IMPLICATIONS OF INTEGRATED LIBRARY SYSTEMS (ILS) SWITCHING COSTS IN NIGERIAN UNIVERSITY LIBRARIES

BY

IDRIS ADAMU DAUDA

DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE
FACULTY OF EDUCATION
AHMADU BELLO UNIVERSITY,
ZARIA, NIGERIA

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BY

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DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE
FACULTY OF EDUCATION
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ZARIA, NIGERIA

JUNE, 2017

DECLARATION

I declare that the work in this dissertation entitled "Implications of Integrated Library Systems (ILS) Switching Costs in Nigerian University Libraries" has been carried out by me in the Department of Library and Information Science. The information derived from the literature has been duly acknowledged in the text by list of references provided. No part of this dissertation was previously presented for another degree or diploma at this or any other Institution.

_____	_____	_____
Name	Signature	Date

CERTIFICATION

This dissertation entitled IMPLICATIONS OF INTEGRATED LIBRARY SYSTEMS (ILS) SWITCHING COSTS IN NIGERIAN UNIVERSITY LIBRARIES by Idris Adamu DAUDA meets the regulations governing the award of the degree of Master of Information Science, of the Ahmadu Bello University and is approved for its' contribution to knowledge and literary presentation.

Prof. Umar Ibrahim

Chairman, Supervisory committee _____ _____

Signature Date

Ezra S. Gbaje (PhD)

Member, Supervisory Committee _____ _____

Signature Date

Dr. Habibu Mohammed

Head of Department _____ _____

Signature Date

Prof. Sadiq Zubairu Abubakar

Dean, School of Postgraduate Studies _____ _____

Signature Date

DEDICATION

This dissertation is dedicated to the blessed memory of my late Uncle Alh Abubakar Dauda who laid the foundation of my education to my late mother Malama Zainab Adamu Dauda and to all members of the Dauda's family.

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Table of Contents

Title Page……...**Error! Bookmark not defined.**..i

Declaration ii

Certification iii

Dedication iv

Aknowledgements v

Table of Contents vi

List of Tables iviii

List of Appendices……...x

List of Abbreviations xi

Abstract xii

CHAPTER ONE: INTRODUCTION 1

1.1 Background to the Study 1

1.2 Statement of the Problem 3

1.3 Research Questions 5

1.4 Objectives of the Study 5

1.5 Significance of the Study 6

1.6 Scope of the Study 6

1.7 Operational Definition of Terms 6

References 8

CHAPTER TWO: REVIEW OF RELATED LITERATURE 11

2.1Introduction 11
2.2 The Concept of Library Automation 11
2.3 The Concept of Integrated Library Systems 12
2.4 Switching Cost 13
2.4.1 Types of Switching Costs 14
2.4.2 Causes of Switching costs 15
2.4.3 Switching Costs of Integrated Library Systems 16
2.5 Reasons for Integrated Library System Switching in Libraries 16
2.6 Procedural Switching Costs 18
2.7 Financial Switching Costs 20
2.8 Implications of ILS Switching on Libraries. 21
2.9 Summary of the Review 27
References 29
CHAPTER THREE: RESEARCH METHODOLOGY 33
3.1 Introduction 33
3.2 Research Design 33
3.3 Population of the Study 34
3.4 Sample and Sampling Technique 34
3.5 Instruments for Data Collection 35
3.5.1 Interview 36
3.6 Rigour in Qualitative Case-Study Research 36
3.7 Procedure for Data Collection 37
3.8 Procedure for Data Analysis 37

References 38

CHAPTER FOUR :DATA PRESENTATION ANALYSIS AND DISCUSSION 39

4.1 Introduction 39

4.2 Data Analysis 39

4.2.1 Reasons for Switching Integrated Library Systems by Nigerian University Libraries 39

4.2.2 Factors Considered by NUL when Switching ILS. 44

4.2.3 Procedural Switching Cost of Integrated Systems in NUL 49

4.2.4 Financial Switching Cost of Integrated Library Systems in NUL……...51

4.2.5 Implication of Switching Integrated Library Systems in Nigerian University Libraries. 56

References 58

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS 59

5.1 Introduction 59

5.2 Summary of the Study……..……59

5.3 Summary of Major Findings 60

5.4 Contribution to Knowledge 62

5.5Limitations of the Study 62

5.6 Conclusion 63

5.7 Recommendations 63

5.8 Suggestions for Further Study 65

Reference 66

BIBLIOGRAPHY 67

Appendix I: Introductory Letter 70

Appendix II: Participant Consent Form 71

Appendix III: Interview Guide..... 72

List of Tables

Table 3.1 Sample distribution……45

List of Appendices

Appendix I: Introductory Letter

Appendix II: Participant Consent Form

Appendix III: Interview Guide

List of abbreviations

ABU: Ahmadu Bello University

ATBU: Abubakar Tafawa Balewa University

CDS/ISIS: Computerized Documentation System/ Integrated Set of Information Storage and Software Package.

GLASS: Graph Sheet Library Automation Software

IFLA: International Federation of Library Associations

ILS: Integrated Library System

IOLS: Integrated Online Library System

ITS/ITF: A Cataloguing Module

KIL: Kashim Ibrahim Library

KOHA: Is an open source Integrated Library System

LIB-PLUS: Library Plus

NUL: Nigerian University Libraries

SC: Switching Costs

TINLIB: The Information Navigator Library Management Software

UNIJOS: University of Jos

UNILAG: University of Lagos

UNN: University of Nigeria Nsukka

WMS: Worldshare Management System

X-LIB: X-Windows Library Automation System

Abstract

Integrated Library System (ILS) switching is a very crucial project in the life of any library, and capital intensive. However, Nigerian university libraries have continued to switch ILS within a short period after deployment without reaping the cost of investment made in the first instance. This study sought to determine the reasons for switching ILS among Nigerian university libraries, the procedural and financial switching costs of ILS and factors taken into consideration while switching. Additionally, the study determined the implications of switching ILS on Nigerian university libraries. A qualitative research approach using multiple case study design was used to gain a better understanding of the problem; purposive sampling technique was used to select the participants. Interview was the instrument used for data collection, and the researcher conducted five interviews with five (5) participants from university libraries across the geo-political zones of Nigeria. Data were collected from June 2016 through July 2016. The analysis of data was done using themes derived from the objectives of the study. Findings revealed that delay in getting vendors support to fix ILS problems, some ILS have limited storage space to accommodate large data, crashing and data loss, and political considerations, were some of the reasons given by NUL for switching ILS. The study also discovered the implications for switching as delay; inability of students to use the online public access computer; time taken to populate the new ILS; and cost in terms of manpower training; while capacity to manage the system, costs, security of data, staff capacity building, hardware, power backup, services to be provided to users, availability of funding, were some of the factors considered by the libraries when switching. The study, therefore, recommended among others that Nigerian university libraries should conduct adequate and thorough feasibility study based on the peculiar needs of their libraries before selecting the appropriate library software, libraries

should adopt and deploy open source ILS which are more cost effective and easier to maintain rather than buying proprietary ILS which were developed based on US and UK standards and which might not fit their needs. The study concluded that the switching over from one ILS to another by NUL studied is too frequent. The frequency of change is associated with lack of proper feasibility study and knowledge involved in determining the implications of frequent switching on the libraries.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

University libraries are grappling with enormous challenges due to high turnover rate of integrated library systems (ILS). In many organizations, information technology (IT) has become crucial in the support, sustainability, and growth of their businesses, university libraries inclusive. As the rate of publication increased, libraries realized that they could not process resources fast enough with traditional manual systems and that automation could be a way out which could also control costs on labour-intensive operations. Gbaje (2013) posits that an automated library is one where a computer system is used to manage one or several of the library's key functions such as acquisitions, serials control, cataloguing, circulation and public access catalog.

Library automation no doubt offers many opportunities to improve library services to patrons. It makes materials easier for patrons to locate as well as allow staff to serve patrons better by facilitating a multitude of tasks. For any automation process to commence, the choice of an appropriate Integrated Library System (ILS) has to be made which will drive the automation process. The adoption and implementation of Integrated Library System is expensive as opined by Gbaje and Murtala (2014), whereas the budget of most libraries is inadequate. Therefore, libraries cannot afford the huge repercussions as a result of frequent switching of integrated library systems. In spite of the huge implications, as revealed by Chetty et al. (2007) university libraries in Nigeria have a high turnover rate of integrated library system.

An ILS, according to Deewil (2013), is an automated package of library services that contains several functions. These functions usually include circulation, acquisitions and cataloguing etc. He further revealed that ILS usually comprises a relational database, software to

interact with that database, and two graphical user interfaces (one for patrons and one for staff). Most ILSs separate software functions into separate modules, each of them integrated with a unified interface. Many integrated library system packages are available in the Nigerian market. These includes Liberty, LIBS+(X-Lib), CDS/ISIS, TINLIB, GLASS, Alice for Windows, Innovative Millennium, Virtua, KOHA, Voyager and more recently NewGenLib. Libraries in developing countries such as Nigeria have depended on ILS imported from developed countries like UK and USA. These ILS are very expensive to purchase, maintain, implement and deploy. Implementing a new ILS, according to Deewil, (2013) is probably one of the biggest and most expensive projects undertaken in a library. Previous studies such as Omoniwa (2001), Bozimo (2006), Nok (2006), and Imo and Igbo (2011) clearly revealed that within a short span of time many university libraries have switched from one integrated library system to another without fully implementing and deploying the old system.

This pervasive use of automation software has created a critical dependency on the software by university libraries calls for a specific focus on implications of switching cost of integrated library systems. Switching costs is defined by Haj-Salem and Chebat (2014) as "the one-time costs that customers associate with the process of switching from one product to another". Similarly, Fan and Suh (2014) view Switching cost as the "difficulty" or "disutility" involved in changing over or switching (to a new product/service/system). This is why Farrell and Klemperer (2007) in Puekert (2010) concludes that when a user changes a product it means that funds specific to the current product have to be duplicated, then switching costs occur. This notwithstanding, organizations are regularly confronted with the decision to renew an existing contract or evaluate the market and switch products.

University libraries, according to Spiers (2010) are generally the most developed libraries in Nigeria as they are the core of any university and therefore are at least minimally sustained. The primary purpose of university libraries as posited by Emwanta (2012) is to "support teaching, learning and research in ways consistent with and supportive of the institution's mission and goals". Thus, university libraries are considered the most important resource centre of an academic institution. No university can develop or function effectively without a strong library at its centre. This emphasizes the saying that an educational institution is rated largely by its library.

Burnham, Frels and Mahajan (2003) developed a switching cost typology that identifies three types of switching costs as (1) procedural switching cost, primarily involving the loss of time and effort; (2) financial switching costs, involving the loss of financially quantifiable resources; and (3) relational switching costs, involving psychological or emotional discomfort due to the loss of identity and the breaking of bonds. Similarly, Fan and Suh (2014) adapted from the research of Burnham et.al (2003) separates switching cost into two types, procedural switching cost and financial switching cost. This study therefore adopted procedural switching cost and financial switching cost, because this study was interested in determining the implication, of switching from one integrated library system to another, as such relational switching cost is excluded.

1.2 Statement of the Problem

One of the most crucial decisions in library automation is the choice of an appropriate Integrated Library System. Having taken such crucial decisions to adopt specific Integrated Library System, it is expected that university libraries will use this software for some time before

considering switching to another, but unfortunately the researcher had observed that few years into the deployment of these software the libraries abandon them for another with substantial implications.

Due to the enormous cost of acquiring and deploying Integrated Library Systems it is not expected, in the view of Deewil (2013), that ILS turnover rate for library automation should be high. According to Applegate, Austin and Mcfarlan (2007), IT system should ideally be easy to adopt and deploy but difficult to stop using. Customers drawn into the system through series of increasingly valuable enhancements should willingly become dependent on the systems functionality. In developed countries, technology savvy executives switch to new technologies because of among others their flair for new innovations these technologies have to offer in anticipation of solving an identified need and their quest to try out something new.

In Nigerian university library system, studies have revealed a high ILS switching rate. According to Imo and Igbo (2011), Nigerian university libraries switch software averagely within five years of use. This is a colossal waste of resources with huge implications on the libraries quest for automation. These not withstanding, Nigerian university libraries continue to switch from one ILS to another Oketunji (2006) and Zaid (2004). Perhaps the management of these libraries are ignorant of the implications of switching ILSs. In the Nigerian university libraries system the implication of this frequent switching is yet to be ascertained.

Several studies have been conducted on switching costs. For instance, Farrell and Klemperer (2007) studied switching costs from a broad theoretical perspective, and Chen and Hitt (2006) from information technology (IT)) perspective. Empirical studies such as (Greenstein, 1993; Knittel, 1997; Chen and Hitt, 2002; Whitten and Wakefield, 2006; Krafft and Salies, 2008; Maicas et al.2009) provide evidence of switching costs in IT markets.

This study determined the implication of switching ILS by Nigerian University libraries. This is because of the need to provide empirical data on the implication of ILS switching in Nigerian university libraries.

1.3 Research questions

The study was guided by the following questions:

1. What are the reasons for Switching Integrated Library System in Nigerian University Libraries?
2. What are the factors considered when switching Integrated Library Systems in Nigerian university libraries?
3. What is the procedural switching cost of Integrated Library Systems in Nigerian university Libraries?
4. What is the financial switching cost of Integrated Library Systems in Nigerian university libraries?
5. What are the implications of Integrated Library System switching in Nigerian university libraries?

1.4 Objectives of the study

The objectives of this study are to determine the following:

1. Reasons for switching Integrated Library Systems in Nigerian university libraries
2. Factors considered when switching Integrated Library System in Nigerian university libraries.
3. Procedural switching cost of Integrated Library Systems in Nigerian university Libraries?
4. Financial switching cost of Integrated Library Systems in Nigerian university libraries?
5. Implications of switching Integrated Library System in Nigerian university libraries.

1.5 Significance of the study

This study is significant because the findings would provide an insight into the implications of ILS switching on libraries and their parent institutions. The result of this study would add to the limited body of knowledge on ILS switching in the information science field. In the wave of dwindling financial resources of the libraries, shedding light on the implications of switching ILS would enable library managements and their parent institutions to be more prudent with their resources and enable them evaluate more critically the decision to switch ILS.

1.6 Scope of the study

The scope of this study was limited to determining the implication of switching ILS in Nigerian federal university libraries. The study was further limited to only those Nigerian federal university libraries that have switched ILS. This means that Nigerian university libraries that have newly acquired or have been using same ILS over time were excluded. The study was focused on the following Universities: Abubakar Tafawa Balewa University, Bauchi; Ahmadu Bello University, Zaria; University of Jos; University of Lagos; University of Nigeria, Nsukka; and University of Port-Harcourt.

1.7 Operational Definition of Terms

The following terms used in the study were operationally defined as follows:

Financial Switching Cost: this refers to the loss of financially quantifiable resources as a result of switching.

Implications: These refers to the positive or negative outcomes of switching ILS in university libraries

Integrated Library Systems (ILS): These are computer programmes designed to enable libraries automate their house keeping functions.

Library Automation: Is the process of computerizing library manual operations

Procedural Switching Cost: refers to time and effort loss as a result of switching

Switching: The act of changing one ILS for another

Switching Costs: quantifiable resources, time and effort lost as a result of switching integrated library systems.

University Library: Is an academic library located in a university under study

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CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter reviewed literatures relevant to this study based on the following sub-headings:

2.2 The concept of Library Automation

2.3 The concept of Integrated Library Systems

2.4 Switching costs

2.4.1 Types of switching costs

2.4.2 Causes of switching costs

2.4.3 Switching costs of integrated library systems

2.5 Reasons for Integrated Library system switching in libraries

2.6 Procedural switching costs

2.7 Financial switching costs

2.8 Implication of ILS switching in libraries

2.9 Summary of the review

2.2 The Concept of Library Automation

Chauhan (2013) defined Library automation as the general term for the application of information and communications technologies (ICTs) to replace manual systems in the library. Gbaje (2013) posits that an automated library is one where a computer system is used to manage one or several of the library's key functions such as acquisitions, serials control, cataloguing, circulation and public access catalog. However, Boateng, Agyemang and Dzandu (2014) simplified the definition to mean the application of ICT in the day to day operations of the

library. Library automation has two major objectives as revealed by Shepherd (2000), which are: to improve access to information, and to decrease or at least not increase cost, by transferring low-level, repetitive operations to a machine. This is why Jayaprakash and Balasubramani (2011) noted that most libraries, in the initial stage of their computerization, assign priorities on library house-keeping activities, as these activities are most rudimentary to make the foundation of automation stronger and the success of other advanced services depends heavily upon these activities. Rao (1995), states that depending on the type of library, all or some of these library housekeeping operations may be computerized according to their priorities. Circulation control may be given first priority in a public library while serials control may be given a top priority in a special library. Similarly, acquisition may be computerized first in a university library. One of the critical factors for library automation is the automation software otherwise known as integrated library systems (ILS).

2.3 The Concept of Integrated Library Systems

An "integrated" library system, according to Lopata (1995), is an automated system in which all of the functional modules share a common bibliographic database. The National Library of Medicine used the term "integrated" in referring to a system in which all automated library functions are processed against a single, master bibliographic file (Goldstein & Dick, 1980). Genaway (1984) expanded the definition and described the integrated online library system (IOLS) as "a library system that uses a common machine-readable database and has two or more subsystems operational and accessible online". Lopata (1995) further explains that, in a system which is not integrated, there might be a bibliographic record in the catalog for a book and, if that book were to be checked out, there would be another bibliographic record for it in a circulation file. Therefore, an integrated library system usually consists of a number of functional modules, such as acquisitions, circulation, cataloging, serials, and an OPAC (Online Public

Access Catalog). Hence, in an integrated system, there would be one bibliographic record for a book, probably created when the book was ordered, then expanded when it was cataloged. If that book were to be checked out, the patron record for the borrower would be attached to the bibliographic record, but there would not be a duplicate bibliographic record for the book in a circulation file. An integrated system is superior in several ways to one which is not integrated as revealed by Lopata (1995) in the following ways:

-The duplication of effort to create and maintain multiple copies of bibliographic records is eliminated in an integrated system.

-Opportunities for errors are reduced when records are entered only once, and changes are automatically propagated throughout the system.

-Library staff and patrons can have access to all pertinent information at different locations.

2.4 Switching Cost

Ting (2014) defined switching cost as the risk, investment and loss customers have to take because of changing service providers. Similarly, the igi-global online dictionary (2014) refers to switching costs as the hidden costs consumers face when switching from one product or technology to another in the market place as opined by Bhattacherjee et.al (2012). Hence, switching costs, according to Harris (2012), are caused by switching from one supplier of a particular good or service to another supplier, involving a complete or partial replacement of the use of one IT product or service with a substitute that serves similar needs, including money costs and the value of users' time.

From the above definitions, it can be concluded that switching costs are the real or perceived costs in terms of money, time, effort, etc that are incurred when changing supplier but which are

not incurred by remaining with the current supplier, complete or partial replacement of products and services.

Numerous studies have been conducted on switching cost in the marketing, management, and economic literature, and consensus has emerged that switching costs are prevalent in a wide variety of industrial and consumer contexts as revealed by Fornell (1992) and klamperer (1995) in Burnham, Frels and Mahajan (2003). Previous researches on IT switching have been scant, Kim,Shin and Lee (2006); Li, Browne and Wetherbe (2007). Although there has been a long tradition of switching costs research in the relationship marketing literature, most of these studies have dwelled on behavioral aspects trying to establish relationship between switching costs and repurchase intention or switching costs and intention to switch, switching costs and satisfaction, etc. very few of these studies have looked at computation or measurement of the actual cost of switching from one product or service to another except for Shy (2002) Whitten and Wakefield (2006) and Puekert (2010) whose works measured switching costs from the perspective of the cellular phone market, Banking, and IT outsourcing. Therefore, like their works, this study sought to determine the implication of switching costs from the perspective of ILS switching in Nigerian University libraries.

2.4.1 Types of Switching Costs

Various types of switching cost have been identified by scholars Klemperer (1995), Burnham et.al (2003), Guiltinan (1989), Jackson (1985), such as economic risk costs, evaluation costs, learning costs, setup costs, benefit loss costs, monetary loss costs, personal relationship loss costs and Brand relationship loss cost. But Burnham, Frels and Mahajan (2003) grouped them into three major typologies as follows:

Procedural switching costs: consisting of economic risk, evaluation, learning, and setup costs. According to Burnham et.al, this type of switching costs primarily involves the expenditure of time and effort.

Financial switching cost: consisting of benefit loss and financial-loss costs, which involves the loss of financially quantifiable resources.

Relational switching costs: consisting of personal-relationship loss and brand relationship loss costs, involving psychological or emotional discomfort due to the loss of identity and breaking of bonds.

Based on the foregoing, this study was only concerned with procedural SC and financial SC as relational SC will be difficult to measure in the context of this study.

2.4.2 Causes of Switching Costs

Klemperer (1995) listed the following as possible causes of switching costs:

· Need for compatibility (cameras and lenses, razors with blades)

· Uncertainty about the quality of untested brands

· Discount coupons such as frequent flyer programs

Fan Suh and Ting (2014) have, however, added dissatisfaction with service or product as another cause of switching. While Haj-salem and Chebat (2014) on their part posited that service failure and poor recovery are also responsible for Switching. From the foregoing, it can be seen that whatever the causes of switching costs are the fact remains that SC have implications for both the consumer and the service or product provider which calls for attention.

2.4.3 Switching Costs of Integrated Library Systems

Switching costs of integrated library systems is a virgin area that still needs to be exploited. This is because to the best of the author's knowledge no study has been conducted on ILS SC in

Nigerian libraries. Therefore, literatures in this area are scarce, but it can be looked at from the perspective of procedural SC and financial SC.

2.5. Reasons for Integrated Library System Switching in Libraries

Libraries have been presenting users with organized and classified information for centuries. However, according to Wang (2009), the once dominant status of academic libraries, assisting scholars and students in their pursuit of knowledge, is facing new competition from popular non-library entities such as Google and Amazon". Rapid advances in library technology, providing accurate and immediate information about library resources and services to users, have contributed to the number of integrated library system (ILS) conversions and migration projects in academic libraries. Many researchers and practitioners such as Wang (2009), Adogbeji, Nwalo, Okonoko and Toyo (2013) have written on the topic of ILS migration with emphasis on local and individual experiences of libraries. Gutierrez and Givens (2014) stated that their "ILS server needed to be replaced therefore, became a major factor that influenced their decision to consider a new library system. When they considered the ongoing hardware and maintenance costs associated with hosting a server, that really made a cloud based system very attractive not to mention downtime for ILS updates and server operating system updates. They were in the perfect situation timing wise, to make a change and save the most money on hardware costs".

Wang (2009) in a survey examined the ILS library market and ILS migration projects of academic libraries in the United States, and found out the following as the top five primary reasons for switching ILS:

1. Better system/Functionality in new system,

2) Diminishing Support of old system,

3) Consortium Requirement,

4) Insufficient Old System Features, and

5) Aging System/Hardware. Other reasons included: Cost, Vendor Merger, Vendor Stability and Customer Support.

On their part Zaid (2004), Adogbeji et.al (2013) reported the following as reasons for switching ILS in Nigerian university libraries studied: GLAS (Graphical Library Automation System) is an improvement on TINLIB by the same manufacturer because it is window-based, TINLIB is menu-driven software with extensive use of the function keys to invoke particular tasks, Search terms in TINLIB are controlled by the scrolling lists i.e. the use of the skip function (F10 key), It is purely DOS-based and windows have become the universal platform of interaction with other systems, Ability for GLAS software to perform multi-tasking functionality, Inability of TINLIB to import data from window-based software, Issue of retrospective conversion of the University of Lagos Library records to machine-readable format has been a Herculean task. TINLIB does not have the import – export module, GLAS though has the 'DATABRIDGE' module for import and export but it was not activated, the development of information technology has actually overridden the advantages of TINLIB where one must memorize commands. Windows has other many features that benefit both new and experienced PC users, lack of systems analysis before and after embarking on the purchase of the software, lack of maintenance or technical support, limitation of software, obsolete nature of the operating systems on which the software run.

However, advocating that reasons for change must be based on carefully evaluated library needs and that any new ILS must demonstrate that it will add value to library services and student outcomes. Services to schools of New Zealand (2015) gave more reasons for change to include:

- Present programme being outdated and static

- Present programme not having updates or add-ons that will cover current and future needs.
- Present programme not user friendly
- Programme being web based to deal with new resources such as websites and ebooks
- Programme that will enhance access to all library resources and add to student achievement within the school
- Programme that will embrace not only print material, but multimedia formats, social media and the online working environment.

From the foregoing, it can be seen that each library might have different reasons for switching ILS, it is worthy to note that no system last(s) a life time as argued by Tebbetts (2006). So ILS must be switched for another as the situation warrants. In the opinion of Zhang (1998) in Raju, Moodley, Jagarnath, Chetty, Shongwe, and Raju (2007), advancement in telecommunication and computer technology have already turned library automation into an on-going process in which librarians keep looking for more powerful and reliable systems to improve their services. The cost of acquiring an ILS, they further revealed, represents a huge investment. Therefore, libraries take the selection process seriously. Purchasing an automated integrated system for your library, according to Tebbetts (2006), is a major decision and one that has to be considered carefully. She argued that planning in this environment is quite different from planning a one-time purchase, and therefore, adaptability and flexibility must always be considered. Hence, the ability to change will be crucial to the success of the library's automation efforts.

2.6 Procedural Switching Costs

Procedural switching costs, according to Burnham, Frels and Mahagan (2003), can be sub-divided into the following specific costs:

- ✓ Economic risk costs are those costs of accepting uncertainty with the potential for a negative outcome when adopting a new provider about which the consumer has insufficient information, (Guiltinan 1989; Jackson 1985; Klamperer 1995; Samuelson and Zeckhauser 1988).
- ✓ Evaluation costs are the time and effort costs associated with the search and analysis needed to make a switching decision (Samuelson and Zeckhauser, 1988); Shugan (1980). Time and effort are associated with collecting the information needed to evaluate potential alternative providers. Mental effort is required to restructure and analyze available information in order to arrive at an informed decision Shugan (1980).
- ✓ Learning costs are the time and effort costs of acquiring new skills or know how in order to use the new product or service effectively Alba and Hutchinson (1987); Eliashberg and Robertson (1988); Guiltinan (1989); Wanerfelt (1985). Learning investments are often provider specific, meaning new investments must be made to adapt to a new provider Klamperer (1987).
- ✓ Setup costs are the time and effort costs associated with the process of initiating a relationship with a new provider or setting up a new product for initial use (consider installing and configuring software) Guiltinan (1989); Klamperer (1995). Setup costs for services are dominated by the information exchange needed for a new provider to reduce its selling risks and understand the customers' specific needs (Guiltinan, 1989).

Therefore, following the line of the above mentioned literature, learning costs and setup costs were measured as they are the ones relevant to the purpose of this study while risk costs and evaluation costs were excluded.

2.7 Financial Switching Costs

Financial switching cost is made up of two facets of switching costs as advanced by Burnham, Frels and Mahajan (2003) which are:

- Benefit loss costs or loss performance costs associated with contractual linkages that create economic benefits for staying with an incumbent firm Guiltinan (1989). Continued patronage of a provider often leads to the accrual of benefits and perquisites that are lost if the relationship is terminated Maute and Forrester, (1993); Turnball and Wilson,(1989). Examples include frequent preferential seating in a restaurant. Such benefits and perquisites represent an augmentation of the flier miles, special volume-based discounts, and special treatment based on prior usage such as core service and thus create positive incentives to remain in a relationship Beatty et al., (1996); Heskett, Sasser, &, Hart, (1990). Given the highly personalized nature of services, such treatment perquisites may derive from strong relationships with service personnel see, Guiltinan, (1989). In switching to a new provider, consumers may lose points they have accumulated and discounts or benefits that are not afforded to new customers Guiltinan (1989).
- Monetary loss costs are the one time financial outlays that are incurred in switching providers other than those used to purchase the new product itself (Heide and Weiss 1995); Jackson (1985); Klamperer (1995); Porter (1980); Weiss and Heide (1993). Adopting a new provider often involves onetime expenditures such as deposits or initiation fees for new customers Guiltinan (1989). In addition, switching products or providers may involve replacing transaction specific assets, or "co-assets," in which the consumer has invested (Kerin, Varadarajan, &, Peterson, 1992); Weiss and Heide (1993).

For the purpose of this study monetary loss costs was the focus and also involved costs of acquiring the new ILS.

2.8 Implications of ILS Switching on Libraries

The migration experience is not always of a smooth transition as revealed by Singh (2013) who reported on the situation in U.S. libraries and found out the following:

- There were delays in the migration schedule and even after the delay not all of the key features were complete.
- In the process of the migration there were merger and separation of the vendors e.g LibLime (a proprietary vendor) with whom they were working announced their separation from the Koha open-source community, which caused additional confusion.
- Data migration problem, due to differences of the fields of the old system and the new system
- Inability to use the right terminologies in the contract terms which affected migration of patrons' current checkouts record, which was a big issue.
- It is very important to do data mapping very carefully because if you lose anything during migration it is difficult to get it back. Check it to make sure that all the fields will be transported correctly, and run tests while the old system is still up to make sure everything is there.
- Inconsistencies in data due to improper clean up.
- Difficulties in using the new systems by the patrons because there is no adequate marketing for the patrons most libraries have not done anything elaborate, generally just announcements through posters, local papers, flyers, and on websites. If the migration is

greatly changing the situation for patrons, then more marketing is needed. Set up a demo computer for patrons to try or hold classes once the system is up.

- High cost due running two systems simultaneously because the old system has to be run for a month or two until you are sure that all the data got migrated over properly.
- Staff has to have the technical knowledge of (Linux, SQL, and coding) which were lacking.

On their part, Gutierrez and Givens (2014) reported the following challenges in the migration process:

- ✓ The process would have been completed earlier but their library chose to go live at the beginning of the spring 2014 semester in order to lessen any complications for their students.

- ✓ We did have one hang-up where a group of our records was not imported and that was not detected until later.

- ✓ The reporting in WorldShare Management Services is still a big work in progress and the biggest hurdle for us at this point. The problem with the current reports is they are mainly canned reports and there are so many they are hard to sort through. The other issue is that reports are not all accessible from one place. We may need to login to 2 or 3 different areas to pull everything together. Also, with canned reports we cannot produce these on demand they are for example only created on a certain day each week.

- ✓ Cleanup of records is another challenge in WMS. The library made the decision to shift some books, 30,000 items approximately. The location needed to be changed manually for each item. This example illustrates why we need certain functionalities in our system. We need to be able to create reports on demand that show all items in a given location. We also need what our previous system called global updates where we could make changes to batches of records in a short amount of time.

- ✓ In the area of serials we have stopped checking in our journals in WMS as we do not like the way this affects the appearance on the public side of the discovery layer. We have heard from other libraries using WMS that they have taken this approach as well. This could be an area where changes will be made and we will start using this functionality but at this point we are not. While not ideal this change has actually led to less work for staff.

- ✓ The transition to a new library system was a huge change for our staff. As with any change certain individuals are impacted more than others and those impacted the most tend to be the ones most hesitant to change or the biggest critics. This is very understandable. We do however have to face the new reality and embrace it so that we can provide the best level of service for our patrons.

- ✓ Getting our staff to transition to WorldShare Management Services in their daily workflows was a challenge. The way WMS works to some extent dictates the new workflows. For example, in the acquisitions module in WMS some of the traditional tasks our cataloger would complete needed to be completed earlier in the workflow

which required us to move those duties to our acquisition staff. Changes like this can be stressful to staff as we not only change how you do something but also give you less or more work. Helping staff with these changes through training and identifying resources on best practices through the online support center is key.

Wang (2009) in his study of academic libraries in U.S. reported that "no system is perfect" and that libraries should not "believe everything said by the vendor's sales team." So also they should not expect the vendors to tell them all the problems. He also reported that the respondents reported not having enough in-house technical personnel to support the new systems.

Raju, Moodley, Jagarnath, Chetty, Shongwe, and Raju (2007) reported the implications of ILS switching in their study of libraries in KwaZulu Natal Province as follows:

- While most library staff have no experience with systems migration, for technical services and systems staff, it is likely to be one of the largest and most complex projects of their careers. The challenges are to make the shift as seamless as possible, to re-invent workflows and re-examine library policy, and to make certain that the public is getting all possible benefits from the new ILS.

- A successful implementation of migration requires considerable commitment from all stakeholders. If the choice is a commercialized product, there has to be formal agreements between the vendor and the library with regard to timeframes. However,

Khurshid and Kadry (2006) advised that timeframes must be realistic yet sufficiently flexible to cope with unforeseen delays.

- The traditional course of action would be to choose the system, configure it, train the staff and then implement using the 'big bang' approach and thereafter 'wait and see'. There is the option of a phased approach which makes provision for some freedom for manipulation and slow configuration ensuring a system that will meet, almost immediately, the needs of the organization. However, this would be a little more costly as the library would have to work with a dual system during the period of transition.

- Given that there are huge financial and human resource implications, there is a need for an individual to take charge and steer the ship. Under the directorship of such an individual, the library can make decisions about the approach to be adopted for implementation, then configure the system and train the staff.

- Provision must be made to market the system and do an evaluation.

- The appointment of the above mentioned project managers limits complications that may arise when too many people are participating in the decision making process.

- The approach to be adopted for the implementation of the migration process is another key consideration for the individuals that are directing the project.

- Library's environment must be seamless and simple for users to navigate. No matter how complex the system is behind the scenes, there is a responsibility to have a simple and coherent user interface.

- The fluidity of the vendor system makes a mockery of the time, effort and finances invested in choosing a vendor and its system. A typical example of the negative implications of the fluidity is the Jordanian experience. Eight universities in Jordan did an extensive evaluation in 2005 of the different systems, including Sirsi's Unicorn, that were on offer and eventually settled on Dynix's Horizon as the best fit for the eight Jordanian universities. Implementation was scheduled for March 2006. In 2006 Dynix merged with Sirsi to form SirsiDynix. A year later (2006) SirsiDynix was sold to Vista. The question that begs an answer is: What about the effort and resources expended to get to the decision to purchase Dynix's Horizon?

- It has been acknowledged that costs are deterrent when dealing directly with the Vendor, especially if there is a requirement for more training. On the other hand, it is cheaper and easier to deal with a supplier from within the country. Notwithstanding the cost implications, it would seem that the institution dealing directly with the vendor gets better support. Queries, via email, are dealt with promptly. However, going via an intermediary causes prolonged delays. Another significant comment made was that the office of the intermediary "was not always as knowledgeable and experienced as their intermediary counterparts".

- KZN institutions were criticised for not exercising their consumer rights. The impression created from the interviews was that the vendor was in control and prescribed many of the processes in accordance with their capabilities as opposed to addressing the needs of the client. The client had to conform as opposed to the vendor conforming. As product consumers, the said institutions should not have let this happen.

2.9 Summary of the Review

This chapter reviewed literature on the concept of library automation. Even though there are several definitions of the concept, the literature all pointed to library automation as simply the application of ICT in the day to day operations of the library. The concept of switching cost was also reviewed and most of the literature reviewed looked at costs in terms of risk; money, time and effort incurred involving complete or partial replacement of IT, service providers and services. The literature reviewed identified types of switching cost to include economic risk costs, evaluation costs, learning costs, setup costs, benefit loss costs, monetary loss costs, personal relationship loss costs and brand relationship loss cost. These were grouped into three major typologies: procedural switching costs, financial switching costs and relationship switching costs by Burnham et.al (2003).

Although the literature reviewed identified many causes of switching costs, such as need for compatibility (cameras and lenses, razors with blades), dissatisfaction with service or product, service failure and poor recovery, etc, many pointed to need for better system functionality, diminishing support of old system, consortium requirement, aging system/hardware etc as the major causes. Similarly, the literature reviewed alluded to many reasons for switching ILS, however most literature emphasized on insufficient old system features, high cost of maintenance as major reasons.

The literature was also reviewed on procedural SC which can be subdivided into four which are: Economic risk costs, evaluation costs, setup costs and learning costs. While Financial SC can be subdivided into two which are: benefit loss costs and monetary loss costs. Literatures were finally reviewed on implications of SC on libraries which were identified as: delay in switching process, data migration problems, fluidity of the vendor systems as a result of merger and separations, libraries not excising their consumer rights by allowing the vendors to dictate the terms of the process, etc.

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discussed the research methodology adopted for the study. The chapter is presented under the following sub-headings:

3.2 Research Design

3.3 Population of the study

3.4 Sample and Sampling technique

3.5 Instrument for data collection

3.6 Rigour in qualitative case-study research

3.7 Procedure for data collection

3.8 Procedure for data analysis

3.2 Research Design

This study adopted a qualitative research approach. Dooley (1984) notes that qualitative methodology involves the researcher interacting, observing and interpreting meanings from the cases being studied. On his part, Samkange (2012) said that the methodology can be used to study different problems. It's use is therefore determined by the problem being studied. For Berg (1998), he is of the view that qualitative research methodology is best suited for obtaining data on attitudes, perceptions, meanings and the description of social reality. This position is further supported by Patton (1990) who further informs us that, as a methodology, it produces a wealth of detailed information about a smaller number of cases that is transferable. The goal of qualitative research can be stated as "*in-depth understanding*" while the goal of quantitative approaches can be stated as, "*empirical generalization to many*" (Nastasi, n.d.). On his part, Willis (2007) posit that the qualitative research methodology makes use of traditional research

methods such as ethnographic research, case studies, histography, and experience narratives. This provides a varied choice in terms of methods to employ, therefore, found suitable for this study. Multiple case study design was adopted for the study as Creswell (2003) posits that it enables the study of processes, activities, and events. Case study according to Yin (2003) is the logic that links the data to be collected and the conclusions to be drawn from the study's initial questions. A case study research design, allows the researcher to study specific cases such as the individuals, groups or such organizations as schools (Yin, 2003). Merriam (1988) on his part views case study as an examination of specific phenomena, such as a programme, an event, a person, a process, an institution or a social group. Merriam further notes that a case study offers more than an examination, as it is employed to gain an in-depth understanding of the situation and meaning for those involved. Since this study is about a process in an institution the design is found suitable.

3.3 Population of the Study

The population of the study comprised of fourty six (46) federal university libraries in Nigeria with fourty eight (48) staff in the project management teams, departments and units.

3.4 Sample and Sampling Technique

The study Used purposive sampling technique specifically Snowball or Chain Sampling which Identifies cases of interest from people who know what cases are information-rich, that is, who would be a good interview participant? This is an approach used for locating information-rich cases (Nastasi, n.d.). Six (6) university libraries were selected from each geo-political zone of the country. According to Nastasi, (n.d.) one may *estimate* sample size based on the approach of the study or the data collection method used, and for each category there are some related rules of thumb. Since the approach of this study is case study the rule of thumb is to select one case or one person. While for the data collection method which is interviewing key informants

the rule of thumb says interview approximately five people. Purposive sampling involves selecting participants who are best suited to help the researcher understand the problem and answer the research questions (Creswell, 2003). Purposive sampling technique is found suitable for this study because it enables one to select samples with the desired qualities. Only libraries that have switched from one ILS to another in their automation projects were selected. The target respondents comprised of six (6) members of the project management teams, departments or units responsible for the exercise in the university libraries under study. One (1) staff (key informant) was selected from each university library. Table 3.2 below has shown the distribution of the sample.

Table 3.1 Sample Distribution

Name of Institution	**Geo-political Zones**	**Library**	**No. of participants**
Abubakar Tafawa Balewa University Bauchi	North East	ATBU Library	1
Ahmadu Bello University Zaria	North West	Kashim Ibrahim Library (KIL)	1
University of Jos	North Central	University of Jos Library	1
University of Lagos	South West	University of Lagos Library	1
University of Nigeria Nsukka	South East	Nnamdi Azikiwe Library	1
University of Port-Harcourt	South South	Donald EU Ekong Library	1
Total	**6**		**6**

3.5 Instrument for Data Collection

The instrument used for data collection in this study was interview. Interview is suitable because it enabled an in depth understanding of the issue under study.

3.5.1 Interview

An in-depth interview was conducted using open ended questions guided by an interview schedule. This involved direct contact with the participants who responded to the questions. This provided the participants the opportunity to comment on widely defined issues (Bless and Higson-Smith, 1995). Both face- to-face and telephone contact were used to conduct the interview with the participants in the libraries studied. The use of open-ended questions in the interviews allowed for the exploration of ideas and further probing. In-depth face-to-face interviews allowed for the study of experiences, thereby, making it suitable for this study.

3.6 Rigour in Qualitative Case-Study Research

There are different criteria used to assess the rigour of qualitative research but the most common are those proposed by Lincoln and Guba (1985): credibility, dependability, confirmability and transferability. In order to ensure trustworthiness in this study, the researcher used these four criteria to present the research methods and findings in a transparent manner.

Credibility: to ensure credibility the study used peer debriefing strategy where colleaques were given the coded data to see if they agreed with the data labels and logical paths taken to arrive at those labels.

Dependability and Confirmability: to ensure credibility and confirmability of the study, an audit trail and reflexivity strategies were used to maintain comprehensive notes related to data and the rationale for all decisions.

Transferability: to ensure transferability of the study thick, rich and vigorous descriptions of the context, research methods and examples of raw data were provided.

3.7 Procedure for Data Collection

The researcher personally conducted the interviews. The consent of the interviewees were sought using a consent form for those who could be reached face-to-face while a verbal consent

was sought from those who were reached by phone. To ensure confidentiality, all participants used for the interview were assured that their names and other credentials that could be used to identify them would be secured and used solely for the purpose of the research. The interviewees were also briefed on the significance and objectives of the study. The interview sessions were recorded using a recorder and a mobile phone. The exercise lasted for one month.

3.8 Procedure for Data Analysis

Data collected were analyzed using thematic analysis. Data analysis involves a number of stages namely; data management; generation; interpretation and presentation (Creswell, 2009; Yin, 2009). In this study, data analysis involved the following steps: transcription of the data, coding of the data, categorization of the data into sub themes and themes the presentation and discussion of the data.

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CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter is on the analysis and discussion of the data collected from the five (5) research questions raised in the study. Thematic analysis was used to systematically analyse the interview responses from the participants. The thematic analysis of data in this study followed the guidelines provided by Braun, Clark and Terry (2014).

4.2 Data Analysis

The interview responses produced One hundred and three (103) narratives, which were analyzed and discussed under the following themes: Reasons for switching integrated library systems, factors taken into consideration when switching integrated library systems, procedural switching costs of integrated library systems, financial switching costs of integrated library systems and implications of switching integrated library systems. These themes are discussed below.

4.2.1 Reasons for Switching Integrated Library Systems by Nigerian University Libraries

The first objective of the study was to determine reasons why Nigerian University Libraries (NUL) under study switch integrated library systems. However, before these reasons were determined, the researcher felt the need to first of all find out information on the previous ILS used, length of time used and the current ILS in use by the Nigerian university libraries under study. Finding on these would guide the researcher in determining the reasons why the Nigerian university libraries under study switch ILS.

With regards to information on the previous ILS used by the Nigerian university libraries under study, the analysis shows that five ILS, Libplus, Alice for Windows, X-Lib, Tin-Lib and GLASS were once used by the Nigerian university libraries under study. Although all the libraries studied used proprietary software which confirms the findings of Felstead's (2004) survey on ILS between 1993 and 2003 which revealed continues dominance of ILS commercial vendors, it is interesting to find out that two of the libraries once used locally developed ILS. However, it was discovered that although Abubakar Tafawa Balewa University Library (ATBU) was not prepared for automation, yet it went ahead to purchase two ILS which were never used.

On the length of use of previous ILS, while the findings of Wang (2009) that surveyed U.S. academic libraries revealed an average use of the old systems to be 8 years with the longest use of 20 years, the analysis shows that the NUL studied used the systems for periods ranging from two years to ten years with an average of 5 years. The fact that Nigerian university libraries studied used the previous ILS below the American average reveals that they did not derive value for resources expended on acquiring the ILS.

In terms of the current ILS in use by the NUL studied, three libraries UNN library, UNIJOS library and ATBU library were found to be using KOHA software, KIL is using Virtua software, and UNILAG is using Millenium Innovative. The fact that three libraries are using KOHA is an indication that open source software is gradually being recognized and deployed in NUL studied.

Similarly, three out of the five libraries UNN library, UNIJOS library and ATBU library studied were currently using open source ILS while two were using proprietary KIL and UNILAG library. This finding indicates a gradual shift from proprietary software dominance in the market place, which Singh (2013) confirmed and gave reasons as to why an open-source ILS appeals to libraries. According to him, Open source and open access are philosophically linked to

intellectual freedom, which is ultimately the mission of libraries and its underlying philosophy. He further revealed the other two reasons as cost and functionality.

On the question of length of use of current ILS, the analysis reveals that University of Nigeria Nsukka Library (UNN) has been using its current KOHA ILS for 6 years and has no plans to switch to another ILS for now. Kashim Ibrahim Libray (KIL) ABU,Zaria has used its current Virtua ILS for 10 years and also has plans to switch to another ILS for now. Although as reported earlier that ATBU Library failed to automate after several attempts, it has now installed KOHA. The library has gotten the infrastructure and manpower in place. However, the University of Lagos (UNILAG) and University of Jos (UNIJOS) libraries have been using the current ILS Millenium innovative and KOHA for 4 and 3 years respectively. The UNIJOS library does not intend to switch to another ILS for now while UNILAG Library is already planning to switch to another ILS despite the short period of use.

The analysis above shows the average length of use of the current ILS in the libraries studied to be 6 years which is just one year above the average of the previous ILS used by the libraries. The longest ILS use is Virtua, which is in use in KIL, having ten years. Since most of the NUL studied are still using their current ILS without indication of possible migration in the shortest time is an indication of the possibility of deriving value for resources expended.

With regards to the number of ILS switched since inception of automation in the NUL studied, UNN Library has used two ILS, LIB+ and KOHA; KIL reported using two, Alice for Windows and Virtua; ATBU Library has two, X-Lib and Tin-Lib which they never used. On the other hand, UNILAG Library used three, Tin-Lib, GLASS, and Millennium innovative, while UNIJOS reported using three, ITS/ITF which is just a cataloguing module, Virtua and KOHA currently. The libraries studied revealed that averagely each library has used two ILS since the

inception of their automation project. This finding is in line with the findings of Adogbeji, Nwalo, Okonoko and Toyo (2013), in which most of the libraries studied by them used a maximum of three years and a minimum of one year since inception of the automation project in the libraries.

On the reasons for switching ILS by the NUL studied, UNN library reported delay in getting vendors to fix ILS problems. KIL listed ILS elements not made for large data, ILS crashing, data lost as reasons for switching. Other reasons given by KIL include the fact that the ILS couldn't manage the kind of power interruption going on in Nigeria and the ILS basically runs on windows operating system, was not customizable, and pressure from donour agencies McArthur and Carnegie cooperation funding the retrospective conversion demanded for regular updates on how the conversion was going because a lot of money was going into it, so the library discovered that the only way to go really was to change. UNILAG Library gave these reasons for switching, the DOS operating system which the ILS ran on was getting outdated, the space on the GLASS ILS was exhausted. While UNIJOS, revealed that they had a fire incident which led to the loss of the software leading to the switch. The several reasons for switching to their current ILS given by NUL studied collaborate the findings of Yeh and Walter (2016),Wang (2009), Adogbeji, et.al (2013), and Tebbetts,(1993).

The implication of KIL and UNILAG libraries stating inability of ILS to manage large data and exhaustion of space provided by vendor as reasons for switching means that the libraries in question did not conduct proper feasibility study of the software before it was selected and acquired. This goes to confirm the findings of Adogbeji, et.al. (2013) that systems analysis was not conducted for the ILS software in the libraries they studied. This underpin the suggestion made by Yeh and Walter (2016) that careful selection process is a critical success factor for ILS

implementation in academic libraries. In the case of UNN Library that reported vendor failure to provide support, it is clear that the library did not heed to Wang (2009) recommendation that libraries should ask serious questions on ILS vendors before taking major decisions on selecting the ILS marketed by the vendors in order to avoid vendor lock-in. For UNIJOS Library, fire incident was the major reason why it changed. Despite losing the server to a fire incident, what could have been expected of the Library to do was to buy another server and reinstall the ILS on it since they still have the license of the ILS after which they can populate it with their back up data.

With respect to source of information on appropriate ILS to switch to by the university libraries studied, UNN Library reported training programs, and other libraries using it as their source, KIL reported IFLA Conference and consultant as the sources of information. While on the part of UNILAG and UNIJOS libraries they reported conducting an independent feasibility study and getting information from literature as their sources respectively.

The paragraph above reveals several sources of information to the libraries studied. This shows that most of the libraries relied on only one or two sources to decide on which ILS to switch to, which is not good enough. Sourcing information from various sources will give better choices than relying on just one or two. A close look at the data reveals that only UNILAG and UNIJOS libraries conducted independent feasibility studies. Even though UNILAG is already planning on switching, which implies that the study conducted was not very helpful on the choice of the appropriate ILS. For UNIJOS the study was very helpful since they don't have plans to switch to another ILS it means they are satisfied with their choice. For the other libraries it is an indication that the choice of ILS was not taken very seriously and it is a very critical factor in ILS successful implementation.

4.2.2 Factors Considered by Nigerian University Libraries When Switching ILS

In order to gain further insight into other factors considered by NUL studied when switching ILS, the study enquired on who was responsible for deciding which ILS to switch to, and why the library chose the current ILS over others in the market as factors.

UNN Library reported that they sought for a system they could manage on their own and it should be open source not proprietary software. In essence the capacity to manage the system and cost were the major factors considered. For KIL, the security of data was a major factor they considered so also were capacity of the staff to manage the system, hardware, power stability, and services to be provided to the users by the new ILS. These were portrayed in this quote from the participant *"When you are switching the things you must take into consideration are, one very important issue is your data must be well protected and not only well protected, wherever whatsoever you switch to must be ready to take your data the way it is even it is going to be converted. Two, you also need to consider the people that will manage the system, there is no way you will switch and you won't have to do capacity building. Managers need to ensure that people are trained well to be able to manage whatsoever you are changing to. So also hardware and power should be considered, if you buy a software that is not robust enough to work in Nigeria because of the epileptic power you will run into a very serious problem. Finally you need to think about your users; how will it affect them, what services is it giving to them, because it is all about being able to provide better services to the community and you know the Library belongs to everybody within and outside the University Community"*

ATBU Library reported that they considered availability of funding, space capacity of the ILS and skilled manpower as the major factors, as for UNILAG Library they considered

universities around the world that are using the software, other sister institutions around them that are using it, so also the sustainability of the software, the availability of the vendor or company within reach and the ability of the company to provide prompt technical support when ever required. Here is a sample quote from the response *"Number one, we looked at universities around the world, what they using, we looked at best universities in the world and we observed that most of them used millennium. Then, we also considered the availability of the company on ground. We looked at university close to us that is using it, we didn't want to get an application that at the end of the day you have to install, there is no sufficient backup. So in terms of the application we have acquired, we have sufficient sustainability the sustainability is very high the company at anytime we have issues immediately they are ready to reply and solve them within record time."* In the case of UNIJOS Library, the major factor was funding as revealed in this quote *"Part of the factors was funding because we couldn't fund the other one again we couldn't afford 13 million to pay for license and then buys server so we opted out."*

From the foregoing, one can deduce that cost was a major consideration among the NUL studied. To buttress on the cost factor, Yeh and Walter (2016) revealed that to mitigate risks in productivity or transaction loss and to minimize system implementation costs, a library needs to determine the best "fitness-of-use" system. Cost is very integral to any ILS switching because it determines whether a library will go for open source or proprietary software. This is further buttressed by Wang (2009) that the cost of acquiring an ILS represents a huge investment. Therefore libraries take the selection process seriously. Another important factor considered by the libraries is the skills of the librarians who will manage the software. This was stressed by Koneru (2005) in Wang (2009) that staff competencies are critical when upgrading an existing system or implementing a new system. This is paramount because a library cannot depend on the

vendor's expertise to implement and manage the system it will result in more cost to the library. So, developing the skills of the librarians is very crucial, otherwise the entire exercise will be a failure and it leads to vendor monopoly. Compatibility of existing hardware with the new software was also a factor considered by KIL. This was to ensure that the new software would run on the existing hardware or else the need to upgrade the operating system and hardware to fit the new ILS.

With regards to who was responsible for the decision on which ILS to switch to, UNN Library reported that the Library Management was responsible for the decision. For KIL, the final decision was taken by the University Librarian even though staff of the Library made inputs as revealed by this quote *"that's a political question the final decision is for the University Librarian to make but, it is bottom-up the people that are actually using the system to work report their difficulty I want to do this I couldn't do it, then it gets to the technical staff then the technical staff evaluate different types of ILS, then we recommend, then the final decision is left with the head of the Library".* In the case of ATBU Library, the decision on the new ILS to acquire was made by the University Librarian in consultation with other staff. UNILAG Library reported that the Library Management, comprising the University Librarian and other members decided on the choice of the new ILS. UNIJOS Library, the Systems Librarian was responsible for deciding which ILS to switch to as shown in this sample quote *"Well, I am. I was in consultation with the University Librarian as Head of Systems Unit, I needed to move ahead … so I just made up my mind and forwarded him my plan and he supported it".*

Revelations of the findings above reveals that in most of the libraries, the university librarians were responsible for the decision on which ILS to switch to. This is in contrast to the findings of Wang (2009) which revealed that of 29 respondents, 21(72.41%) choose

"Committee/Task Force,"14(48.28%) reported "Site Visits,"4(13.79%) used "Surveys" and one 1(3.45%) utilized "Consultant." 11(37.93%) respondents who answered "Others" provided further details such as: vendor demo, information from sister campuses, literature search, and online site comparisons. The finding of Wang viz a viz the finding of this study show that the selection process of ILS in the libraries studied did not explore the varied options available that will ensure the best choice of an appropriate and suitable software for the libraries. This finding implies that inability of the libraries studied to explore the varied options is a major factor responsible for the frequent switching of ILS among the libraries.

On the question of why the choice of the current ILS over others in the market, UNN Library reported they chose the current ILS because it is an open source software. For KIL, several reasons were responsible for the choice of Virtua over other ILS such as size of the Library, number of modules in the ILS, technical support and constant updates, and the operating system on which the ILS runs. Here is a sample quote of the response *"You know the question is so ambiguous let's compare carrot with carrot so that we don't just say others there are several ILS but one I have told you, you cannot compare Virtua with Alice because Alice was meant for small library, two Alice was running on windows operating system and power was an issue, three; you look at all the modules that you have in each of these ILS, four; VTLS said very clearly that they do constant review, in fact they have virtual user group meetings, there use to be a mailing list and what they expect is that they get feedback from users, they produce but they don't use even if they use it, every country has its own peculiar problems so they expect people to be able to give them feedback so they will use it to improve on the system so you discover that when I was very active with virtua we normally have updates often so when users complain, they go back sit down and see how they can modify and they send us updates and we just run the*

update on the system so we can be able to do what we want. And you know that makes a lot of sense it makes a whole lot of sense that they already know that it cannot be a black box there must always be some kind of twicking and changing here and there to be able to suit the need of people and I think to the best of my knowledge then I think they did some good work".

On its part, ATBU Library revealed that they chose their current ILS because it is open source. While UNILAG Library reported they considered the storage space the ILS could provide, availability of the company within reach and wide use of the ILS as elaborated in this quote *"You know it's widely used, it has enough space and the company is on ground"* UNIJOS Library cited several reasons for the choice of the current software as shown in this quote *"Is an open access software, it is used widely, there is provision for support, other institution around are using it because that's another thing there is a library software that nobody has used, these are the reasons. I discovered that many institutions are using it both within Nigeria and outside and they have a forum where they attend to issues."*

The findings above reveal that three out of the five libraries chose their current ILS KOHA because it's open source. This finding contradicts the finding of Wang (2009) where only five out of twenty six libraries chose open source ILS. The similarity of Wang's finding with that of this study is that two of the five libraries who choose open source in his study also choose KOHA software. This is an indication of the challenges of funding being faced by the libraries and the growing acceptance of open source software in the automation market as against previous years where proprietary software's dominated the market. Part of the reason for the choice of KOHA open source software could be attributed to the ease with which it can be customized to suit a particular library need and the presence of an active user community which provides prompt response to challenges raised by clients. Another issue considered by the

libraries studied in the choice of the current ILS had to do with storage space provided by the new ILS like. In KIL and UNILAG library which had challenge of storage space with their previous ILS, because the previous ILS were not meant for large libraries so the software's could not handle the large volume of data they had so, storage space was a primary factor considered in the choice of the current ILS.

4.2.3 Procedural Switching Cost of Integrated Library System in Nigerian University Libraries

The third objective of the study was to determine the procedural switching cost of Integrated Library System in the Nigerian university libraries studied. Therefore, questions on time taken for the migration of data between the previous ILS and the current one, number of staffs trained on the current ILS, duration of training, and time taken to complete the switch over to the new ILS formed part of the variables for determining switching cost as highlighted by Burnham, Frels and Mahajan (2003).The responses to these questions are presented and analyzed as follows:

On the time taken for migration of content between the previous ILS and the current ones in use by the respective libraries studied, UNN library did not experience data migration because it started afresh with the new ILS, as it had challenge accessing data on the previous ILS. However, KIL reported using not less than six months for the migration of data, and UNILAG library took almost a year to migrate to the new ILS, while, UNIJOS library used less than one hour to migrate because as reported all its documents were in MARC format and had a backup from Virtua.

From the foregoing, it can be seen that the libraries used different periods to export or migrate their data from the previous ILS to the current ones. The periods ranged from 20 minutes

to one year, except for UNN Library which had to start importing records afresh due to their inability to access records on the previous ILS which is attributed to lack of proper backup, unlike in the case of UNIJOS library where it used its back up to import data into the new system. There are certain important things that all libraries should do before migrating content as stated by Singh (2013) which has to do with setting up a demonstration site and data mapping that involves data clean up and determining where the fields in a current system should go when it moves into a new system. This was unfortunately found not considered by any library under the study. Data migration could have its own challenges if not handled carefully as it is a very sensitive issue in ILS switching. The experience of Gutierrez and Givens (2014) demonstrates this when they reported that "We did have one hang-up where a group of our records was not imported and that was not detected until later. This problem was on the library side and OCLC went out of its way to make sure this problem was corrected".

On the question of number of staff trained on the current ILS in the NUL studied, UNN library had fifty (50) librarians trained. On the other hand, KIL reported that it had different set of training for different categories of librarians. ATBU Library could not say the exact number of staff that were trained but all the academic staff of the Library were trained. UNILAG Library trained 39 staff that included both academic and non academic. While UNIJOS Library, trained 43 staff from the different divisions of the Library which included Cataloguing, Circulation and Subject Librarians.

The above responses indicate that all the libraries trained their staffs on the new ILS, which indicates that all the libraries conformed to the standard procedure for migrating ILS as stated by Singh (2013) who revealed that training could be done in two ways, by a vendor or internally. The various libraries trained different number of staff depending on their staff strength

and the particular modules of ILS the training was conducted. As to the question on duration of the training, except for UNIJOS Library that did its training in three (3) days, all others used a week. This is line with the recommendation of Singh (2013) who suggested that two to three days should be used for training and further recommended that the training should be done fairly close to the launch date.

On the issue of time taken to complete the switch over from the previous ILS to the current one by the NUL studied, KIL completed the switch over within six months, UNILAG Library completed the switch over within a year. While UNIJOS Library implemented the ILS in phases based on the modules each module took one month so in all it used five months to complete the switch over. Three of the libraries completed the switch over between five months to one year. The time taken by KIL to complete the switch over is in line with the experience of Gutirrez and Givens, (2014) where the Library also completed the switching within six months. The findings from the libraries studied also conform with the findings of Wang (2009) who reported that "Close to two-thirds of the respondents in his study (66.66%) reported that six (6) to twelve (12) months were required to migrate to their new ILS". This implies that for a successful switch over to take place a minimum of six months is required.

4.2.4 Financial Switching Cost of Integrated Library System in Nigerian University Libraries.

Objective four sought to determine the financial switching cost of ILS among the Nigerian university libraries studied. In order to gain better understanding, questions on cost of data migration, cost of training staff, cost of previous ILS, and cost of current ILS were raised. With respect to cost of data migration between the previous ILS and the current one, UNN Library reported that because it did not transfer data to the new ILS, as it just started afresh, only new servers were purchased of which the cost is not known. KIL revealed that the initial cost of

data migration was part of the negotiation for buying the software. ATBU Library is yet to start data migration because they have just installed the software so no cost implication for now. UNILAG Library also revealed that the cost of data migration was part of the total package of acquiring the new ILS, while UNIJOS Library never determine the cost of the data migration because it was done in house as revealed in this quote *"I don't think I ever cost how much it cost us to migrate. This was born out of necessity; we just migrated so I don't know, in fact I personally did the installation in house here"*.

From the above responses one can deduce that KIL and UNILAG libraries had the cost of data migration to their new ILS embedded in the cost of the total package this was because they both switched to proprietary software, in which data migration was part of the agreement for buying the software. While for UNN and UNIJOS libraries who both switched to open source software and did their installation and data migration in house so no cost was incurred, even though the libraries bought servers and other hardware and the systems librarians expended man hour which is hidden cost not determined.

On the cost of training staff on the new ILS installed by the libraries, UNN and UNIJOS libraries reported that the training was done in house, which was conducted by the Head of systems unit and in both cases the cost was not determined. KIL response is portrayed by this quote "*The initial training was not charged for because it was part of the package. The only thing that probably the university paid for was the payment of duty travelling allowance (DTA) when trainings were conducted in universities with similar project which amounted to five hundred and four thousand naira only ₦504,000."* UNILAG also reported that the cost of training was included in the cost of the ILS. This implies that libraries should expect to incur hidden cost regardless of whatever training mode is adopted. Proper and adequate training will

sooth users and eliminate their reluctance to use the new system, which in turn helps realize productivity gains (Yeh & Walter, 2016).

With respect to cost of previous ILS, UNN Library reported not knowing the cost of the previous ILS. KIL revealed that the previous ILS cost about thirty five thousand pounds (£35,000) which is equivalent to five million six hundred and ninety one thousand one hundred and twenty five naira (₦5,691,125), here is a quote from the response "*that is a very difficult question, I know Alice for windows is a UK based software so we paid in pounds sterling may be like 35,000 pounds"*. ATBU Library couldn't remember the cost of previous ILS. For UNILAG Library the cost is not known. While UNIJOS Library reported that the previous ILS cost over thirteen million naira (13,000,000).

From all the responses only two of the libraries could give the cost of their previous ILS KIL and UNIJOS libraries, and from the figures revealed one could see that a lot of expenses had been incurred considering the shrinking budget of libraries for quite some time now. KIL bought the software using its own resources while for UNIJOS Library Carnegie Foundation provided the funding to acquire the software. Two common reasons considered by libraries when switching ILS is cost and functionality as posited by Singh (2013). This is because ILS switching is one of the most critical decisions to be taken by any library Therefore, cost should be considered very carefully. This brings the issue of either to build or to buy ILS as argued by some scholars such as Reggie, et.al (2007) and Tennant, (2007). While Reggie et al opined that "It is common cause that building is less expensive than purchasing a commercial system, even after factoring in the increased staff required" Tennant points out that there will be savings on software licensing and support fees. He further states that there will be savings in the use of commodity hardware and architecture that allows for scaling as needed. From the foregoing

argument, it means that libraries need to look inwards to either develop software on their own or opt for open source software which is cheaper and less expensive to maintain compared to commercial software. This could be made possible by exploiting the vast array of skilled programmers available in the country.

On the cost of the current ILS, UNN Library reported that the current ILS cost nothing because it's open source software and it was downloaded and installed by the Systems Unit of the Library. For KIL their current software cost about sixty four million (64) naira as shown in this quote ***"****Virtua cost 110,000 thousand dollars that's about sixty four million naira".* ATBU Library could not give the cost of the current ILS in their Library. Even though it is open source software it is likely that no cost was incurred except if they used a vendor to install it for them. On the part of UNILAG library, the library paid ninety (90) thousand dollar as revealed in this quote *"we paid around ninety something thousand dollars per annum yes ninety thousand, let me give you the naira equivalent 31 million".* While UNIJOS Library reported that it was cost free because it's open source software as revealed in this quote *"Is it totally free well it depends on the angle you are looking at it. Because if you want to know the reason why it is free is because we did it in-house if the University had contacted may be contractors they will charge for it. For us, it was free because we had the technical knowhow".*

With regards to the source of funding for ILS switching in the Nigerian university libraries studied, UNN Library reported buying servers using the Library fund. KIL revealed that the Library's previous ILS was funded by the University while the second was co-funded by two donor agencies, as confirmed by this quote *"Everything about virtual initially was funded by McArthur and Carnegie including the training.* ATBU Library reported that the University provided the funding for the switch over. For UNILAG Library the switch over was funded from

internally generated revenue, while UNIJOS Library reported that their previous ILS Virtua was funded by Carnegie Foundation and the current ILS KOHA was funded by the Library and later got assistance from TETFund as supported by this quote *"For Virtua, it was funded by Carnegie, but for KOHA, we moved without any funding.Well eventually we got funding from TETFund after the fire incident".*

From the above, it can be deduced that while KIL and UNIJOS libraries got funding from donors to carry out the switch over, UNN Library, ATBU Library and UNILAG Library funded the switch over internally. Since the switch was funded internally, it could be part of the reasons why UNN Library, ATBU Library, and UNIJOS Library switched to KOHA open source software because of the high costs of proprietary ILS which the libraries could no longer afford. This was confirmed by UNIJOS Library which reported they couldn't afford the license for Virtua after the fire incidence, therefore, had to opt for KOHA open source ILS. By implication, this means that even those libraries that switched using funds from donors might not have been able to do so without the donor's assistance as some of the libraries despite being assisted by donors now find it difficult to renew the license. This finding also reveals that, despite interventions from donor agencies, libraries and parent institutions are the dominant source of funding of ILS switching, which is in line with the findings of Wang (2009) who reported that library budget provided 43.24% of funding for ILS switching and special allowance from institution had 37.84% as against grants from donors which had only 8.11%.

4.2.5 Implications of Switching Integrated Library Systems in Nigerian University Libraries

On the implication of switching ILS on NUL studied, UNN Library reported three implications; delay in the automation process, inability of students to use the online public access catalogue, and the time taken to populate the new ILS. KIL revealed several implications as demonstrated in this quote *"You know because for us we had reasons to switch but if you look at the other side of it, when you switch from one system to another cost implication is one very serious issue, manpower which is also related to cost because you have to train people on how to manage, people must understand and be able to manage the system. Like here in ABU even after we switched we also discovered that we had problem with Sun Solaris operating system so at some point we had to change the Operating System to Reddart leading to incurring hardware cost. One other very serious implication is that you are likely to lose data and that is actually the most terrible one and time was also an issue".*

For UNILAG Library, the project was capital intensive and the library staff were already used to the old system so they found it difficult to adapt to the new ILS, and delay in the release of funds by the University Management for the project. A sample quote from the response further buttress the implications on the Library.*"The implications are many it is capital intensive. People are already used to the old one so there is this legacy it was not easy to adapt to the new system. There was no delay once you have your money, immediately we paid there was no delay though it took series of memos and series of meetings before the University could release money but eventually when it was released it was bound up*"**.** UNIJOS Library reported

implications such as; staff being used to the old system and the new system was a new environment for them which is different from what they were use to in their practical operation.

From the implications identified by the NUL studied, one can deduce that majority of the libraries revealed that ILS switching is capital intensive as confirmed by Tebbetts (2006), this is serious considering the continuous decline in library budget. Another implication revealed by the libraries is time since the libraries before the switch were either partially or fully automated, switching ILS results in setback to the Library automation quest especially where the switch over was not done in phases, which cripples the entire library system for months making users unable to access the library resources through the OPAC. Data loss is another very serious implication of switching ILS. In the process of switching, data could be lost if not handled carefully by professionals. This was buttressed by Tebbetts (2006) who notes that "of primary importance in the process of migrating to a new system is the transfer of data, it is important to remember that your database is the essential element in your online platform and restoring lost or corrupted data will be time consuming and costly".

Adaptability to the new ILS was also a major challenge to the libraries because most of the libraries reported difficulties in adapting to the new environment of the ILS; thereby causing delay in the full exploitation of the new system. Yeh and Walter (2016) suggested early staff user involvement, interdepartmental communication, staff user education and training as well as managing staff user emotions as critical success factors for implementing ILS in academic libraries and this will help overcome the challenges of adaptability to the ILS.

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CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This Chapter presents the summaries of the study and major findings. It also presented a conclusion and put forward some recommendations. The study also gave suggestions for further studies.

5.2 Summary of the Study

The study was aimed at determining Integrated Library System (ILS) switching costs in Nigerian university libraries. This is because integrated library system switching is a process that requires huge investment of material and human resources, careful planning and decision making. The success or failure of ILS switching affects the entire library operations and services so also, determines the future of the library quest for full automation. Despite this, university libraries in Nigeria continue to switch from one integrated library system to another without regard for the switching cost and its implications on the Library. Five research questions guided the study. These are: what are the reasons Nigerian University Libraries Switch over Integrated Library Systems?, What is the financial switching cost of Integrated Library System in Nigerian university libraries?, and What are the factors taken into consideration when switching an Integrated Library System in Nigerian university libraries?. Relevant literatures were reviewed which revealed that there are various types of switching costs which include learning costs, setup costs, relationship loss cost, financial costs, and procedural costs. The literature reviewed also identified many causes of switching costs, such as need for compatibility, dissatisfaction with service or product, service failure and poor recovery, etc, and that the major reasons for switching are insufficient old system features, and high cost of maintenance.

Qualitative multiple case study design was used for the study. To achieve the aim of the study, one-on-one interview was conducted with five participants from five university libraries across Nigeria, purposely selected based on their experiences with switching integrated library systems in the libraries studied. Analysis of the data was done based on the narratives that emerged from the interviews conducted which were premised on the objectives of the study.

5.3 Summary of Major Findings

This section presents the summary of the major findings of the study, which are as follows:

1. The study discovered that five different ILS, ranging from Tin-Lib, Alice for windows to LIBPLUS and GLASS were previously used by the NUL studied, and all the previous ILS were proprietary software which lasted for a period ranging from 2-10 years with an average of 5 years. The current ILS in use in the libraries indicate a shift from proprietary software to the open source software, and the study also discovered that all the five NUL studied had to switch over from one ILS to another within a range of 2-3 years and the reasons associated with this switching over were delay in getting vendors support to fix ILS problems, some ILS not designed for big libraries with large data, crashing and data loss, inability to cope with erratic power supply are some reasons given by NUL for switching ILS. Other reasons attributed to switching over also include ILS not customizable, only compatible with one operating system, outdated operating system, exhaustion of storage space, and political reasons. In addition, it was discovered that adequate sources of information were not consulted to aid in deciding what ILS to switch to.

2. The study found out that factors taken into consideration by Nigerian university libraries studied when switching ILS are; capacity to manage the system, costs, security of data, staff capacity building, hardware, power backup, services to be provided to users, availability of funding, storage capacity of the ILS, and skilled manpower. Others include sustainability of the software, availability of the vendor and their ability to provide prompt technical support, popularity of the ILS among university libraries within the country and around the world. It was also discovered that in most of the libraries, the university librarians were responsible for the choice of software to switch to.
3. The Nigerian university libraries studied indicated a period of less than an hour to a six months as the time taken to migrate data from one ILS to another and that a total of one hundred and thirty eight (138) staff were trained on their new ILS which lasted for between three (3) days to one week. Libraries incurred an average contingency training cost of five hundred and four (₦504,000) thousand naira. The time taken for the complete switch over in the libraries was between six months to one year.
4. In terms of the financial switching cost of ILS, unfortunately the study was unable to determine the financial implication of switching because only three of the Nigerian university libraries studied, were able to provide some components of the financial implication. The study revealed that they were unable to provide the initial cost of some of the previous and current ILS, and other associated cost such as installation, maintenance, training, e.t.c.
5. On the implication of switching integrated library systems on Nigerian university libraries studied, inability of students to use the online public access computer; time taken to populate the new ILS; cost in terms of manpower training, hardware, and software

costs; capacity to manage the system by library staff; data loss during migration; project is capital intensive; difficulty in adapting to the new system by staff of the libraries; and difficulty in accessing funds were found to be the implications of switching over.

5.4 Contribution to Knowledge

The study established the following:

1. The five NUL studied switched from one ILS to another averagely within five (5) years of use, and in most of the libraries studied, the university librarians were responsible for the choice of software to switch to.

2. Lack of proper feasibility study was responsible for the frequent switching of ILS among NUL studied.

3. Funding challenge was responsible for the NUL studied abandoning initial proprietary ILS adopted for open source ILS, despite getting assistance from donor agencies because the libraries could not sustain license renewal after the expiration of the donor funds.

4. Nigerian university libraries are not fully aware of the of the extent of switching cost of ILS, the initial cost of the ILS and other associated cost such as installation, maintenance, training, e.t.c.

5.5 Limitations of the Study

There were a number of challenges encountered in the cause of conducting this research. Five limitations were identified that needs to be addressed. The first concerns difficulty in securing audience with the participants because the researcher did not visit all the study locations physically so several attempts were made at fixing time for the interview through text messages and phone calls. Secondly, in ability of the researcher to send the interview questions to the participants before the actual interview limited the information gotten from them to only what they could remember. Thirdly, inadequate time given by the participants for the interviews due to other engagements they had limited the level of probe the researcher could do. Finally, study findings apply to these specific areas. As naturalistic inquiries focus

on people's understanding of their realities in a particular social context, generalizing across context-specific situations is not possible (Erlandson, Harris, Skipper and Allen 1993). Findings, nevertheless, can inform or encourage a working hypothesis for new inquires and areas of study.

5.6 Conclusion

From the findings of this study it can be concluded that the switching over from one ILS to another by NUL studied is too frequent. The frequency of change is associated with lack of proper feasibility study and knowledge involved in costing switch over as well as neglect of cost benefit analysis of the implication of frequent switching on the libraries. It can also be concluded that the absence of information technology strategic plan and strategic planners which should guide information technology projects like ILS switching is bane of the Nigeria university libraries studied.

Libraries position as an information provider is challenged in the 21st century by alternative sources such as search engines and increasing demand from information technology savvy patrons. For libraries to cope with this challenge and maintain its patrons, automation is key, using Integrated Library systems. However technology doubles every six months and no integrated library system is designed to last for a life time So Nigerian university libraries will continue to grapple with new innovations in the ILS market place which they will need to adopt in order to cope with the current trends of information service provision.

5.7 Recommendations

Based on the major findings, the study recommends the following:

1. Nigerian university libraries studied should conduct adequate and thorough feasibility study based on the peculiar needs of their libraries before selecting the appropriate library software. This can be done by planning ahead and coming up with a comprehensive plan on how the ILS switching will be conducted, before the actual switch over starts. This can be achieved by setting up a committee of all stakeholders of the library including students and faculty members as well as experts with ILS switching experience. The committee can consider site visits, vendor demo, and online site comparisons.
2. The libraries studied should consider services to be provided to the users as an integral factor to be considered while switching. So also the decision on what ILS to switch to should be made with adequate consultation with all stakeholders of the library to avoid individual monopoly and selection of inappropriate software, leading to waste of scarce resources and time.
3. University libraries in Nigeria studied should strive to provide training for students and other users of the ILS by providing demo systems which they can practice on. The training should be planned using a time table scheduled based on modules of the ILS. The libraries should also ensure adequate budgetary provisions to cater for contingencies that may arise in the cause of the training.
4. The libraries studied should ensure that when negotiating with vendors for a new ILS a comprehensive breakdown of the cost of each component of the ILS implementation is known such as cost of installation, data migration, training, hardware etc instead of a lump sum cost.
5. Nigerian university libraries studied should ensure that the old ILS they are switching from keeps on running while the new system is being deployed to avoid disruption of

services to users and setback to the automation quest of the libraries. Provisions should be made for the additional expenses for running the two systems concurrently before the new system is fully deployed.

5.8 Suggestion for Further Study

It is suggested that further research should be conducted on user satisfaction with services provided by Integrated Library Systems in Nigerian university libraries with a view to evaluating the attainment of the goals of automation in libraries.

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Appendix I: Introductory Letter

Department of Library and Information Science

Faculty of Education

Ahmadu Bello University, Zaria.

19/06/15

Dear Participant,

I am a Master's student carrying out a research titled **"Implications of Integrated Library Systems (ILS) Switching Costs in Nigerian University Libraries"**. The information being sought will be used for academic research purposes and treated with utmost confidentiality.

Thank you in anticipation of your cooperation.

Yours Sincerely

Dauda, Idris Adamu

P15EDLS/8280/15-16

Appendix II: Participant Consent Form

Department of Library and Information Science

Faculty of Education

Ahmadu Bello University, Zaria.

RESEARCH PARTICIPATION CONSENT FORM

Topic: Implications of Integrated Library Systems (ILS) Switching Costs in Nigerian University Libraries.

Investigator: Dauda Idris Adamu (08095944300)

Supervisory team:

Prof. Umar Ibrahim

Dr Ezra S. Gbaje

Department: Library and Information Science

Status: Postgraduate (masters)

I wish to request for your voluntary assistance by participating in a research dissertation involving an in-depth interview.

Purpose of the study

The study intends to find out the switching costs of integrated library systems in Nigerian university libraries and its implication on the libraries.

Confidentiality: All interviews will be scheduled for your conveniences. The interview will be recorded using a tape recorder. Name and other personal information will not be involved.

Participants signature……Date……..

Thank you

Appendix III: Interview Guide

Section A: Demographic Information



1. Name of Institution:
2. Name of Library
3. Department/Section/Unit:

Section B: Reasons for Switching Integrated Library Systems

4. What was the name of the immediate past ILS your library was using before now?
5. For how long was the old ILS in use?
6. What is the name of the current ILS in use in your library?
7. How long has the current ILS been in use in your library?
8. How many ILS have your library changed since inception of the automation project?
9. What would you agree as the reasons responsible for the switching from the previous ILS to the current one in your library?
10. What was the main source of information to the library when you decided to switch?

Section C: Factors Taken into Consideration when Switching Integrated Library Systems.

11. What will you consider as the factors considered when switching ILS in your library?
12. Who was responsible for deciding which system or ILS to switch to?
13. Why did your library choose its current ILS over other ILS in the market?

Section D: Procedural Switching Costs of Integrated Library Systems

14. How long did it take for the migration between the previous ILS and the current one?

15. How many staffs were trained for the incumbent ILS?

16. How did the training last?

17. How did it take to complete the switch over

Section E: Financial Switching Costs of Integrated Library Systems

18. What was the cost of data migration?

19. What was the cost of the training of staff?

20. What was the estimated cost of the previous ILS?

21. What is the estimated cost of the incumbent ILS?

22. What was the source of funding for the switch over

Section F: Implication of Switching Integrated Library Systems

23. What will say were the implications of switching to another ILS in your library