency tables.

Data Analysis

Descriptive data analysis in terms of frequencies, percentages and means were used to analyze the demographic characteristics of respondents (i) gender (ii) age (iii) education level (iv) number of years worked with the library. Correlational data analysis using Pearson Product Moment Correlation was used to establish the relationship between the factors; system productivity, ease of use, peer pressure and existence of resources and acceptance of Koha.

The following numerical values and descriptions were used.

Mean range	Response mode	Interpretation
3.40-3.90	Strongly Agree	Very good
2.80-3.30	Agree	Good
2.20-2.70	Neither agree nor disagree	Fair
1.60-2.10	Disagree	Poor
1.00-1. 50	Strongly disagree	Very poor

Ethical Considerations

To ensure confidentiality of the information provided by the respondents and to ascertain the practice of ethics in the study, the following activities were implemented by the researcher;

1. Solicited permission through a written request to the concerned officials of the place of study.
2. The researcher introduced herself to the respondents before distributing the questionnaires. She gained the consent of the respondent by requesting them to sign the informed consent form. After she gave them time to fill the questionnaires at their own convenient time without putting them on pressure.
3. Also due to security consciousness, the researcher ensured respondents that the collected data will remain confidential and will only be used for academic purposes.
4. Presentation of study findings was done in a generalized manner. The findings represented all the four libraries under study.
5. Citations and referencing was done to acknowledge the various authors cited in this study.

Limitation of the Study

The following threats to validity were identified.

1. Extraneous variables such as honesty of the respondents in answering the questionnaires and personal biases which were beyond the researcher's control. However during data collection, the respondents were requested to

be as honest as possible and to avoid personal biases while answering the questionnaires.

2. The respondent never had time to be interviewed during the data gathering process. This was due to their busy schedules, others had travelled and others were on leave.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS

This chapter details results of data analyses concerning the socio-demographic characteristics of respondents and description of the objectives of the study, variables used and testing of the hypothesis.

Socio-demographic Characteristics of Respondents

The first objective of the study was to determine the socio-demographic characteristics of respondents and to achieve it, questions were asked in the questionnaire to capture these responses. Descriptive statistics using frequencies and percentage distributions were employed to summarize section A of the questionnaire. This consisted of the socio-demographic characteristics of respondents in the selected academic libraries in terms of gender, age, highest level of education and number of years worked with the institution as shown in table 4.1

Table 4.1

Socio-Demographic Characteristics of Respondents

Category	Sub-category	Frequency	Percentage %
Gender	Male	46	56.8
	Female	35	43.2
	Total	**81**	**100**
Age	20-24	9	11.1
	25-29	32	39.5
	30-34	26	32.1
	35-39	5	6.2
	40 and above	9	11.1
	Total	**81**	**100**
Highest Level of Education	PHD IS	1	1.2
	MSC LIS	7	8.6
	PGD LIS	2	2.5
	BLIS	40	49.4
	DLIS	19	23.5
	CLIS	1	1.2
	Other qualifications	11	13.6
	Total	**81**	**100**
Number of Years Worked with the Institution	Below 1 year	13	16.0
	1-3 years	36	44.4
	4-5 years	12	14.8
	6 and above	20	24.7
	Total	**81**	**100**

Source: Field Data

The results in table 4.1 reveal that as regards to gender, most of the respondent in the sample were dominated by males 56.8% while females were 43.2%, indicating that Koha acceptance in academic libraries is mainly dominated by men. The findings are supported by Tibenderana (2010) who in her study of a model

for measuring levels of end-users' acceptance and use of hybrid library services and its applicability to Universities; found female's acceptance of hybrid library services to be low. The findings are further supported by Lule (2012) who found out that males dominated the adoption of M-Banking in Kenya with 52% accepted M-Banking more than females who had 48%.

Regarding age, Table 4.1 further reveals that the respondents fall in the category of 25-29 years with 39.5% and 30-34 years with 32.1% compared to other categories of 20-24 years, 35-39 years and 40 and above, which gave percentages of 11.1%, 6.2% and 11.1% respectively. This reflects that those libraries are dominated by youths. The findings are supported by Tibenderana et al. (2010) who in the study of measuring levels of end-users' acceptance and use of hybrid library services showed that the majority of the users who accepted and used hybrid library services were youths with the percentage of 45% and 36%.

The results from table 4.1 further indicate that in regard to highest level of education, majority of the respondents had Bachelor's degree in library science contributing 49.4%. It was followed by those with Diploma in library science 23.5%, followed by respondents having qualification in other fields other than library science 13.6%. Masters of Science in library science had 8.6%, Postgraduate diploma in library science had 2.5% and lastly followed by certificate in library and information science and PHD in library science with 1% each. Table 4.1 further reveals that majority of the respondents have worked with the libraries for 1-3 years with a percentage of 44.4%, followed by those who have worked with the libraries for 6 and above years with a percentage of 24.7%. Those who have worked for less than 1 year had a percentage of 16.0% and lastly followed by those respondents who have worked for 4-5 years with a percentage of 14.8%.

Factors Influencing the Acceptance of Koha

The second objective of the study was to investigate how system productivity influences the acceptance of Koha library software in academic libraries. Table 4.2 presents how system productivity influences the acceptance of Koha library software in academic libraries.

Table 4.2

System Productivity

System Productivity (Item 1-10)	Mean	Std. Deviation	Interpretation	Rank
Koha facilitates fast cataloguing of information materials.	4.48	.69121	Very good	1
The search module facilitates fast searching for information materials by staff.	4.42	.66829	Very good	2
Koha OPAC module facilitates fast information search which saves time for searching	4.91	5.68814	Very good	3
The patron module enables fast registration of library patrons.	3.96	.92796	Very good	4
Koha circulation module saves time of charging and discharging of information materials.	4.14	.83296	Very good	5
The circulation module generates circulation reports easily.	4.09	.86887	Very good	6
The circulation module enables you to identify over-due items.	4.23	.88419	Very good	7
Koha fully supports the use of barcodes for accuracy thereby minimizing the chances of human error in entering identification data.	4.09	.89718	Very good	8
Koha facilitates the management functionality of monitoring the book processing and service provision that reduces on the supervisory workload of administrators.	3.88	.92713	Very good	9
Koha has a multi-lingual support which can enable Koha to be customized according to your preferred language.	3.84	3.44404	Very good	10
Average mean	**4.20**	**1.583**	**Very good**	

Source: Field data

Mean range	Response mode	Interpretation
3.40-3.90	Strongly Agree	Very good
2.80-3.30	Agree	Good
2.20-2.70	Neither agree nor disagree	Fair
1.60-2.10	Disagree	Poor
1.00-1. 50	Strongly disagree	Very poor

Table 4.2 shows that system productivity influences its acceptance highly with all the ten items having an average mean of 4.20. Among the ten items, Koha OPAC module facilitating fast information search which saves the time for searching scored highest mean of 4.91. This is probably because library staff and any user have to first locate the information material to ascertain where it is before using it. Koha having a multi-lingual support which can enable Koha to be customized according to the preferred language scored least with a mean of 3.84 in influencing the acceptance of Koha. This is because multi-lingual support is not in their interest since they use English as a mode of communication and most of those languages that Koha support are in International languages. These findings are supported by Chang et. al. (2007) who in their study found that in Taiwan, performance expectancy affected behavioral intention to use more strongly than expectancy. Pai and Huang (2011) also found that perceived usefulness had a positive direct effect on intention to use.

Ease of Use

The third objective was to determine how ease of use influences the acceptance of Koha library software in academic libraries. This objective was examined and perceptions were captured from the respondents on the six items. The responses were analyzed using means showing the extent to which ease of use of Koha influences its acceptance. As shown in Table 4.3

Table 4.3

Ease of Use of Koha

Ease of Use (Item 11-16)	Mean	Std. Deviation	Interpretation	Rank
It is easy to use the cataloguing module for cataloguing library information materials	4.37	.78174	Very good	11
It is easy to use the circulation module for charging and discharging information materials	4.21	.77000	Very good	12
It is easy to use the circulation module to prepare circulation reports.	4.04	.85797	Very good	13
It is easy to use the patron module to register library patrons.	4.09	.82458	Very good	14
It is easy to use the administration module to prepare reports on book processing and service provision.	3.86	.89097	Very good	15
It is easy to use the OPAC module to retrieve information.	4.26	.94575	Very good	16
Average mean	**4.14**	**0.845**	Very good	

Source: Field data

Mean range	Response mode	Interpretation
3.40-3.90	Strongly Agree	Very good
2.80-3.30	Agree	Good
2.20-2.70	Neither agree nor disagree	Fair
1.60-2.10	Disagree	Poor
1.00-1. 50	Strongly disagree	Very poor

The results in Table 4.3 show that ease of use influences Koha's acceptance so much with an overall mean of 4.14. The results indicate that easy use of the cataloguing module to catalogue library information materials scored the highest mean of 4.37. This is supported by Kumar and Vimar (2012) whose results in their study of adoption and user perception of Koha library management system in India show that among Koha users, 32.14% marked ease of cataloguing as excellent and 53.57% marked it as very good. This was followed by easy to use the OPAC module to retrieve information which had 4.26 and the least ranked was the ease to use the

administrative module to prepare reports on book processing and service provision which has a mean of 3.86. Also Suha and Anne (2009) found out that 63% of participants claimed that any online e-government services needed to be easy to use if they were to be used by those with little Internet experience.

Peer Pressure

The third objective was to ascertain how peer pressure influences the acceptance of Koha library software in academic libraries. The findings indicate that peer pressure influences Koha acceptance by an overall mean of 3.13 which is good. The respondents ranked superiors/instructors determining their acceptance of Koha highly with a mean of 3.68, followed by administrators' attitude influencing their acceptance with a mean of 3.68 and social pressure influence scored the least with a mean of 2.56 as shown in the table that follows.

Table 4.4

Peer Pressure

Peer Pressure (item 17-21)	**Mean**	**Std. Deviation**	**Interpretation**	**Rank**
Superiors/instructors determined my acceptance of Koha	3.68	1.35856	Very good	17
Administrators' attitude influenced my acceptance of Koha.	3.62	1.34692	Very good	18
Social pressure influenced my acceptance of Koha.	2.56	1.36931	Good	19
Staff members influenced me to use Koha.	2.90	1.40183	Good	20
Staff attitude influenced me to use Koha.	2.84	1.46165	Good	21
Average mean	**3.13**	**1.388**	Good	

Source: Field Data

Mean range	Response mode	Interpretation
3.40-3.90	Strongly Agree	Very good
2.80-3.30	Agree	Good
2.20-2.70	Neither agree nor disagree	Fair
1.60-2.10	Disagree	Poor
1.00-1. 50	Strongly disagree	Very poor

The findings in Table 4.4 are similar to those of Suha and Anne (2009) who found out that those participants with experience in online services would be more likely to use e-services even though others did not. Nearly half of participants (47%) indicated that they would be more inclined to use online services if other members of their families had used them. Nearly a quarter of all participants (20%) also mentioned that peers might influence their views about using online services if their experience was successful. Another quarter of participants (23%) were influenced by large numbers of people using the services, others said they would adopt any technology that made life easier. These findings suggested that users' experience with online services would determine whether there would be any social influence on the adoption of e-government services, since good experience was likely to encourage users to recommend the services to others. However social influence was found unimportant to many participants with especially postgraduates suggesting that those students who have adequate experience of their chosen professions are able to think sufficiently independently and normally place less weight on others' opinions.

Venkatesh et al. (2003) found social influence not significant in voluntary contexts but becomes important when use is mandated. Chau and Hu (2002) found no significant effects of peer influence on either attitude toward the technology or intention to use. In this context, Loraas and Wolfe (2006) found perceived support from others and encouragement from supervisors to have associated with intention to use technology. Similarly, Curtis and Payne (2008) varied the attitude of a remote superior and found this to have an overriding influence on intention to use software on an audit engagement.

Existence of Resources

The fifth objective was to identify how existence of resources influences the acceptance of Koha library software in academic libraries. The questionnaire captured responses from respondents to ascertain how existence of resources influence Koha acceptance in academic libraries, the responses were analyzed using means for the seven items as shown in Table 4.5.

Table 4.5

Existence of Resources

Existence of Resources (Item 22-28)	Mean	Std. Deviation	Interpretation	Rank
University management supports the funding of Koha.	4.26	.81820	Very good	22
The University has the financial resources to support Koha.	4.05	.80469	Very good	23
University management has the required infrastructure to support Koha.	3.88	.95371	Very good	24
Technical team is available to support Koha installation, implementation and maintenance of the system.	4.00	.90830	Very good	25
Trained and competent library staff is available to use Koha.	4.05	.85002	Very good	26
Operation and maintenance manuals regarding Koha are available.	3.49	1.05028	Very good	27
The University offers on job training for implementation of Koha.	3.77	1.19657	Very good	28
Average mean	**3.93**	**0.940**	**Very good**	

Source: Field Data

Mean range	Response mode	Interpretation
3.40-3.90	Strongly Agree	Very good
2.80-3.30	Agree	Good
2.20-2.70	Neither agree nor disagree	Fair
1.60-2.10	Disagree	Poor
1.00-1. 50	Strongly disagree	Very poor

Results from Table 4.5 show that existence of resources influence the acceptance of Koha software in academic libraries with an overall mean of 3.93. The results indicate that the University's management support to fund Koha influences highly the acceptance of Koha with a mean of 4.26. This is followed by the University having the financial resources to support Koha and availability of trained and competent library staff to use Koha with a mean of 4.05 each. Availability of operation and maintenance manuals regarding Koha scored the least with a mean of 3.49 but still it was very good. The findings are in line with Siddike, Munshi and Sayeed (2011) who in their study found out that administrative factors, support from the higher authorities and government influence much in introducing ICT in the public and private university libraries of Bangladesh. Computer literate professionals and existence of ICT infrastructure have influenced the adoption of ICT in the university libraries of Bangladesh.

Acceptance of Koha

Acceptance of Koha in this study was examined and responses were analyzed using means on each item as shown in table 4.6.

Table 4.6

Acceptance of Koha

Acceptance of Koha (Item 28-42)	Mean	Std. Deviation	Interpretation	Rank
You are using the acquisition module to make orders from vendors; budgets and get pricing information	1.07	.49441	Very poor	29
You are using the catalogue module to catalogue information materials	4.42	.58873	Very good	30
You use the serial module to catalogue journals	4.41	.58689	Very good	31
You are using the search module to search for information materials from the system	4.38	.56053	Very good	32
OPAC module is used to make information searches which saves the time for searching	4.41	.56519	Very good	33
You are using the patron module to register library patrons	4.46	.54885	Very good	34
You use the circulation module to charge and discharge information materials.	4.22	.63246	Very good	35
You use the circulation module to generate circulation reports	4.14	.64717	Very good	36
The circulation module is used to identify and manage over-due items	4.16	.64142	Very good	37
The LOC, Dewey and other non-Dewey categorizations are used	4.41	.58689	Very good	38

Barcodes are use to minimize the chances of human error	4.26	.62805	Very good	39
You use multi-lingual support/module to customize Koha in your preferred language	1.12	.55639	Very poor	40
You are using the management functionality to monitor book processing and service provision there by reducing the supervisory workload of administrators	3.89	.80623	Very good	41
You are using the administration module to prepare reports on book processing and service provision	3.89	.80623	Very good	42
Total	**3.80**	**0.618**	Very good	

Source: Field Data

Mean range	**Response mode**	**Interpretation**
3.40-3.90	Strongly Agree	Very good
2.80-3.30	Agree	Good
2.20-2.70	Neither agree nor disagree	Fair
1.60-2.10	Disagree	Poor
1.00-1. 50	Strongly disagree	Very poor

Results from Table 4.6 show that academic libraries are accepting Koha with an overall mean of 3.80. Most of the Koha modules are accepted with a mean of 3.80 and above which is very good. Using the patron module to register patrons was ranked highest, followed by using the catalogue module to catalogue library information material with a mean of 4.42. The least ranked were the two modules of using the acquisition module to make orders from vendors, budgets and get pricing information which has a mean of 1.07 and using the multi-lingual support/module to customize Koha in your preferred language with a mean of 1.12. The findings from table 4.5 are supported by Ukachi (2012) results which show that 4.8% libraries are

presently using Koha for cataloguing. Three (7.1%) libraries use Koha for cataloguing and circulation, two (4.8%) other libraries use it in their Serials section. CD/ISIS is being used by four (9.6%) libraries for both cataloguing and circulation while three (7.1%) other libraries indicated that they presently use it in all their library sections.

Table 4.7

Summary Table of Means for the Factors and Acceptance of Koha

Independent Variable (Factors)	**Mean**	**Std. Deviation**	**Interpretation**	**Rank**
System Productivity	4.20	.87428	Very good	1
Ease of Use	4.13	.64592	Very good	2
Peer Pressure	3.11	1.06760	Good	3
Existence of Resources	3.93	.64251	Very good	4
Total	**3.85**	**0.808**	**Very good**	
Dependent Variables (Acceptance of Koha)	**3.80**	**.38271**	**Very good**	

Source: Field Data

Mean range	**Response mode**	**Interpretation**
3.40-3.90	Strongly Agree	Very good
2.80-3.30	Agree	Good
2.20-2.70	Neither agree nor disagree	Fair
1.60-2.10	Disagree	Poor
1.00-1. 50	Strongly disagree	Very poor

Results in Table 4.6 show that system productivity, ease of use, peer pressure and existence of resources influence the acceptance of Koha in academic libraries with the overall mean of 3.83. Among the four factors, productivity of Koha scored highest with a mean of 4.20, followed by ease of use (4.13), followed by existence of resources with (3.93) and peer pressure has less influence with 3.11. These findings are supported by Shengli, Yong and Yuanyuan (2011) who found out that performance expectancy is a direct predictor of behavioral intention to use Web

Based Question and Answer Service. It suggested that practitioners should focus on increasing the usefulness of the services. Effort expectancy was found to be a significant predictor of behavioral intention as well. This suggested that practitioners should put more effort into making Web Based Question and Answer Service easy to use, such as reducing the effort involved in registration and asking questions. It was further found out that there is a significant relationship between social influence and behavioral intention and use of Web Based Question and Answer Service. However it was suggested that the use of WBQAS tends to be a more personal issue and thus it was not an effective strategy for practitioners to use when advertising Web Based Question and Answer Service to generate more users.

The significant impact of facilitating conditions on actual usage suggested that more people will use Web Based Question and Answer Service if given access to the internet and computers. Facilitating conditions were found to have a positive impact on behavioral intention in a number of previous studies (Zhou et al., 2010). Cheong et al. (2004) found that facilitating conditions have a positive influence on the intention to use credit cards. Hung et al. (2006) indicated that facilitating conditions are an important determinant of user acceptance of e-government services. Also results from table 4.6 reflect that Uganda Christian University, International Health Sciences University, Uganda Management Institute and Nkumba University libraries have accepted Koha with an overall mean of 3.80.

Testing the Null Hypotheses

The sixth objective of the study was to establish whether there is a relationship between system productivity, ease of use, peer pressure and existence of resources and acceptance of Koha. The researcher tested the null hypotheses of no significant relationships between system productivity, ease of use, peer pressure, existence of resources and acceptance of Koha. To test the null hypotheses, the researcher correlated the mean scores for the factors and the mean scores for acceptance using the Pearson Product Moment Correlation (PPMC). The results of the correlation are shown in Table 4.8.

Table 4.8

Pearson Product Moment Correlation Results on System Productivity, Ease of Use, Peer Pressure, Existence of Resources and Acceptance of Koha.

Variables Correlated(Factors)	Acceptance of Koha		Interpretation of Correlation	Decision on H_0
System productivity	Pearson Correlation	.310**	Significant	Rejected
	Sig. (2-tailed)	.005		
	N	81		
Ease of use	Pearson Correlation	.624**	Significant	Rejected
	Sig. (2-tailed)	.000		
	N	81		
Peer pressure	Pearson Correlation	.080	Not significant	Accepted
	Sig. (2-tailed)	.478		
	N	81		
Existence of resources	Pearson Correlation	.380**	Significant	Rejected
	Sig. (2-tailed)	.000		
	N	81		

Source: Field data

Results in Table 4.8 indicate that there is a significant relationship between system productivity and acceptance of Koha thus the null hypothesis was rejected, there is a significant relationship between ease of use and acceptance of Koha and the null hypothesis was rejected, there was no significant relationship between peer pressure and acceptance of Koha and the null hypothesis was accepted and finally there was a significant relationship between existence of resources and acceptance of Koha with the null hypothesis rejected. On the overall, system productivity, ease of use, peer pressure and existence of resources) are significantly related with

acceptance of Koha with the overall level of significance of 0.000. The null hypothesis is rejected when the Pearson coefficient is less than 0.05.

Regression Analysis on the Relationship between Factors (system productivity, ease of use, peer pressure and existence of resources) and Acceptance of Koha.

Regression analysis was used to measure the strength of the relationship between the factors and acceptance of Koha as shown in table 4.9 below.

Table 4.9

Regression Analysis on the Relationship between Factors (system productivity, ease of use, peer pressure and existence of resources) and Acceptance of Koha.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.632[a]	.400	.638	.30427

a. Predictors: (Constant), Productivity, Ease of use, peer pressure and Existence of resources.

Source: Field Data

Table 4.10

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.681	4	1.170	12.641	.000[a]
	Residual	7.036	76	.093		
	Total	11.717	80			

a. Predictors: (Constant), Resources, Pressure, Productivity, Use

b. Dependent Variable: Dependent Variable

Source: Field Data

Results in Table 4.9 show that factors (system productivity, ease of use, peer pressure and existence of resources) significantly influence the acceptance of Koha. This is indicated by the r-value of .632, the adjusted r square of .638. Thus, the findings revealed that the degree of the relationship between the two variables is strong at r- value of .632 of the regression model.

ANOVA in able 4.10 indicates the F value for the regression models which represents the significance of the regression model. The determination of this is based on the principle that the larger the F value, the more variance in the dependent variable explained by the independent variable. Since the F value is 12.641 and it is greater than 1.0, the null hypotheses were rejected. It also indicates that the model is highly significant at the level of 0.000. Thus the general regression results indicated in the ANOVA. These factors (system productivity, ease of use, peer pressure and existence of resources) influence the variations in acceptance of Koha by 63% and 37% variations are contributed by among other factors:

Anxiety

Anxiety towards use of technology is described as evolving anxious or emotional reactions when it comes to performing a behavior (e.g., using a computer) the apprehension or even the fear an individual has toward the possibility to use a technology (Venkatesh et al., 2003). Anxiety as a construct has foundation from the Social Cognitive Theory (SCT) introduced to Information System by Campeau and Higgins (1985), as an extended SCT in the context of computer utilization.

Domain Knowledge

Domain knowledge is defined as the person's knowledge of the respective discipline, domain or area that is relevant to the database search. Past research has demonstrated empirically that persons with a higher level of domain knowledge were able to conduct searches and database queries more efficiently (without error) and more rapidly than novices (Thong et al., 2002).

Computer Literacy

Several studies indicate that a positive relationship exists between previous computer usage/computer fluency and the adoption of a computer-dependent technology (Atkin, 1994). Internet also had a significant impact on the user's acceptance of a system.

CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents a discussion of findings, conclusions, recommendations and area of further research.

Discussion of Findings

Socio-Demographic Characteristics of the Respondents

a) **Gender;** most of the respondents were male with a percentage of 56.8%
b) **Age;** majority of the respondents in the study were in the age category of 25-29 years making 39.5%
c) **Highest level of education;** libraries are dominated by Bachelors of library and information science holders contributing 49.4%
d) **Number of years worked with the institution;** majority of the respondents have worked with the libraries between 1-3 years making 44.4%

Factors that influence Koha acceptance: system productivity, ease of use, peer pressure and existence of resources

1. Most respondents ranked productivity as the most influencing factor with a mean of 4.20
2. The least ranked factor was peer pressure with a mean of 3.12

Acceptance of Koha

1. Koha acceptance was observed to be high in UCU, IHSU, UMI and Nkumba University libraries. They are using almost all the modules to carry out library operations. Respondents ranked using the cataloguing module to catalogue information materials highly with a mean of 4.46
2. Low level of acceptance was registered in using the multi-lingual support module to customize Koha in the preferred language. Also the libraries are not using the acquisition module to make orders from vendors, budgets and

get pricing information. They both scored means of 1.12 and 1.07 respectively.

Relationship between Factors: system productivity, ease of use, peer pressure and existence of resources and Acceptance of Koha

Factors and acceptance of Koha are significantly related with (r=.632, P=.439, the adjusted r square of .638 and Sign. =0. 000). The null hypotheses were rejected because the overall level of significance was 0.000 which was less than 0.05. The factors: system productivity, ease of use, peer pressure and existence of resources; greatly influence the acceptance of acceptance of Koha in academic libraries. The r value is .632 which indicates a linear correlation and there is a strong relationship between factors and acceptance of Koha. The r value of .632 is greater than 0 and 0.5 and this indicates a positive and strong relationship.

Regression Analysis for Factors (system productivity, ease of use, peer pressure and existence of resources) and Acceptance of Koha.

The regression analysis results showed that factors (system productivity, ease of use, peer pressure and existence of resources) significantly influence the acceptance of Koha (F=12.641, Sign .000, R=63 the adjusted R square of .638). They influence the variations in acceptance of Koha by 63%.

Conclusions

Basing on the findings of this study, the following conclusions were drawn:

The null hypotheses of no significant relationship between factors and acceptance of Koha were rejected because the Pearson coefficient is less than 0.05. The unified theory of acceptance and use of technology (Venkatesh et al. 2003) was proved right. The findings of this study concluded that factors; system productivity, ease of use, peer pressure and existence of resources have strong influence on the acceptance of a system. The UTAUT posits age, gender and experience as moderators of the predictors. Similarly in this study age, gender, level of education and experience were recognized to play a moderating role in Koha acceptance among males, IT personnel, LIS professionals. Also those who had worked for the

library for some period accepted Koha easily. System productivity, ease of use, peer pressure and existence of resources influence the acceptance of Koha in academic libraries with 63%. The remaining 37% is contributed by other factors which include anxiety, domain knowledge, computer literacy among others.

Recommendations

For effective acceptance of systems, on job training can be embraced by institutions through workshops and seminars for all library staff members especially females about use of systems there by creating awareness hence easy acceptance of some systems.

Operation and maintenance manuals should be given out to staff such that they can refer to them incases of emergencies than waiting for the technical team.

There is need for Universities to give due consideration to funding the library through automation since we are in the era of digital migration. As the software is open source, management should fund libraries through providing resources and support to purchase the required equipments to improve on the acceptance of the system.

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Appendices

Appendix I: Transmittal Letter from CHDR

KAMPALA
INTERNATIONAL
UNIVERSITY

Ggaba Road, Kansanga
P.O. BOX 20000 * Kampala, Uganda
Mobile: +256782823607
E-mail: mphelixx@gmail.com

COLLEGE OF HIGHER DEGREES AND RESEARCH (CHDR)
OFFICE OF THE HEAD OF DEPARTMENT, APPLIED SCIENCE AND TECHNOLOGY

Date: 14th March 2013

Dear Sir/Madam,

RE: REQUEST FOR ELIZABETH ALIKOBA MIS/36848/121/DU
TO CONDUCT RESEARCH IN YOUR INSTITUTION

The above mentioned is a bonafide student of Kampala International University pursuing **Masters of Science in Information Systems.**

She is currently conducting a research entitled **"Evaluation of Factors Influencing the Acceptance of KOHA Library Software in Academic Libraries of Selected Universities"**

Your Institution has been identified as a valuable source of information pertaining to his research project. The purpose of this letter is to request you to avail her with the pertinent information he may need.

Any information shared with her from your Institution shall be treated with utmost confidentiality.

Any assistance rendered to her will be highly appreciated.

Yours truly,

Businge Phelix Mbabazi
Head of Department, Applied Science and Technology

NOTED BY:
Dr. Sofia Sol T. Gaite
Principal-CHDR

Appendix II: Informed Consent

I am giving my consent to be part of the research study of Ms. Alikoba Elizabeth that will focus on evaluation of factors influencing the acceptance of Koha library software in selected academic libraries in Uganda.

I shall be assured of privacy, anonymity and confidentiality and theta I will be given the option to refuse participation and right to withdraw my participation anytime.

I have been informed that the research is voluntary and that the results will be given to me if I ask for it.

Initials: _____

Date: _____

Appendix III: Questionnaire

Dear Sir/Madam

I am a Masters Degree candidate in Management Information Systems of Kampala International University. Part of the requirements for the award of the Masters degree is to conduct research. My research focuses on **evaluating the factors that influence the acceptance of Koha library software in academic libraries in Uganda in the perspective of library and ICT staff.**

Within this context, I kindly request you to answer the questionnaire by providing the most appropriate answer in your opinion by either ticking or writing in the given space as the case may be. Your humble participation will be of great importance to me and the information you provide will be primarily used for academic purposes and held in strict confidentiality.

I thank you for devoting your time to help me.

Yours Sincerely

.....

Alikoba Elizabeth

Section A: Demographic Characteristics of Library Staff.

Please help me by giving the following facts about yourself

Gender (Please tick as appropriate) —— (1) Male

—— (2) Female

Age (Please tick as appropriate):

—— (1) 20-24

—— (2) 25-29

—— (3) 30-34

—— (4) 35-39

—— (5) 40 and Above

Highest Level of Education (Please tick as appropriate)

—— (1) PHD IS

—— (2) MS LIS

—— (3) PGD LIS

—— (4) BLIS

—— (5) DLIS

—— (5) CLIS

——(6) Other qualifications other than Library and Information Science.

Please specify.....

Number of Years Worked with the Institution (Please tick as appropriate)

—— (1) Below 1 year

—— (2) 1-3 years

—— (3) 4-5 years

—— (4) 6 and above

Section B: Factors that Influence the Acceptance of Koha-Library Software in Academic Libraries.

Direction: Please indicate your rating in the space before each option which corresponds to your assessment in terms of: Productivity of Koha; ease of use; Peer Pressure and existence of resources. Kindly use the scoring system of 1-5 as detailed below:

Rating	Response Mode	Description	Interpretation
5	Strongly agree	You agree with no doubt at all	Very good
4	Agree	You agree with some doubt	Good
3	Neutral	You neither agree nor disagree	Fair
2	Disagree	You disagree with some doubt	Poor
1	Strongly disagree	You disagree with no doubt	Very poor

System Productivity

— 1. Koha facilitates fast cataloguing of information materials.

— 2. The search module facilitates fast searching for information materials by staff.

— 3. Koha OPAC module facilitates fast information search which saves time for searching.

— 4. The patron module enables fast registration of library patrons.

— 5.Koha circulation module saves time of charging and discharging of information materials.

— 6. The circulation module generates circulation reports easily.

— 7. The circulation module enables you to identify over-due items.

— 8. Koha fully supports the use of barcodes for accuracy thereby minimizing the chances of human error in entering identification data.

— 9. Koha facilitates the management functionality of monitoring the book processing and service provision that reduces on the supervisory workload of administrators.

—10. Koha has a multi-lingual support which can enable Koha to be customized according to your preferred language.

Ease of Use

— 11. It is easy to use the cataloguing module for cataloguing library information materials

— 12. It is easy to use the circulation module for charging and discharging information materials

— 13. It is easy to use the circulation module to prepare circulation reports.

— 14. It is easy to use the patron module to register library patrons.

— 15. It is easy to use the administration module to prepare reports on book processing and service provision.

— 16. It is easy to use the OPAC module to retrieve information.

Peer Pressure

— 17. Superiors/instructors determined my acceptance of Koha
— 18. Administrators' attitude influenced my acceptance of Koha.
— 19. Social pressure influenced my acceptance of Koha.
— 20. Staff members influenced me to use Koha.
— 21. Staff attitude influenced me to use Koha.

Existence of Resources

— 22. University management supports the funding of Koha.
— 23. The University has the financial resources to support Koha.
— 24. University management has the required infrastructure to support Koha.
— 25. Technical team is available to support Koha installation, implementation and maintenance of the system.
— 26. Trained and competent library staff is available to use Koha.
— 27. Operation and maintenance manuals regarding Koha are available.
— 28. The University offers on job training for implementation of Koha.

Section C: Acceptance of Koha

— 29. You are using the acquisition module to make orders from vendors; budgets and get pricing information
— 30. You are using the catalogue module to catalogue information materials
— 31. You use the serial module to catalogue journals
— 32. You are using the search module to search for information materials from the system
— 33. OPAC module is used to make information searches which saves the time for searching
— 34. You are using the patron module to register library patrons
— 35. You use the circulation module to charge and discharge information materials.
— 36. You use the circulation module to generate circulation reports
— 37. The circulation module is used to identify and manage over-due items
— 38. The LOC, Dewey and other non-Dewey categorizations are used

— 39. Barcodes are use to minimize the chances of human error

— 40. You use multi-lingual support/module to customize Koha in your preferred language

— 41. You are using the management functionality to monitor book processing and service provision there by reducing the supervisory workload of administrators

— 42. You are using the administration module to prepare reports n book processing and service provision.

Appendix IV: Interview Guide

How does Koha facilitate fast cataloguing of information materials?

.....

.....

How does the search module facilitate fast searching for information materials by staff?

.....

.....

How does Koha OPAC module facilitate fast information search which saves time for searching?.....

.....

How does the patron module enable fast registration of library patrons?

.....

.....

How does Koha circulation module saves time of charging and discharging of information materials?

.....

.....

Can you generate circulation reports easily using the circulation module?

.....

.....

Can you easily identify over-due item using the circulation module?

.....

.....

.....How do you minimizing the chances of human error in entering identification data?

.....

.....

How do managers reduces on the supervisory workload of monitoring the book processing and service provision? .....

.....

.....

Can you customize Koha according to your preferred language?

.....

.....

Can you easily use the cataloguing module for cataloguing library information materials? .....

.....

Is it easy to use the circulation module for charging and discharging information materials? .....

.....

Is it easy to use the circulation module to prepare circulation reports?

.....

Is it easy to use the patron module to register library patrons?

.....

Is it easy to use the administration module to prepare reports on book processing and service provision? .....

.....

Is it easy to use the OPAC module to retrieve information?

.....

Of what importance are the Koha modules to the library?

.....

Who influenced you to use Koha?

.....

How do you get financial resources to support Koha?

.....

.....

Do you have the required infrastructure to support Koha?

.....

.....

Who supports Koha installation, implementation and maintenance of the system?

.....

How do you gain more knowledge about Koha in case of any difficulties?

.....

How do the library staff members gain knowledge about Koha? .....

.....

.....

What influenced your institution to accept Koha? .....

.....

.....

.....

.....

.....

What are some of the challenges faced while using Koha?

.....

.....

.....

.....

Recommendations.....

.....

.....

Appendix V: Proposed Budget

Particular	Quantity	Amount
Stationary	Paper 5 Reams Ink 1 Cartridge Binding materials 4	75,000/= 35,000/= 40,000/=
Transport costs		120,000/=
Research assistant	1	50,000/=
Data Analysis		250,000/=
Up keep		200,000/=
Miscellaneous		100,000/=
	Total	**870,000/=**

Appendix VI: Time Frame

Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Conceptual Phase											
Planning Phase											
Thesis Proposal											
Data Collection											
Analytic Phase											
Report Writting											
Dissemination Phase/ Viva Voce											
Revision											
Final Book Bound Copy											

Appendix VII

CURRICULUM VITAE

Personal Information	**Surname** : Alikoba **First Name** : Elizabeth **Sex** : Female **Nationality** : Ugandan **Telephone** : 0774115154 **E-mail Address** : eabrendan@yahoo.com
Education Background	**2004 to 2007** Bachelor of Library and Information Science, Makerere University. **2002 to 2003** Uganda Advanced Certificate of Education, Busoga High School, Kamuli **1998 to 2001** Uganda Certificate of Education, Busoga High School, Kamuli. **1991 to 1997** Primary Leaving Examination, St. Theresa Primary School, Kamuli
Work Experience	**2008 to Present** Assistant Librarian, Kampala International University Library