

**ASSESMENT OF MAINSTREAMING OF INFORMATION LITERACY
INTO ACADEMIC PROGRAMS IN SELECTED UNIVERSITIES IN
NAIROBI AND KIAMBU COUNTIES, KENYA.**

BY

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DECLARATION

I declare that this research is my original work and has not been presented in any other university/institution for consideration of any certification. This research has been complemented by referenced sources duly acknowledged. Where text, data (including spoken words), graphics, pictures or tables have been borrowed from other sources, including the internet, these are specifically accredited and references cited using current APA system and in accordance with anti-plagiarism regulations.

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Supervisors' Declaration

This research has been submitted for appraisal with my approval as a university supervisor.

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DEDICATION

This research project is dedicated to our darling daughter Darlene and anointed son
Gabrielle.

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ABBREVIATIONS AND ACRONYMS

CHE	:	Commission for Higher Education
CILIP	:	Chartered Institute of Library and Information Professionals
CUE	:	Commission for University Education
ICT	:	Information Communication Technology
IL	:	Information Literacy
IT	:	Information Technology
LIBR/STD	:	Library Standard
ACRL	:	Association of College and Research Libraries
IFLA	:	International Federation of Library Association
KLISC	:	Kenya Library and Information Services Consortium
ALA	:	American Library Association
INASP	:	International Network for the Availability of Scientific Publications
QUT	:	Queensland University of Technology
ILF&S	:	Information Literacy Framework and Syllabus

ABSTRACT

The primary purpose of this study was to assess mainstreaming of information literacy into universities' academic programs as outlined by Commission for University Education standards and guidelines for university libraries in Kenya. The standards require universities to integrate information literacy into the curriculum under common units for both undergraduates and postgraduates to ensure information literacy skills are imparted to all students in institutions of higher learning in Kenya. The study sought to examine the perceptions of librarians and faculty regarding mainstreaming information literacy into academic programs; their involvement in mainstreaming IL into the curriculum; the extent to which Information Literacy has been incorporated into the academic curriculum; availability of adequate resources in terms of equipment and human to facilitate mainstreaming as well as the challenges encountered in mainstreaming IL into curriculum. This research was guided by the socio-cultural learning theory by Vygotsky. The target population was 267 librarians and faculty coordinators of information literacy in the main university campuses in Kiambu and Nairobi counties. The sample size comprised of 57 librarians and 7 faculty coordinators of information literacy. Descriptive survey design was used and the research used questionnaires to collect data. A pilot study was undertaken at KCA University to determine the validity and reliability of the instruments. Data from completed questionnaires was analysed using descriptive statistics and the Statistical Package for the Social Sciences (SPSS). The findings were presented in form of pie charts,

tables and bar graphs. The study established that librarians are strongly in agreement that mainstreaming information literacy into universities' academic programs can raise standards in use of electronic resources which universities acquire annually but had less positive perception on whether mainstreaming IL could make students more responsible users of information. It also revealed that universities are involving librarians in aspects of designing IL curricular, setting study topics and establishing search strategies. In terms of resources universities have reliable internet connection though have a shortage in application programs and equipment. In determining the extent of IL incorporation into curriculum all universities have embraced the idea where most of them have adopted the inter-curricular model. However major challenges faced by all universities were inadequate resources. The study recommends that universities should acquire adequate resources in terms of equipment and human to cater for the large numbers of students, establish a new curriculum so that IL can be taught as a core unit to all students as well as promote strict adherence to Commission University Education (CUE) guidelines in regard to Information Literacy.

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

This chapter presents background to the study, statement of the problem, research questions and objectives, purpose of the study, limitations and delimitations, assumptions, theoretical and conceptual framework and operational definition of terms.

1.2 Background to the Study

Information literacy has been termed as a survival skill that empowers information seekers to become independent lifelong learners in the 21st century, an era of information explosion due to technological advancements and affordability (Sacchanand, 2002). Information literacy programs in universities are provided by the library to its users in form of training during library orientation and on request by faculty members or individual users. Some faculty members have also realized the importance of information literacy skills and have collaborated with librarians by ensuring their students attend the IL training sessions. This has not been effective though, since not all university students visit the library nor attend the training sessions, yet they need the skills to become independent lifelong learners as pointed out by (Black, Crest, & Volland, 2001)

However, this mode of information literacy delivery to library users has had a number of challenges. Kavulya (2003) pointed out some of them namely: lack of support from parent organization in terms of policies; the program only captures a few library users who are aware of the program and realize its importance and more so non-library users are not captured because they do not believe in going to the library to obtain information, yet even with other information sources, they need the IL skills. Computer illiteracy among librarians was also cited as a challenge though it has been addressed over a time through revision of the training courses for librarianship by embedding information technology (IT) into its courses. Notably, computer literacy is compulsory for any library position being advertised currently. Wanjiru (2009) in his research on collaboration challenges facing IL concluded that there is little collaboration when it comes to IL training in Kenya and specifically in Jomo Kenyatta University of Agriculture and Technology. He pointed out negative attitude of lecturers and library staff towards Information Literacy, users' general attitude towards the library as well as the lack of an IL policy that would nurture IL partnership between lecturers, librarians and users. Inadequate time allocated to IL programs considering the unmanageable large groups of students due to lack of space in most Kenyan institutions also hinders effectiveness in delivery of the service. He recommended the need for interdepartmental workshops to discuss on IL collaboration in universities and the country at large.

A number of scholars in library profession in mitigation of the above challenges recommended incorporation of information literacy into the university curriculum as the only successful way to impart information literacy skills (Kavulya, 2003). Andretta (2006) recommended that higher education institutions implement IL as a top-down initiative through institutional learning and teaching policies which has led to successful integration of IL in two outstanding courses in Sweden. He further reveals that IL in the UK has continually been integrated due to resistance by trainers and students specifically at the Loughborough University. Educators are not willing to take up a more pro-active facilitation of learning whereby on the other hand learners do not realize the value of IL competencies. Lack of top-down drive for IL programs at institutional level has greatly contributed to less impact of IL provision by the libraries.

Implementing IL in Africa, and specifically in Tanzania has faced a number of similar challenges. Lwehabura and Stilwell (2008) clearly indicated that IL in Tanzania is offered by libraries and students attend on voluntary basis. Sometimes however, faculty members invite librarians to provide specific instructions to students in a specific discipline. He pointed out that failure to integrate IL into curriculum, compromises its effectiveness in terms of theory and hands on practice. He highlighted that efforts to integrate IL into curriculum has been faced with challenges that include lack of policies, reluctance by librarians to push for implementation, lack of collaboration between librarians and teaching staff, inadequate library human resource and nurturing interest to learn in students. He

went further to recommend incorporation of IL into curriculum as a compulsory unit for all students, as the only way to make them attend IL sessions. This would ensure that both students and staff take it seriously.

In Kenya, information literacy campaign is a major initiative in universities being spearheaded by librarians. The librarians are making efforts to collaborate with faculty members to develop an information literacy competency program to train users as required by the Commission for University Education in Kenya's library standards and guidelines. The CUE standards and guidelines require mainstreaming of IL into the academic curriculum for all 1st years' undergraduates and postgraduate students. It stipulates that "Librarians, in partnership with the faculty, shall provide information and instruction to all users through a well-structured information literacy competency programme and that it shall be integrated in all the academic programmes of the university under common units at both undergraduate and post graduate levels".

Librarians cannot implement this on their own, except in partnership with faculty and the universities management. Librarians should sell the idea of mainstreaming IL into curriculum to teaching faculty and university's management. They should also do a survey to establish their views and opinions as well as point to them the valued components of having information literacy mainstreamed into the curriculum. In collaboration with faculty they can develop the IL course content and forward it to management for approval and mainstreaming into curriculum. The university management can then determine to what extent to mainstream the

IL course by looking at the course content and available resources, time included. The program could be embedded within a common unit or be taught as a standalone compulsory unit depending on the decision of management.

Libraries too are going virtual just like booksellers therefore information literacy skills are mandatory for an independent learner. It is the high time university stakeholders augmented University libraries to play a major role in supporting the integration of IL into curriculum. Maitaouthong, Tuamsuk, and Tachamane (2013) highlighted that one of the roles of the library is to inculcate information literacy to students, who require skills in searching for information independently to complete the course assignments and writing research papers. They drew conclusions from their research that university libraries have a role in supporting efficient use of information resources and therefore, it is very important for educators, students and researchers to use information from libraries and other sources to understand information literacy skills. This will empower them to obtain access to the right information.

In addition, libraries can further be involved in mainstreaming IL into University curriculum by assisting in the preparation of learning and teaching resources. This can be through the provision of relevant information resources both print and electronic that would cater for various disciplines. Furthermore in equipping librarians to teach IL, management could organize trainings for developing information literacy instructors through meetings, workshops and seminars. These would be a good forum for exchanging ideas and building IL networks for

knowledge and understanding and advising students on the same. Library administrators should also take the responsibility of preparing infrastructure to facilitate integration of IL into curriculum. Last but not least libraries should prepare instruction programs that develop students' information literacy for example teaching plans that integrate IL, assessing their competencies and evaluating their attitudes towards information literacy.

The Commission for University Education which is the government arm charged with accreditation of universities should enforce implementation of standards and guidelines for university libraries in all Kenyan universities. This would see to it that IL is integrated in university curriculum hence prompting universities to provide funding, adequate resources and infrastructure to facilitate the implementation. In developing IL trainers, all institutions training library and information science should teach IL as a course at all levels. The guidelines by CUE, to integrate IL into curriculum by all universities in Kenya could bring about an information literate society, lifelong independent learners and quality research output by researchers and university graduates. This will in the long run facilitate the government to achieve Kenya's Vision 2030 on education and training. This is by providing quality education, training and research to citizens for development of the nation and improved individual well-being thereby raising the quality and relevance of education.

1.3 Statement of the Problem

University libraries in Kenya have taken lead in providing information literacy training program to its users during orientation and on request. This mode of IL delivery has not been very effective since not all students turn up for library orientation. The students who fail to turn up for the orientation miss out on very important insights that are given during the training. Some students only go to the library for the conducive reading environment as well as to borrow and return books. The failure by students to turn up during orientation programme where information literacy training is conducted has prompted professionals in the library field to recommend mainstreaming it into curriculum to make it effective so as to have graduates who are information literate. As a result the Commission for University Education (CUE) provided standards and guidelines to university libraries on information literacy. The guidelines mandate university libraries to integrate IL into curriculum under common units for both undergraduates and postgraduates to ensure information literacy skills are imparted to all students in higher learning institutions in Kenya. Mainstreaming IL into curriculum will also enhance critical thinking, academic success and lifelong learning. While this is a great idea, what remains unclear is whether or not the guidelines have been embraced by universities in Kenya. Without assessing the mainstreaming of information literacy, the CUE guidelines and standards will remain just mere statements and universities will continue producing graduates who do not have competencies necessary for the 21st Century survival as regards to explosion of

information. It is this form of monitoring and evaluation that can ensure that the envisaged benefits of revamped information literacy programs are realized. This study therefore aimed at assessing what obtains currently as regards to mainstreaming information literacy into academic programs in selected universities in Nairobi and Kiambu Counties.

1.4 Purpose of the Study

The purpose of this study was to assess mainstreaming of information literacy into academic programs by universities in Kenya with the intention of promoting lifelong independent learners.

1.5 Objectives of the Study

The study was guided by the following objectives:

1. To determine librarians' and faculty perceptions towards mainstreaming of IL into academic programs.
2. To determine the librarians' level of involvement in mainstreaming IL into academic programs.
3. To determine the availability and adequacy of resources available for mainstreaming IL into curriculum.
4. To establish the extent to which IL has been incorporated into the academic curriculum.
5. To determine challenges facing librarians in mainstreaming IL into academic programs.

1.6 Research Questions

The study sought to provide answers to the following research questions:

1. What are the perceptions of librarians and faculty towards mainstreaming IL into curriculum?
2. To what extent are librarians involved in mainstreaming IL into curriculum?
3. What resources are available to facilitate mainstreaming of IL into curriculum?
4. To what extent has IL been incorporated into the university's academic curriculum?
5. What challenges are librarians facing in IL mainstreaming process?

1.7 Assumptions

The researcher made the following assumptions:

- i) The selected libraries were aware of CUE guidelines and standards on Information literacy.
- ii) The selected librarians and faculty members would freely participate in the research.

1.8 Limitations of the Study

The investigation was limited to selected public and private chartered main university campuses in Kiambu and Nairobi Counties. The researcher had no control over the number of questions that were answered and honesty in the responses

1.9 Significance of the Study

The critical role of information literacy skills among university students cannot be over emphasized. The best way to have this noble skills achieved by all graduates is to adopt the most effective instructional approach by having it integrated into the university curriculum for both undergraduates and postgraduate students. This study comes at a time when the commission for university education in Kenya has

i) Commission for University Education

It would give an overview of the current status of information literacy in universities and guide the agency in enforcing the full implementation of the standards and guidelines for university libraries in Kenya.

ii) University Libraries

It would as well avail important information to library managers on IL integration into the curriculum, since information obtained will offer data, guidelines and suggestions on how to overcome the named challenges.

iii) Researchers and Information Professionals

The study would also provide insights by sharing experiences on factors hindering IL integration thus forming a basis for providing solutions.

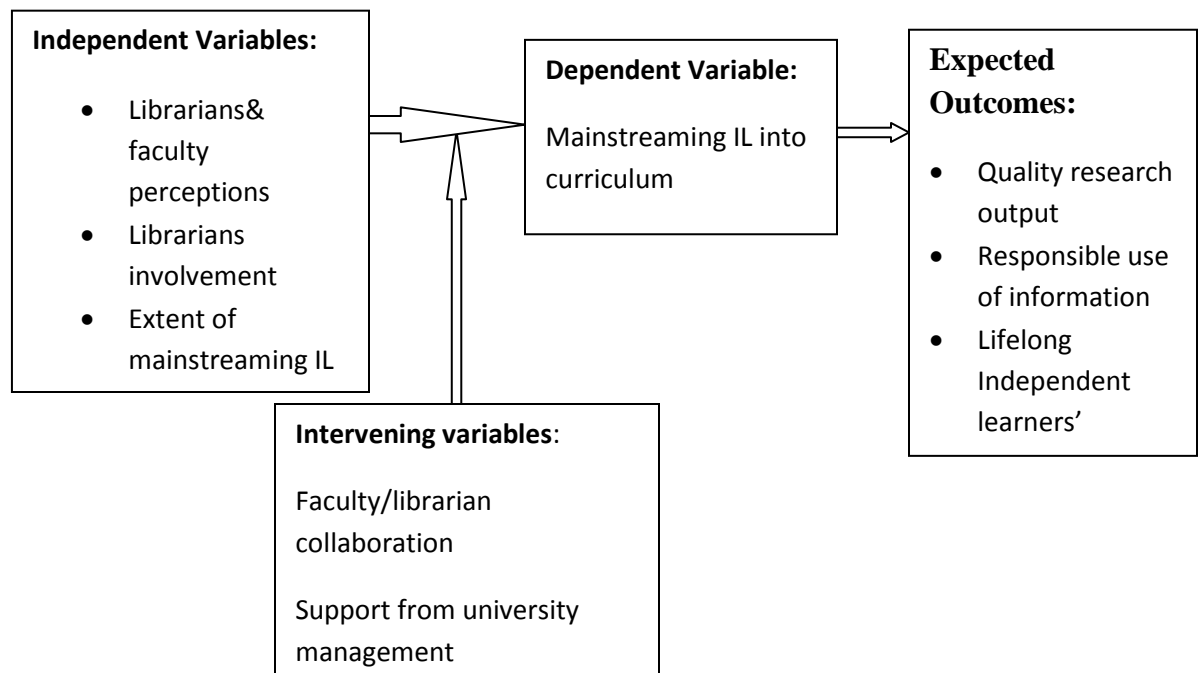
1.10 Theoretical Framework

This research was based on the socio-cultural learning theory by Vygotsky (1978). The theory describes “learning as a social process and the origination of human

intelligence in society/culture.” Vygotsky believes that everything is learnt through interaction with others. In this study, mainstreaming information literacy into curriculum will make students learn better through interaction with each other’s in solving problems, doing assignments and presentations among others. Socio-cultural learning theories are learner-centred and they provide insight to collaborative approaches to students’ learning. Through collaborative activities and interactions, learners are able to interact with peers; teachers and librarians thus making them perform better. Mainstreaming IL into curriculum brings about collaborative learning where students engage in class activities as a way of exploring answers. The study can therefore be anchored on this theory since it can be applied in higher education using different models.

1.11 Conceptual Framework

Figure 1.1: Conceptual Framework Source: Researcher 2016



The independent variables in this study are Librarians and faculty perceptions in mainstreaming IL into curriculum, their involvement in the mainstreaming process and availability of resources including physical and human. The dependent variable is the actual mainstreaming of IL into academic programs which when achieved would eventually give rise to an information literate society. Librarians' perceptions and their involvement variable is concerned with how librarians perceive mainstreaming of IL into curriculum. Literature has indicated that librarians have appreciated the importance of IL and that when its mainstreamed into curriculum, would lead to easy and responsible use of information resources both electronic and print hence promoting quality research output. Adequate resources both human and equipment make the process successful. However, as much as librarians may embrace the whole idea of mainstreaming IL into curriculum, without the management and faculty-librarian support as intervening variables, then the whole process may not be achieved.

1.12 Operational Definition of Terms

Information Literacy: A set of skills that one ought to possess so as to know when information is needed, how to articulate that information need, search for information efficiently, retrieve, interpret, evaluate its credibility and use it responsibly to communicate or achieve a certain purpose.

Mainstreaming: A process of integrating or embedding new course content into an existing unit or incorporating a new unit into the curriculum.

Electronic Resources: Resources that require computer access either through a personal computer, mainframe or a mobile device and may be accessed remotely via internet or locally. Such resources include electronic books, electronic journals, full text databases, electronic images among others.

Commission for University Education: An arm of government charged with the mandate of ensuring maintenance of standards, quality and relevance in all aspects of university education training and research. Its mission is “to regulate and assure quality university education by setting standards and guidelines and monitoring compliance to achieve global competitiveness”.

Collaboration: A practice that involves working together of individuals, groups or departments in order to achieve an identified goal.

Academic programs: Are defined and prescribed course of studies which students must fulfil in order to pass a certain level of education.

Information Professionals: Specialists who are information/knowledge managers who work for information organizations that are defined to deliver information based solutions to a given market.

Private Chartered Universities: These are Private Universities which have been fully accredited by the Commission for University Education. They are universities established in accordance with the Universities Act, 1985 (CAP 210B) and the Universities Rules, 1989 (Establishment of Universities, Standardization, Accreditation and Supervision)

Librarians' perceptions: Refers to librarians' beliefs and attitudes towards mainstreaming IL into academic programs.

CUE guidelines: University standards for accreditation and operations in Kenya.

Instruction Librarians: Librarians involved in training information literacy program.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter reviews related literature with special reference to librarians' and faculty perceptions and their involvement in mainstreaming information literacy into academic programs, extent of mainstreaming IL and institutional readiness in terms of availability of resources and challenges in mainstreaming IL into curriculum.

2.2 Librarians' and Faculty Perceptions on Mainstreaming Information

Literacy into academic programs

Librarians' perceptions refer to their beliefs, attitudes and views as regards to mainstreaming IL into academic programs whereby their input would determine the success of such mainstreaming. Due to the dominant role of information skills in higher education, quite a number of studies have highlighted faculty and student's perceptions and attitudes towards IL.

The new paradigm shift requires librarians and faculty in higher education to work in collaboration to develop information literacy curriculum and integrate it into curriculum to make it effective in developing higher learning thinking skills in students (Thompson, 2002a)

Faculty, who have a direct involvement with students have kept themselves away from collaborative efforts with librarians. This study tends to gauge their views and perceptions towards mainstreaming IL into curriculum to help advance the

discourse of IL into curriculum. (Thompson, 2002) gave an overview of past working relationships between instruction librarians and faculty in IL curriculum development. He pointed out that unlike in the past decades where faculty saw library skills as not central to academic growth, the later decades of information explosion in the 21st century has made the time ripe for a transformation in the traditional teaching of library skills to a broader teaching of Information literacy.

A research on faculty perceptions of IL at two higher educational institutions in the U.S.A. and England by (DaCosta, 2010) indicated that faculty and librarians should work together for the development of effective IL programs. To achieve this, the researcher recommended that librarians should promote IL by taking the message first to faculty through educational conferences and workshops pointing out the importance of pedagogical value of IL as well as mentioning where it has been successfully incorporated into academic programs. However, Ivey (2003) justified in her study how librarians and faculty could work in partnership to provide effective IL programs. Her findings indicated that there is a difference in understanding of IL between faculty and librarians since teaching IL aspects should be a shared responsibility. Librarians perceived that teaching students how to evaluate, organize and integrate information into any particular use was the responsibility of faculty while on the other hand faculty indicated that a collective responsibility with librarians was required to teach the three attributes. Her findings also pointed out that librarians are not involved in designing the course

content and therefore, there is need for support from the university and library management to ensure that the program is adequately resourced.

In Pakistan Ullah and Ameen (2016) also conducted a study to determine the perceptions of medical librarians towards the importance of IL. Structured questionnaires were distributed to head librarians of academic medical institutions in Pakistan. Their findings indicated that the Higher Education Commission of Pakistan had included a six credit course on IL in the library and Information Science curricular of 4th year program. It was concluded from the study that medical librarians found IL skills to be more important and recommended that all users must be equipped with IL competencies. However, they did not give suggestions on how best this could be done thus giving more relevance to this study which seeks to determine librarians' perceptions on mainstreaming IL into academic programs.

Amongst other recommendations Association and others (1989) recommended that librarians should work together with other professionals to promote IL and that departments of education together with the Commission for Higher Education should ensure integration of IL into curricula. Doskatsch (2003) indicates that not much has been documented about faculty perceptions of the librarians educative role except from the research in USA and Canada that gave faulty perceptions pointing out that they would support librarians if their qualifications, research and research publications output was equivalent to theirs. They recommended need to communicate to faculty about changes in the role of librarians since according to

them librarians are subordinate to faculty. In Australia, Bruce (2001) provided an analysis of different collaboration dimensions of faculty-academic partnerships to involve policy, research, curriculum, higher degree and academic development partnerships. A study by Mitchell-Kamalie (2011) indicating successful IL efforts through faculty-librarian collaboration pointed out that as much as faculty send students for IL sessions they do not accompany them making the program appear so irrelevant to the students. She indicated that according to faculty, IL is problematic and it's still unclear where it fits in the university curriculum. She pointed out that there is a conflict of perceptions about librarians teaching capabilities which has been a major barrier between librarians and faculty regarding teaching Information Literacy.

However a study by Hoffmann et al. (2012) pointed out the value of librarian/faculty collaboration. Unlike other researches, the findings indicated positive perspectives of librarian led Information Literacy instruction, whereby the faculty noted the value of library instruction to students by promoting their learning and overall confidence and how the instruction impacted positively on faculty's teaching and assignment design. Most researches have been done on faculty-librarian collaboration in IL whereby not much has been done to seek the faculty perceptions on integrating IL into curriculum thereby giving much relevance to this study that intends to fill that gap. However, few researches have been documented about librarians' perceptions of information literacy embedding into curricular. This study intends to fill that knowledge gap. Librarians' just like

faculty views are key in mainstreaming that would lead to effective information literacy programs.

2.3 Librarians' involvement in mainstreaming information literacy into academic programs

The role of librarians has kept changing in relation to managing new technologies. The traditional information acquisition, access managements and dissemination has changed and brought about change in the role of information professionals. This is especially in development of information products and services, tools to support information seeking and selection, analysis and synthesis of information on behalf of users and information user instruction(Griffiths, 1995). Libraries in universities have been offering IL training program to its users and on realizing its importance, recommended that the program be incorporated into academic curriculum. However, studies have indicated that successful integration would require collaborative efforts of librarians and faculty, though a study by Lindstrom and Shonrock (2006) pointed out that librarians contribution in curriculum development, course planning and teaching is not clearly outlined it has not been widely accepted. Faculty feels that there are skills that librarians ought to have in order to interact with them. Some key elements of collaborative teaching partnerships were pointed out to be a shared common goal, mutual respect, tolerance, trust and ongoing communication between the partners. The findings indicated that librarians should market their teaching and academic qualifications

as well as showcase how they could assist faculty in research and teaching and at the same time develop and sustain the partnership.

In Kenya, CUE requires that librarians develop an IL program and implement the curriculum to meet the changing needs of students and staff. This guideline however, gives information professionals an opportunity to reinforce and expand the air facilitation of communication of learning processes in their institutions. The advent of web 2.0 technologies has had a significant impact on higher education thus affecting library services. CUE standards and guidelines stipulate that IL and competency programs should be taught by librarians. IL would be best taught by librarians who have a wide knowledge on available information resources as well as the changing trends in the information market. In learning how to teach IL skills, instructional librarians should have a pedagogical background which could be facilitated by the parent organization or through information related organizations like KLISC, INASP through training and seminars. The researcher would also recommend that besides librarians teaching IL as provided by CUE, the component should be taught in the library. This will give students hands on experience as well as encourage student-centred learning. This would change their attitude towards libraries where most of them visit to find reading space with a conducive environment(Amunga, 2011).

The University and library management should ensure that librarians involved in collaboration with faculty in teaching IL should be teachers with expertise in library science and information literacy. This would call for adjustment of

workloads and job descriptions and at the same time provide adequate staff and time for the development of effective learning programs. Though a study by Wanjiru(2009) indicates that there is little collaboration between faculty and librarians when it comes to information literacy training in Kenya, not much has been documented as an indication of librarians' involvement in mainstreaming IL into curriculum which is one of the objectives of this study. This investigation therefore intends to determine whether librarians are involved in IL curriculum development, teaching and assessment.

2.4 Adequacy of Resources in mainstreaming

An institution would be considered ready to mainstream information literacy into academic programs if it has adequate resources in terms of human and equipment. There is need to strengthen human resources since IL ought to be taught by librarians as stipulated in CUE guidelines and standards for University libraries, who therefore should possess the required professional skills. Rogan and Aldous (2005) proposed that there should be capacity to support new innovations. In promoting IT resources, institutions need to invest more in technology and provide wireless internet access to students all over campus. Introducing a new curriculum or reviewing an existing one is not an easy task especially if the idea is not emanating from a top-down management hierarchy(Dadzie, 2007). He points out problems and solutions to each problem that institutions face when preparing to embrace a new program. In his study on assessing readiness on Ghana universities,

he pointed out problems which may hinder implementation of information literacy. Institutions therefore in preparing to mainstream IL should begin by addressing the expected challenges as highlighted below.

In showing commitment to the program, Universities should make IL a campus-wide program by creating awareness among academic communities so as to tailor the IL curriculum to meet the specific needs. As a library initiative to kick start the IL project, library professionals should embrace the challenge as an opportunity to showcase the value and importance of libraries, librarians and other information professionals in society. Being an innovation in curriculum planning, mainstreaming IL into curriculum or into an existing course are the most effective approaches. Therefore an institution should consider the suitable option for their institutional set-up.

2.5 Extent of mainstreaming Information Literacy into academic programs

Infusing a new course into an already developed curriculum can be a controversial issue. Such issues need to be addressed to ensure successful development and implementation of a new curriculum. In determining the extent of mainstreaming IL into curriculum, a number of institutions have outlined working frameworks that highlight the characteristics which an Information literacy program should portray for good practices. Major indicators as regards to curriculum development and implementation should be considered. A paper presented by Peacock (2002) at Yeppoon Queensland provides an outline of information literacy framework and syllabus. She pointed out various models that illustrate the mainstreaming

approach. An institution may choose to adopt any and still achieve similar successes depending on their capabilities. Queensland University of Technology (QUT) developed and released their information literacy framework and syllabus (ILF& S).

At the design and development stage, QUT realized the need for a comprehensive plan to support the university's educational goals and objectives. The library developed and designed the framework for a period of nine months seeking input from IL expertise. After review through the relevant channels, the framework was presented to the QUT teaching and learning committee who endorsed it. Copies of the published framework were distributed to QUT deans, heads of schools and course coordinators as well as librarians and international institutions. Lobbying and advocacy was successful due to the good partnerships between faculty, librarians and entire committee participation. The approach used brought a lot of achievements in mainstreaming IL into curriculum.

On the other hand, Committee (2012) encourages librarians globally to use guidelines for IL instruction programs to guide libraries involvement with IL programs. It outlined characteristics of IL programs that would illustrate best practices. The guidelines are intended to guide those who are in pursuit of developing, assessing and improving IL programs. The characteristics outline the details of a given program. However, no program is expected to be exemplary with respect to all characteristics. Individuals are supposed to consider their libraries and institutional contexts in designing IL programs. Association & others (2008)

pointed out that in planning for an IL program the following components should be adopted namely mission, goals and objectives, administration support, articulation with the curriculum, collaboration, pedagogy, staffing, outreach, assessment/evaluation.

As a university's information literacy initiative, the libraries should have a designed framework and syllabus as a tool to support, develop and promote collaborative partnerships with other stakeholders. These may include administrators, faculty and students. Such partnerships are key in facilitating mainstreaming of IL into academic programs within the university. This study will therefore seek to find out whether the universities under study have developed an IL framework/syllabus as one of the indicators to determine extent of mainstreaming IL into curriculum and how far they have progressed in lobbying and advocating for its integration into academic programs. Based on the above scenarios, this study intends to pick a few components to use as a benchmark in determining to extent universities in Kenya have gone as regards to mainstreaming IL into academic programs.

The approach employed in IL mainstreaming as outlined by Wang (2007) will be another factor to determine extent. This could either be inter-curricular where IL is offered by librarians as an additional session in an academic program on request by an academic member of staff. Intra-curricular is another approach where IL is mainstreamed into learning programs, outcomes, learning activities or assessment through collaboration between library staff and faculty. The other approach is

extra-curricular whereby IL is offered by the library with or without consultation with faculty staff and attendance is voluntary. Finally is the stand-alone approach where IL is taught as an independent course as part of the curricula either as a selective or compulsory course in a faculty or university.

2.6 Challenges of Mainstreaming Information Literacy into curriculum

Various approaches are used and challenges faced as well as challenges faced by educators and librarians in integrating IL into curriculum in the United States, Canada, South Africa and United Kingdom among others. The various approaches include; teaching IL skills in isolation by support staff and complete integration into subject content of the discipline which involves support staff in collaboration with faculty staff. However, despite the different approaches applied, Hepworth (2000) pointed out various challenges that are associated with attitudes, knowledge, infrastructure and finance. In addressing attitude related issues, he pointed out that librarians ought to think beyond the traditional ways of assessing resources and usage of the library but instead embrace the new changing roles of library professionals. Librarians should ensure that they are involved in teaching by sitting on curriculum committees and view themselves as integral and fundamental to the learning process.

Commission for University Education (2012) cultivates such an attitude in librarians by giving them the mandate to develop the IL curriculum, IL policy and teach IL in class under common units. Reinforcing and implementing this

guideline in universities, in Kenya will completely change the role of librarians and involve them in teaching. Getting faculty to support incorporation of IL into curriculum may be difficult since most of them do not possess training in this area. They are also not used to working with non-faculty staff except in matters relating to access to information resources both print and electronic. Such changes may take time to be effected and may also be met with resistance. He also pointed out infrastructure to be another challenge when incorporating IL into curriculum. This would require additional reading and instructional rooms, more computers and qualified staff. With an approach to support problem-based, learning would involve re-engineering the university library. The necessary changes involved in mainstreaming IL into curriculum have budgetary implications ranging from developing learning materials which may require additional staff. Before taking up new roles, there is need for staff training, whereby decentralized access requires telecommunications and computing infrastructure.

In the UK, Andretta(2006) cited quite a number of challenges faced during IL integration process. He indicated that limited access to students and curricula by librarians had resulted to IL being integrated at module level instead of degree level. Another challenge is reluctance of faculty staff to adopt IL approach because of lack of proper training in information literacy and its competencies. Students too have a misconception in believing that they already possess IL skills which is not the case. In Africa specifically Tanzania and Kenya, a number of studies have indicated challenges of IL programs (Lwehabura& Stilwell, 2008;

MuemaKavulya, 2003). A study in Tanzania by Lwehabura on four universities reported challenges and opportunities that could influence implementation of IL in Tanzanian universities. The findings pointed out lack of adequate resources, lack of IL policy, lack of proactive solutions among librarians, inadequate staffing and training and poor collaboration between librarians and teaching staff. In Kenya, Kavulya on the other hand pointed out challenges facing IL programs to be lack of financial and human resources, inadequate support by parent organization in terms of policy and resources and lack of initiative by librarians. Not much has been documented to clearly bring out the challenges encountered by librarians and in extension faculty in mainstreaming IL into curriculum in universities in Kenya. The existing lacuna will be addressed by the current investigation. This study intends to establish that as one of the objectives and advise on the way forward.

2.7 Summary of Literature Gaps

A number of researchers based on the reviewed literature recommend incorporation of IL into curriculum to make it effective in reaching out to all students since it should be put under common units. This will in turn end collaboration constraints between faculty and librarians since they will have no option but to work together. Further review was made to highlight challenges encountered in providing IL and focused on solutions to the named challenges. No study seems to indicate the level of mainstreaming of IL into curriculum in Universities in Kenya. That was the reason for this study which sought to establish

that and the challenges faced in implementing the guideline as well as possible solutions. A few studies have indicated the challenges facing information literacy programs but no focus has been made to point out challenges facing the mainstreaming process hence the relevance to this study. On the other hand, a lot has been documented about students' and faculty perceptions on information literacy. Not much has been written about Librarians' perceptions and information literacy except a few with a bias to instruction models and not librarians' perceptions as teachers of IL.

This study therefore, sought to fill that knowledge gap. The findings will serve as vital feedback to CUE and a guideline to other Universities in Kenya. The study therefore seeks to assess the status of IL integration into universities academic programs in Nairobi and Kiambu Counties in Kenya.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter focuses on research design that was applied in the study. It also outlines the dependent and independent variables, data collection methods, location of the study, target population, sampling techniques and size, research instruments, pre-testing study, data collection techniques, data analysis and logistical and ethical considerations.

3.2 Research Design and Locale

This study adopted a descriptive survey research technique. This design does not emphasize the diverse aspects of a single case as in case studies but rather the number of answers to the same questions by different people (Orodho, 2009). It guided the researcher in collecting, analyzing and interpreting facts from librarians and faculty as regards to their perceptions and involvement in the curriculum and whether their institutions had adequate resources to facilitate mainstreaming of IL into universities academic programs. This design was ideal for the researcher since it involved collecting information by administering questionnaires to a sample of individuals. Information obtained from librarians and faculty was analyzed to describe and interpret perceptions, involvement, challenges and availability of resources. A survey gathers data at a particular point with the intention of describing the nature of existing conditions. For example, the aim of this research was to assess mainstreaming of information literacy into academic programs in

universities in Kenya. The survey also identifies the standards against which existing conditions can be compared. In this regard, the researcher looked at the current set standards and guidelines for University libraries on information literacy.

3.2.1 Location of the Study

This study was conducted in Nairobi and Kiambu Counties that have a larger representation of public and private chartered main university campuses in Kenya. There are a total of 9 main university campuses in these counties as shown in Table 3.1. The location was identified because of its uniqueness as it would provide the study with a cross-section of universities with more representative characteristics that would contribute to the universality of the findings.

Table 3.1: Distribution of main university campuses in Nairobi and Kiambu counties

County	Public Universities	Private Chartered Universities
Nairobi	<ul style="list-style-type: none"> • University of Nairobi (UoN) • Technical University of Kenya (TUK) • Kenyatta university (KU) 	<ul style="list-style-type: none"> • Strathmore University (SU) • United States International University (USIU) • Catholic University of East Africa (CUEA) • KCA University
Kiambu	<ul style="list-style-type: none"> • Jomo Kenyatta University of Agriculture and Technology (JKUAT) 	<ul style="list-style-type: none"> • Mt. Kenya University (MKU)

3.3 Target Population

The target population of this study was 267 librarians and 7 information literacy faculty coordinators in selected seven main university campuses in Kiambu and Nairobi counties. They comprised of four public and three private chartered universities. The study targeted to sample purposively all information literacy

trainers whereas not many librarians are involved in teaching as well as the faculty coordinator of information literacy since IL is supposed to be mainstreamed under common units.

3.4 Sampling Techniques and Sample Size

3.4.1 Sampling Techniques

Purposive sampling was used to select seven main universities, four public and three private chartered universities in Kiambu and Nairobi counties since most fully fledged universities are located in these counties therefore the findings gave a representation of the information literacy status of other universities in Kenya. Librarians in the sampled universities would be selected purposively considering their involvement in IL training and Deputy University Librarians in charge of Instruction and Information services represented management. The technique was appropriate in obtaining relevant information from IL trainers whereas not many librarians are involved in training. The IL faculty coordinator were also be purposefully sampled primarily because of coordinating the IL program.

3.4.2 Sample Size

The sample size comprised 57 librarians and 7 faculty coordinators of IL purposively selected because of their involvement in training information literacy and coordination respectively.

3.5 Research Instruments

Questionnaires for information literacy trainers, Deputy Librarian's in charge of instruction and Information services as well as IL faculty coordinator were used in the study.

3.5.1 Questionnaires for Instruction Librarians (information literacy trainers)

Questionnaires were used to gather information from instruction librarians. They captured data on librarians' perceptions as regards to mainstreaming IL into curriculum, availability of adequate resources for mainstreaming IL into curriculum

3.5.2 Questionnaire for Deputy University librarian/Faculty information literacy Coordinators

The deputy university librarian's interview schedules would collect qualitative data about librarians' perceptions as regards to mainstreaming information literacy into curriculum, librarians involvement and the extent at which IL has been mainstreamed as well as challenges' encountered while doing so. These were also administered to Faculty coordinating IL programs in the said campuses.

3.6 Pilot Study

A pilot study was carried out at KCA university library which is a private chartered university in Nairobi County. The study enabled the researcher to detect any weaknesses in the research instruments, check for clarity of the questions and modify the research instruments before the actual study. Data collection in the pilot study was conducted through administration of questionnaires to 3 instruction

librarians, 1 Deputy Librarian at KCA library and 1 faculty coordinator of information literacy. Data collected was analysed and corrections were made to various questions that seemed ambiguous.

3.6.1 Validity

Validity is the degree to which results obtained from the analysis of the data represents the phenomenon under study. This was established through the results obtained from the pilot study. The pilot study enabled the researcher to ensure that the research instruments were up-to-date and clearly stated so as to give the same meaning to all respondents.

3.6.2 Reliability

Reliability is a measure of the degree to which a research yields consistent results after repeated trials. The reliability of the instruments was determined through test-retest method. The pilot study was repeated again after two weeks to the same respondents.

3.7 Data Collection Techniques

The researcher visited the selected universities and sought permission from their research offices so as to be allowed to collect data from the university. An introductory letter was issued to university librarians to allow the researcher to collect data from the deputy librarians in charge of instruction, instruction librarians and IL faculty coordinators.

3.8 Data Analysis

Orodho (2009) defines data analysis as a process of systematically organizing collected data into a form that makes them easy to analyze, understand and interpret with the aim of increasing one's understanding and being able to present to others. Each questionnaire was coded separately and keyed into SPSS to obtain frequencies and percentages. Data from completed questionnaires was analyzed using descriptive statistics and presented using pie charts and bar graphs. Qualitative data was analyzed thematically and presented in descriptive form.

3.9 Logistical and Ethical Considerations

The researcher obtained an introductory letter from Kenyatta university graduate school through the Department of Library Information Science, and then secured a research permit from National Commission for Science, Technology and Innovation. The permit was used to seek permission from the Library management of each University selected for research in Nairobi and Kiambu Counties. The researcher then visited the selected universities for general introduction and sought permission through the research office in order to collect data from the university libraries. The Chief University Librarians facilitated the involvement of instruction librarians and deputy university librarians in charge of training and instruction to fill in the questionnaires. All participants were informed of the purpose of the study so as to obtain their consent. Anonymity of every participant in the study was observed as no one was required to indicate their names on the questionnaire. The data obtained from the investigation was used for academic purpose only.

CHAPTER FOUR

PRESENTATION OF FINDINGS, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter presents findings and analysis of the study. The chapter begins with a discussion on the demographic structure of respondents; University deputy librarians, faculty coordinators and instruction librarians. Findings of the study on; perception towards IL mainstreaming into academic programs; librarians involvement levels in mainstreaming IL into academic programs; availability and adequacy of resources mainstreaming IL; the extent of IL incorporation into the university curriculum and challenges encountered in mainstreaming IL into academic programs.

4.2 General and Demographics Information of Respondents

This section presents the type of universities, participants' professional qualification, working and teaching experience. The data was collected from 30 librarians, 4 faculty coordinators and 7 deputy librarians from public and private chartered universities in Nairobi and Kiambu counties in Kenya who responded to the questionnaires. All the deputy librarians and 99% of faculty coordinators who participated in the study teach information literacy. On professional qualifications, majority of deputy librarians (5 out of 7) had master's degrees and the rest were PhD holders. Similarly, 75% of faculty coordinators were PhD holders and 25% had Masters Degrees. Instruction librarians had the highest variation in terms from their professional qualifications ranging from diploma to Masters Degree.

Table 4.1 presents a numerical summary of respondents and their qualification.

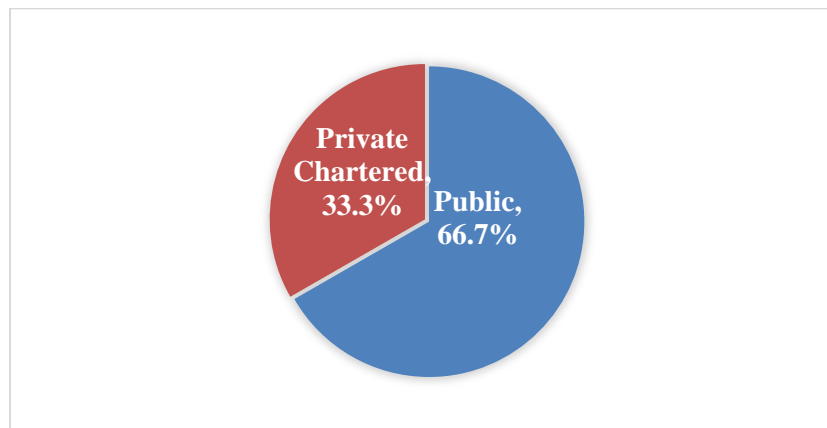
Respondents	PhD	Masters	Bachelor's Degree	Postgraduate Diploma	Diploma	Total
Deputy Librarians	2	5	0	0	0	7
Faculty Coordinators	3	1	0	0	0	4
Instruction Librarians	0	13	14	1	2	30
TOTAL	5	19	14	1	2	41

Table 4.1 Professional Qualifications of Respondents

Demographic characteristics of institutions of higher learning staffs involved in information literacy are important as they portray the influence of mainstreaming IL into academic programs. Respondents' professional qualifications of librarians and faculty were considered important since they would portray the level of competency, expertise and experience the respondents' possess as they ought to work in collaboration to ensure successful integration of IL into curriculum. Moselenand Wang (2014) points out that many of its subject librarians were uncertain on how to promote integration of IL into curriculum to academic

staff since they felt they lacked the pedagogic knowledge and skills to do so. However this research indicated that 100% of the deputy librarians in charge of instruction and training had at least a masters degree therefore had the skills and expertise to influence mainstreaming of IL into universities academic programs.

Figure 4.1 Respondents' University Affiliation



Majority of respondents (66.7%) were drawn from public universities and the rest (33.3%) were from private chartered universities. Responses on the type of university were considered relevant because CUE standards and guidelines to university libraries apply to both public and private chartered universities in Kenya. Kiambu and Nairobi counties have a good representation of each and therefore responses as regards to CUE guidelines would be a good indication to justify their accreditation since they were meant to ensure standardization, accreditation and supervision CHE (2012).

4.3 Perceptions towards Mainstreaming of information literacy into

Academic Programs

This section presents the findings relating to the perceptions of instruction librarians, deputy university librarians in charge of instruction and training as well faculty towards mainstreaming information literacy into academic programs. In assessing perception, a 5-point Likert scale was used in which each nominal point was given a numeric code such that strongly agree=5, Agree=4, Not sure=3, Disagree=2 and Strongly disagree =1. The significance indexes were computed based on the equation used by Zhang and Asce (2005) which is effective in assessing the relative impact of survey factors. The following formula will be used to calculate the Significance Indices:

$$S_i = \frac{20R_{i1} + 20R_{i2} + 20R_{i3} + 20R_{i4} + 20R_{i5}}{R_{i1} + R_{i2} + R_{i3} + R_{i4} + R_{i5}}$$

Where

S_i = Significance Index

R_{i1} = Number of responses as “1” for the i^{th} factor or sub-factor

R_{i2} = Number of responses as “2” for the i^{th} factor or sub-factor

R_{i3} = Number of responses as “3” for the i^{th} factor or sub-factor

R_{i4} = Number of responses as “4” for the i^{th} factor or sub-factor

R_{i5} = Number of responses as “5” for the i^{th} factor or sub-factor

4.3.1 Instruction Librarians’ perceptions on mainstreaming IL into academic programs

The researcher sought to establish the perception of instruction librarians on the effect of mainstreaming IL into academic programs on the quality of graduates from the University. This was considered necessary because perceived usefulness in mainstreaming IL would steer up the instruction librarians’ campaign in promoting IL program because it’s the only way the program would be made effective since it will be a compulsory unit. In assessing perception of instruction librarians on mainstreaming IL into academic programs, a 5-point Likert scale was developed as a measurement tool and a significant index computed as detailed in Table 4.2.

Table 4.2 Instruction Librarians’ Perception towards Mainstreaming IL into curriculum

Parameter:	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Sig. Index
Mainstreaming IL into curriculum would give rise to graduates who are able to:	(5)	(4)	(3)	(2)	(1)	
Access the needed information effectively and efficiently	22	7	0	0	1	0.92

Determine the extent/scope of information needed	21	8	0	0	1	0.91
Use information effectively to accomplish a specific purpose	17	12	0	0	1	0.88
Critically evaluate information and its sources	17	12	0	0	1	0.88
Incorporate selected information into one's knowledge base	14	15	0	0	1	0.85
Understand the economic, legal and social issues	13	14	0	2	1	0.83

From the study, it is evident that instruction librarians perceive that mainstreaming IL into academic programs can help students and graduates access the needed information effectively and efficiently and also help them to determine the extent/scope of information needed. This is because the significant indices for these parameters are 0.92 and 0.91 respectively. This is followed closely with the perception that mainstreaming IL into academic programs will help students and graduates to use information effectively to accomplish a specific task and critically evaluate information and its sources. The ability of graduates and students to incorporate selected information into their knowledge base and raise their

understanding of economic, legal and social issues relating to use of information as a result of mainstreaming IL into academic programs was the least 0.85 and 0.83 respectively. Nevertheless, there is insignificant variation among instruction librarians' perception from 0.83 to 0.92.

The empirical evidence as presented in Table 4.2 above about the perception of instruction librarians on how mainstreaming IL into academic programs can raise the aptitude of graduates makes the researcher conclude that IL skills are fundamental to students and graduates and students in higher education. This finding is consistent with Ullah and Ameen(2016) who concluded from their study that medical librarians in Pakistan found IL skills to be more important and recommended that all users must be equipped with IL competencies.

4.3.2 Deputy University Librarians' perceptions on mainstreaming IL into curriculum

The researcher sought to establish how senior librarians (deputy University librarians) perception on mainstreaming IL into academic programs could impact on education. Establishing the deputy librarians' perception was considered important as it would indicate whether librarians have embraced CUE guidelines on integrating information literacy into curriculum. There positive response on strongly agreeing that it would lead to high usage of e-resources and promote quality research output means they will sell the idea to university management since they are in library management team. Introducing a new curriculum or

reviewing an existing one is not an easy task especially if the idea is not emanating from a top-down management hierarchy(Dadzie, 2007)

Table 4.3 details the response frequency on how they perceive the possible impact of mainstreaming IL into academic programs in the Universities.

Table 4.3 Deputy Librarians’ Perception on Mainstreaming IL into curriculum

Parameter:	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Sig. Index
Mainstreaming IL into curriculum would bring about the following:	(5)	(4)	(3)	(2)	(1)	
High usage of electronic resources	6	1	0	0	0	0.97
Quality research output	6	1	0	0	0	0.97
Responsible use of information	3	3	1	0	0	0.86
Lifelong independent learners	3	3	1	0	0	0.86

From Table 4.3 above, we see that the significance indices are fairly high (above 0.8) for each aspect. The study shows that deputy university librarians’ viewpoint with regard to mainstreaming IL into academic programs has a higher variance. From the significance index (*Sig.Index*) column, it is evident that positive

perception with regard to high usage of electronic resources and improvement in the quality of research output is much stronger (0.97). On the contrary, the deputy University Librarians' perception on students being responsible information users and ultimately become lifelong independent learners was less positive at (0.86). On the overall, senior library staff just like instruction librarians have a good perception about the importance of mainstreaming IL into academic programs in higher institutions of learning. The stronger positive perception with regard to raising standards in the use of electronic resources and improving the quality of research output may be due to the perceived instant gratification during schooling. However, when deputy university librarians felt less confident to assure the researcher that mainstreaming IL into academic programs is likely to make graduates become responsible information users and lifelong independent learners, the inference out of this findings is similar to what Mitchell-Kamalie(2011)describes that as much as faculty send students for IL sessions they do not accompany them making the program appear so irrelevant to the students. Clearly, when the student feel that the program they are going through is irrelevant, they are less likely to embrace it.

4.3.3 Faculty perceptions towards mainstreaming IL into curriculum

American Library Association (ALA) offers general guidelines and description of an IL literate student as one who is able to; recognize when the information is needed; locate the information; and evaluate and uses information responsibly. In assessing the perception of faculty on mainstreaming IL into academic programs,

the researcher used a 5-point Likert scale on which the respondents indicated their level of agreement or disagreement with ALA statements.

Table 4.4 presents detailed faculty responses.

Table 4.4 Faculty Perceptions on Mainstreaming IL into curriculum

ALA Statement about an IL literate student	Strongly Agree (5)	Agree (4)	Not Sure (3)	Disagree (2)	Strongly Disagree (1)	Sig. Index
Can recognize when information is needed	0	3	0	0	1	0.65
Has the ability to locate the needed information	1	2	0	0	1	0.70
Evaluates and uses responsibly the needed information	1	2	0	0	1	0.70

From Table 4.4 above, the perception level appears much lower compared to instruction librarians and Deputy University librarians as indicated by relatively smaller significance indices values of below 0.8. Similar findings were shown by Ivey (2003) who indicated that there is a difference in understanding of IL between faculty and librarians since teaching IL aspects should be a shared responsibility. Determining faculty perception on mainstreaming IL into curriculum was necessary as it would indicate whether they embrace the importance of the program and support integrating it into curriculum in

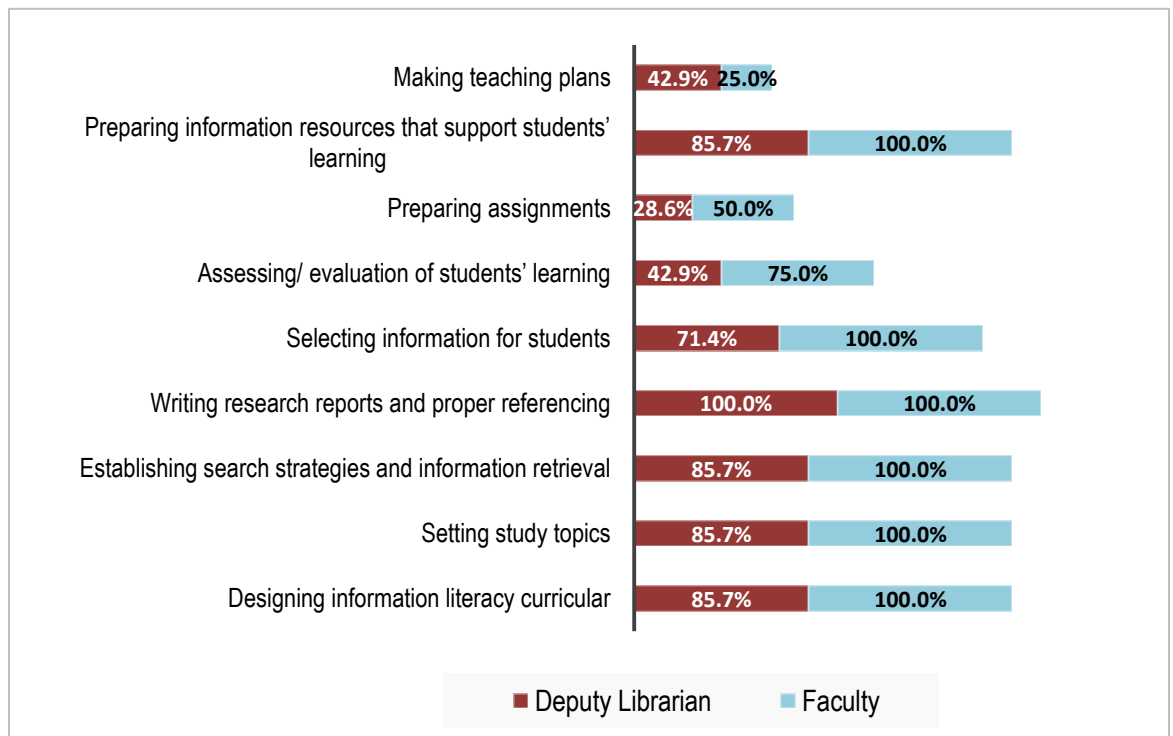
collaboration with librarians. Nonetheless, it seems clear that the faculty coordinating information literacy in the universities agree to a reasonable extent the description of an information literate student as one with ability to locate the needed information and able to evaluate and use information responsibly.

4.4 Librarians' level of Involvement in mainstreaming information literacy into curriculum

In this section, the researcher sought to determine the librarians' level of involvement in mainstreaming IL into academic programs. This was considered important because it would give a clear indication on whether librarians and faculty are working in collaboration to develop the IL curriculum and have it integrated into academic programs. According to Thompson (2002), the new paradigm shift in the required information skills in higher education requires librarians and faculty to work in collaboration to develop information literacy curriculum and integrate IL into curriculum to make it effective in developing higher learning thinking skills in students. Information management is continuously changing and university libraries are ideally key agents to drive this change. In this regard, the role of information professionals in higher institutions of learning keeps changing in relation to managing new technologies. According to (Griffiths, 1995) the change is especially in the development of information products and services, tools to support information seeking and selection, analysis and synthesis of information on behalf of users and information user instruction.

The researcher examined the library management and faculty's level of involvement in the mainstreaming IL into academic programs.

Figure 4.2 Librarians involvement in mainstreaming information literacy into curriculum



From Figure 4.2 above, it is clear that some writing research reports and proper referencing has been given attention by both library management and faculty as a strategy of mainstreaming IL (100%). The study also indicate that all university faculties (100%) involve librarians in designing information literacy curricular, setting study topics, establishing search strategies and information retrieval selecting information for students and preparing information resources that support

learners. Similarly, these involvement approaches are adopted by at least 71.4% of university library management (deputy university librarian).

On the other hand, some of the involvement strategies that have not taken root for both university library management and faculties include assessment and evaluation of students' learning, preparing assignments and making teaching plans. These approaches are embraced by at most 42% of library management and at most 50% of coordinating faculties as detailed in Figure 4.2 above. Further still, the study established a significant positive correlation between involvement of university library management and coordinating faculty ($R^2 = 0.71$). This observation implies that there is a strong link between collaboration of library management and the university coordinating faculty and mainstreaming of IL into academic programs. This findings confirms similar observation by (DaCosta, 2010) who indicated that faculty and librarians should work together for the development of effective IL programs in the United States and Europe. Thus, a similar model can be contextualized in Kenya for mainstreaming IL into academic programs in institutions of higher learning.

4.5 Availability and Adequacy of Resources for Mainstreaming IL into academic programs

This section presents findings related to the availability and adequacy of resources necessary for mainstreaming IL into academic programs. This was considered important because availability of adequate resources are key in facilitating mainstreaming IL into curriculum. The scope of resources in this study is limited

to equipment, content, application programs, and available human resources as follows.

4.5.1 Availability and Adequacy of Equipment

In this study, the researcher focused on availability of instruction rooms fitted with computers and overhead projectors as basic equipment to facilitate efficient teaching of information literacy. Establishing the availability of such equipment was considered important because this would be a good indication on whether universities will be able to provide hands on learner centred experience in terms of searching for online resources among other applications. Projectors too would indicate that IL instructors would be able to demonstrate practically to a larger group of students in a classroom or computer laboratory. On the other hand, such equipment ought to be adequate because Commission for University Educations directs that IL should be integrated under common units for both undergraduate and postgraduate programs. The facilities should therefore be adequate to cater for the large numbers since common units are undertaken by all students in the universities.

Fig 4.3 shows the summary of findings relating to availability and adequacy of these resources.

Figure 4.3 Instruction Rooms with Available computers

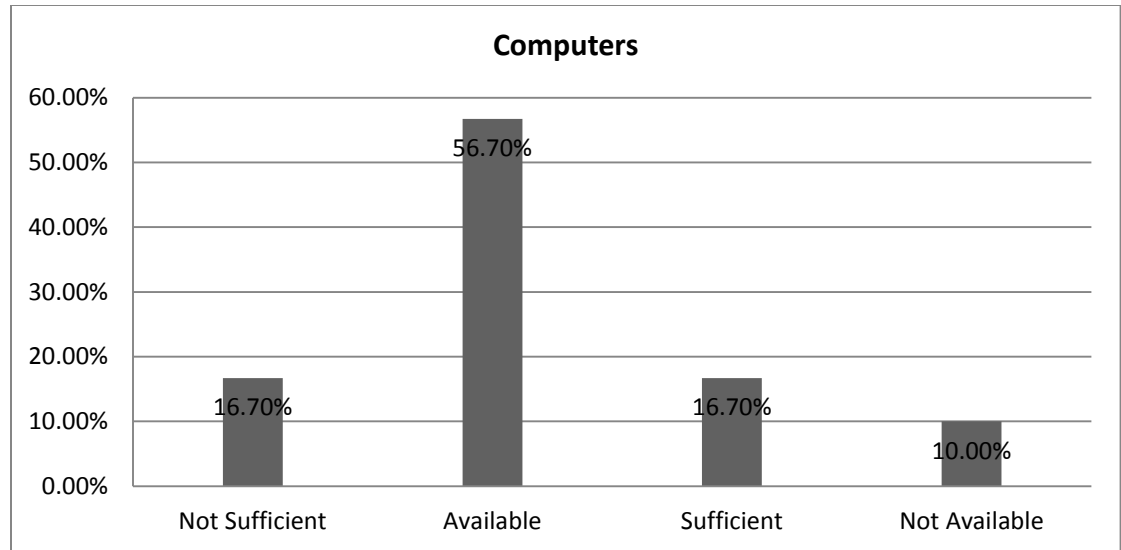


Figure 4.4 Instruction Rooms with Available Projectors

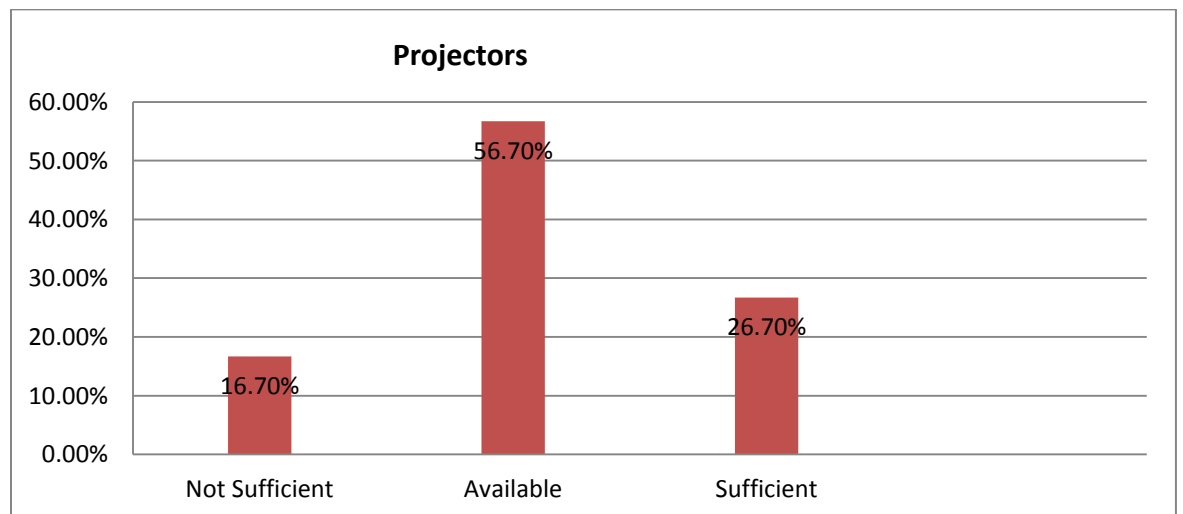


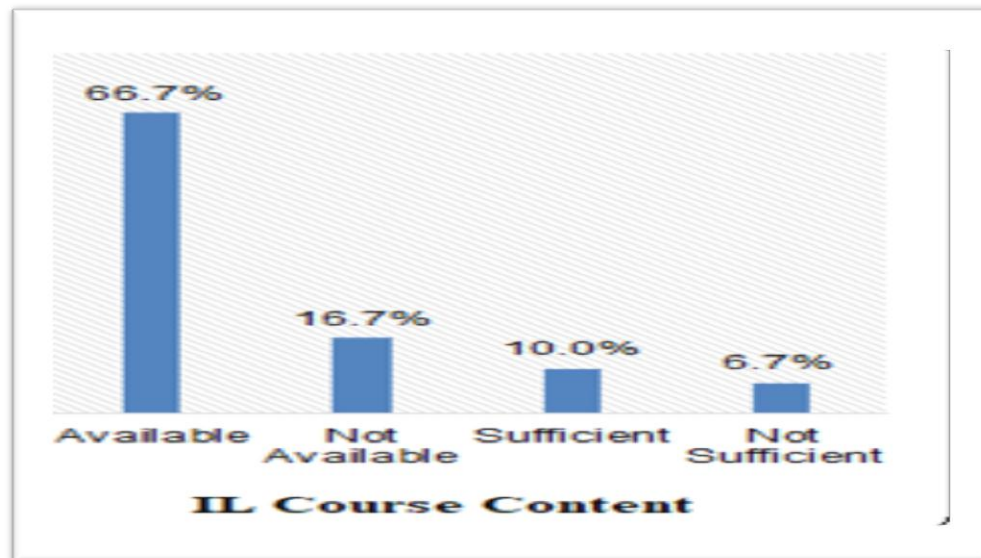
Figure 4.3 and figure 4.4 shows that at least 56.7% of instruction rooms in public and private chartered universities in Nairobi and Kiambu are fitted with both computers and overhead projectors. However, this equipment may not be adequate to facilitate effective mainstreaming of IL in academic programs. For instance, the

study established that only 16.7% and 26.7% of respondents indicated to have sufficient computers and overhead computers respectively.

4.5. 2 Availability and Adequacy of Content

The researcher focused on determining the availability of IL course content and digital content in the universities. Establishing availability of e-resources and IL course content would be a good indication as to whether universities are ready to have IL mainstreamed into curriculum or not. Any unit either standalone or inter-curricular should have adequate content worth examination. On the other hand availability of electronic resources would also indicate the importance of integrating IL into curriculum to empower all the students with information literacy skills which will promote high usage and responsible use of these resources.

Figure 4.5 Availability and Adequacy of IL Content



From Figure 4.5 it is clear that at least 66.7% of respondents indicated they have IL course content in their universities out of which only 39.9% indicated the content to be sufficient. Any unit either standalone or inter-curricular should have adequate content worth examination. This leaves a gap since a larger proportion of respondents then thinks their universities did not have sufficient IL course content which implies that mainstreaming of IL into academic programs is likely to face challenges.

Figure 4.6 Availability and Adequacy of E- resources

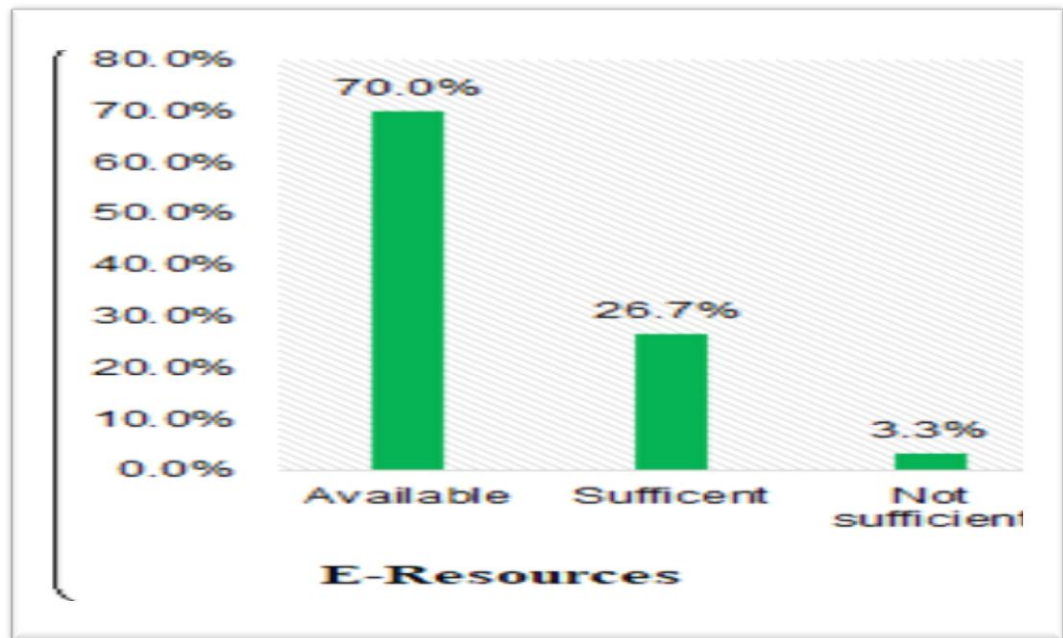


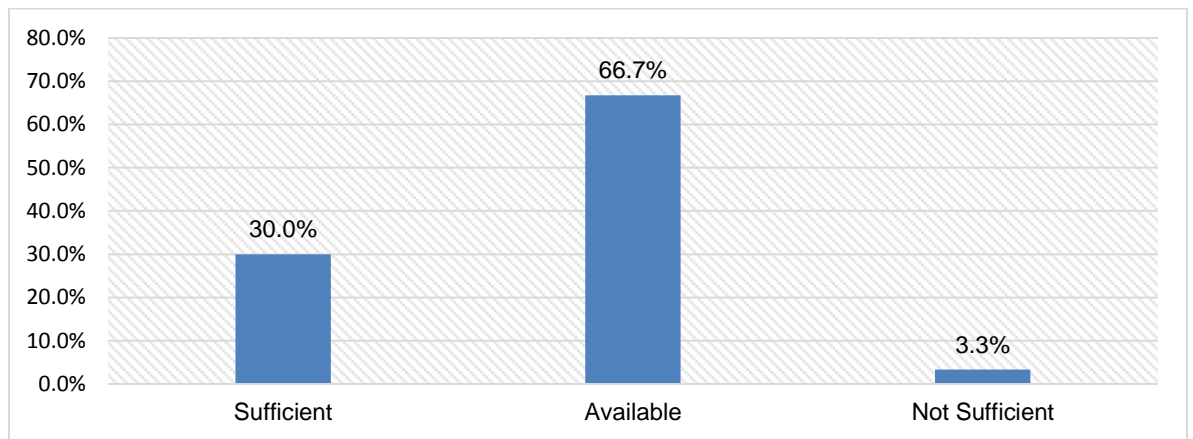
Figure 4.6 clearly shows that 70% of the universities surveyed have available digital content (E-resources) in their universities. Nonetheless, a small proportion of respondents explicitly stated that their e-resources (26.7%) is sufficient. This leaves a gap since a 3.3% of respondents then thinks their universities did not have sufficient digital content while 30% respondents indicated that their e-resources

content is not available which implies that mainstreaming of IL into academic programs is likely to face challenges.

4.5.3 Availability and Adequacy of Internet and Application Programs

The researcher sought to find out availability of internet and application programs since reliable internet connectivity and availability of application programs are key in mainstreaming IL into academic programs. This would be a good indication that students are able to access electronic resources. Availability of internet and application programs means mainstreaming and teaching IL will be a success story for most universities. It could also mean that the IL program can be administered online to manage the huge numbers of students especially in public universities.

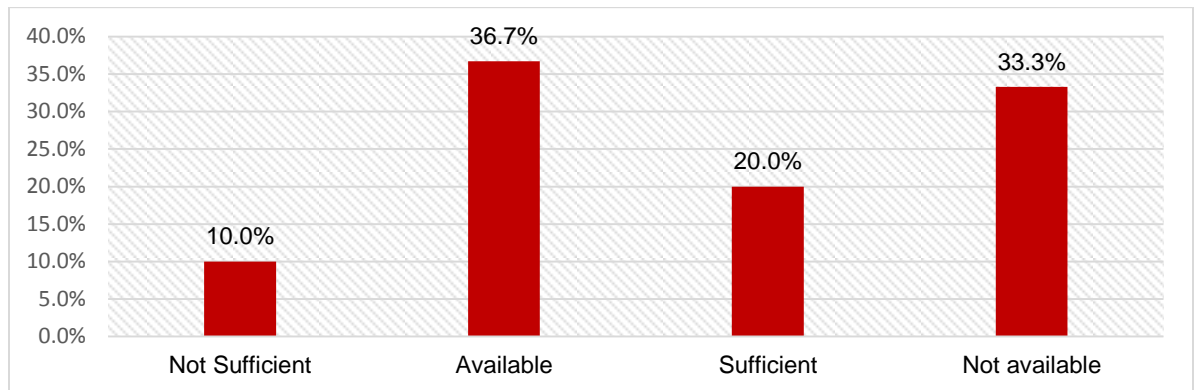
Figure 4.7 Internet Connectivity



This study found that on average, there is sufficient internet connection in most universities. A relatively large number of respondents (30%) expressed explicitly that the available internet connection is sufficient and only 3.3% did not have sufficient internet connection (See Fig. 4.5). Inadequacy of internet may greatly

affect the program since most of the hands on practical sessions would involve internet usage while conducting online searches as well as referencing.

Figure 4.8 Application Programs



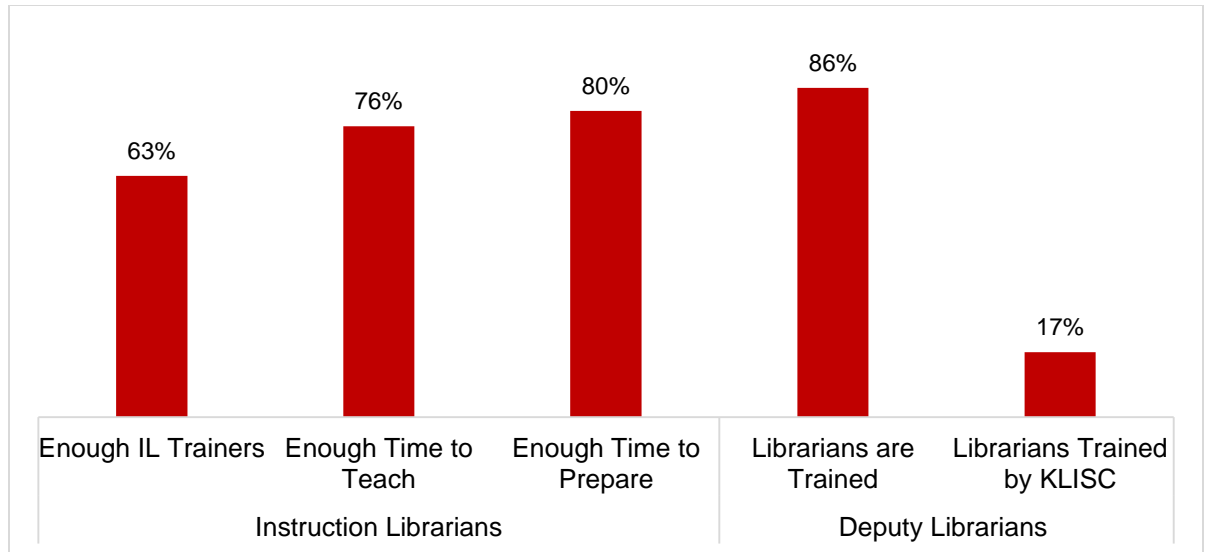
On the other hand, the study revealed that only 36.7% of respondents have relevant application programs out of which only 20% indicated that these programs were sufficient (See Figure 4.6).

The severe shortage of application program may limit the mainstreaming of IL into academic programs because of limited innovation as described by Rogan & Aldous (2005).

4.5.4 Availability and Adequacy of Human Resource

Establishing the availability and adequacy of human resource would indicate whether universities have capacity to support the adjustment of the curriculum. Rogan & Aldous (2005) proposed that there should be capacity to support new innovations.

Figure 4.9. University Library Human Resource

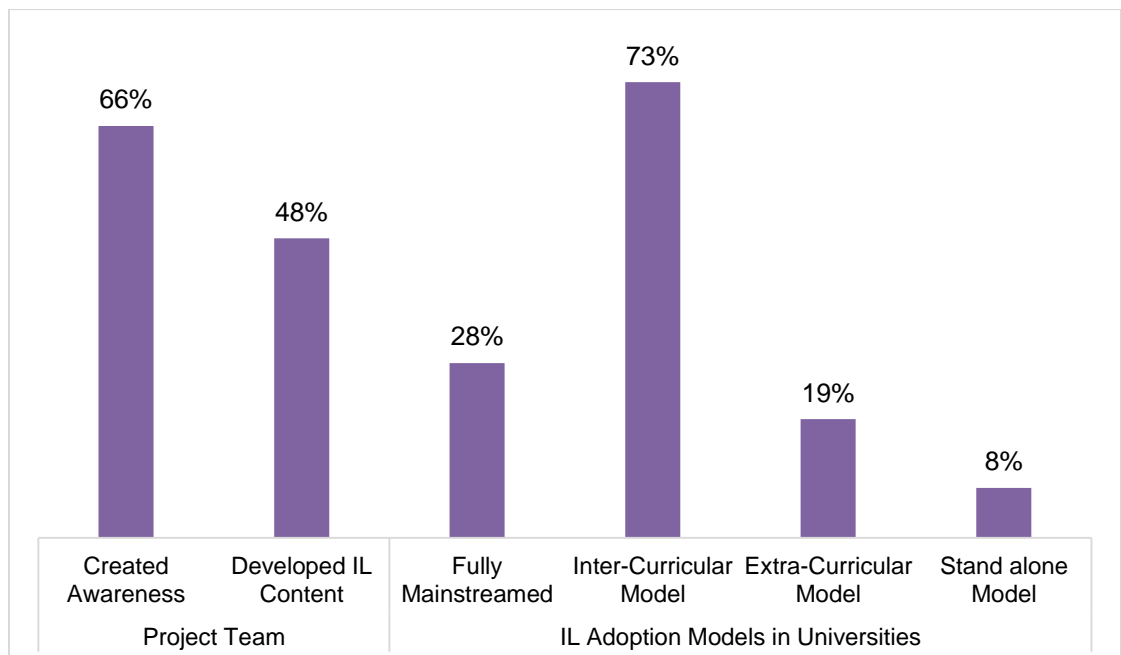


Regarding human resources, 63% of instruction librarians believe that there are enough IL trainers to handle IL sessions. Further still, 76% admitted that there is enough time in the library to teach IL and 80% indicated that there is enough time in the library to prepare for IL lessons. When asked about the training of instruction librarians in teaching IL, 86% of Deputy University librarians indicated that their instruction librarians have been trained out of which only 17% had been trained by KLISC and the rest acquired training either through in house training, workshop and seminar participation or personal initiative. Training of IL trainers should be regularized and universities tasked to ensure that IL instructors go through a standardized training to ensure uniformity. Such requirements if met would minimize discrepancies in administering information literacy.

4.6 The extent of IL incorporation into the University curriculum

This study also sought to establish the extent to which IL has been incorporated into the academic curriculum. This was considered important as it would give a clear indication on how far the universities have gone in embracing CUE guidelines on mainstreaming IL into curriculum. Literature revealed that infusing a new course into an already developed curriculum can be a controversial issue. Such issues need to be addressed to ensure successful development and implementation of a new curriculum. The study revealed that all universities involved in this research embraced establishment of collaborative partnership as a feasible approach to incorporating IL into the University curriculum. The study revealed that all institutions had established a project team which is tasked with the implementation of the IL project.

Figure 4.10. Information Literacy Adoption Models in Universities in Kenya



From figure 4.10 above, at least 66% of the institutions' project team have created awareness on the importance of mainstreaming IL into the academic curriculum among librarians, students and faculty members. About half of Universities' projects teams have either developed or are in the process of developing IL course content in partnership with the coordinating faculties and managed to sell the idea to deans and the vice-chancellor.

The study also revealed that less than 28% of universities surveyed have successfully mainstreamed IL into the course content. Finally, 73% of universities have adopted the Inter-curricular model to mainstreaming of IL where the academic staff requests the library for an IL session and attendance is mandatory, 19% have adopted extra-curricular model where IL is provided by the library outside the curriculum to students who are available and the rest (8%) have adopted the stand-alone model where IL is offered as a unit either elective or compulsory by the university. Since there are various models that can be adopted to mainstream IL into curriculum, depending on the institution's capability as cited by (Peacock, 2002), the component of Information literacy should be made compulsory as stipulated by Commission for University Education.

4.7 Challenges Facing Librarians in Mainstreaming IL into Academic Programs

This study also sought to determine the challenges facing librarians in mainstreaming IL into academic programs. Responses on challenges were considered relevant as they would provide a good platform for benchmarking on

IL integration into curriculum. The study revealed that some of the major challenges they face include inadequate human resources. In determining availability of adequate resources, the study established that 23% of instruction librarians indicated a limitation of information literacy trainers which means that such institutions will not be able to support adjustment of the curriculum by mainstreaming information literacy. Lack of sufficient support from the university management in integrating IL into the curriculum was also established to be a grave challenge because if the mainstreaming of IL idea is not sold out successfully to management then the process will not be since policy and resources both human and equipment may not be provided. Lack of cooperation among faculty members and lack of seriousness from students were also cited as key challenges. If faculty and students do not realize the importance of information literacy, then they may not support or embrace integration of IL into curriculum, therefore librarians should take the initiative of successfully selling out the idea on the importance of IL mainstreaming into curriculum.

When asked about how they could rate the status of IL in Kenyan universities, some said it is still very low and would require aggressive sensitization by involving all stakeholders. Others said that these competencies are not taken seriously as one of the 21st century skills.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summary of findings as presented in the previous chapter per objective, makes overall conclusion based on these findings and draws recommendations based on the findings of the study in light of the contemporary literature.

5.2 Summary

The purpose of this study was to assess mainstreaming information literacy into academic programs in universities in Nairobi and Kiambu counties in Kenya with the intention of promoting lifelong independent learners. In the pursuit of this goal, the study was guided by five specific objectives.

The first objective of the study sought to determine librarians' and faculty perceptions towards mainstreaming of IL into academic programs. The study found that instruction librarians have a positive perception that mainstreaming IL into academic programs can raise the aptitude of graduates. The study also found a stronger positive perception among Deputy University librarians with regard to mainstreaming IL into academic programs can raise standards in the use of electronic resources and improve the quality of research output but had less positive perception that mainstreaming could make students more responsible users of information and become lifelong independent learners. The study also

revealed that there is a significance difference in the perception on mainstreaming IL into academic programs between faculty and librarians.

The second objective of the study was to determine the librarians' level of involvement in mainstreaming IL into academic programs. The study revealed that universities are doing very well in some aspects such as involving librarians in designing information literacy curricular, setting study topics, establishing search strategies and information retrieval selecting information for students and preparing information resources that support learners. On the other hand, some of the involvement strategies that have not taken root for both university library management and faculties include assessment and evaluation of students' learning, preparing assignments and making teaching plans. The study also confirmed existence of a positive correlation between involvement level of senior university library management involvement in mainstreaming of IL into academic programs and the level of faculty involvement.

The third objective of the study was to determine the availability and adequacy of resources necessary for mainstreaming IL into academic programs. The study determined necessary resources could be in form of equipment, IL course content and digital (E-resource) content, internet, application programs and human resources. The study revealed that most universities have reliable internet connection. However, there was shortage of application programs, and equipment such as computers and overhead projectors in instruction rooms.

The fourth objective was to establish the extent to which IL has been incorporated into the academic curriculum. The study revealed that all universities had embraced establishment of collaborative partnership as feasible approach to incorporating IL into the University curriculum. Universities had established a project team which is tasked with the implementation of the IL project. The project teams had made some good progress such as creating awareness among librarians, students and coordinating faculties about the importance of mainstreaming IL into the academic curriculum. However, there is still a long way to go since less than one third of these institutions had managed to sell the idea to senior university management such as dean of schools and the vice-chancellors. The study also revealed a trend in which about three-quarters of universities had adopted the Inter-curricular model to mainstreaming of IL where the academic staff requests the library for an IL session and attendance is mandatory.

The fifth objective of the study was to determine challenges facing librarians in mainstreaming IL into academic programs. The study revealed that some of the major challenges they face include inadequate resources including staffing, lack of capacity created by few librarians to teach against the high number of students, lack of sufficient support from the university management in integrating IL in the curriculum, apathy from faculty towards library trainers. Lack of cooperation among faculty members and lack of seriousness from students were also cited as key challenges in trying to achieve this goal.

5.3 Conclusion

Several conclusions were drawn from this study. First, collaboration between faculty coordinating mainstreaming of IL into academic programs and the library management is very key in fast tracking the integration process. The positive correlation observed between the perceptions of instruction librarians and deputy university librarians and the divergent viewpoint of coordinating faculty is a resounding call for collaborative partnership. Secondly, project teams tasked with implementation of mainstreaming project need to develop a comprehensive guidelines stipulating target decision makers within the institution. The guidelines should also include a checklist as a monitoring and evaluation tool to avoid skewing implementation focus to selected aspects. Thirdly, since information topography changes as fast as technology does, information professionals in higher education can have an edge in their field by embracing emerging technologies such as application programs. The study also concludes that information literacy is an agent of innovation and thus mainstreaming IL into academic programs should be a critical component of the modern curriculum particularly in higher education. Finally, the researcher concludes that a careful blend of collaborative partnerships and inter-curricular model is an ideal hybrid to successfully infusing IL into the university academic programs. All the challenges facing librarians in mainstreaming IL into academic programs in universities have structural basis with which the law cannot remedy. Radical changes especially in sensitizing the

entire body of information users in the university about the importance of mainstreaming IL into academic programs can be a good entry point into overcoming the challenges facing mainstreaming of IL.

5.4 Recommendations

Based on the empirical evidence presented in this study, the researcher makes the following recommendations.

1. Kenya Libraries and Information Services Consortium should be tasked to come up with a common curriculum and provide training materials to eliminate duplicate effort
2. Information Literacy aspect should be taught by Librarians who are in better position to enrich the program with practical approaches within the library
3. Ensuring that the academic staff understands the benefit of IL by making it compulsory that the students go through orientation and attend a session of IL training. It is then, that they will see its importance and make an effort to ensure its flawless inclusion into the curriculum.
4. Establishment of closer partnership with faculty and primarily the staff involved in curriculum review so as to identify what can be integrated in other disciplines and what can be taught in a standalone IL course.
5. Promote strict adherence to CUE guidelines in regard to IL planning and training.
6. Staff required to carry out information literacy and standardization of the program for different user levels.

7. Incorporate information literacy into the main unit in the main course for university program as well as provision of enough tools for such exercise which should be done at all times and not restricted for specific times
8. Revise the curriculum in the university so that information literacy can be taught as a core unit to all undergraduate students and postgraduate students.

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APPENDICES

APPENDIX I: RESEARCH INSTRUMENTS

Questionnaire to Instruction Librarians

Dear Librarian,

Kindly fill in the questionnaire to enable the researcher gather information on the status of mainstreaming Information Literacy into universities' curriculum. Please do not write your names anywhere. The information provided will be confidential and used only for this research. The findings are meant to assess the status of Information Literacy integration into academic programs in universities in Kenya.

Thank you in advance.

SECTION A: PERSONAL INFORMATION

1. What is the type of your institution
Private Chartered [] (ii) Public []
2. What is your professional qualification?
Diploma [] (ii) Bachelor's degree [] (iii) Postgraduate Diploma []
(iv) Masters [] (v) PhD []
3. Years of working experience (i) below 1 year (ii) 1-5 yrs[] (iii) 6-10 yrs[]
(iv) Over 10 years

**SECTION B: PERCEPTIONS OF LIBRARIANS IN MAINSTREAMING IL
INTO ACADEMIC PROGRAMS**

Please indicate your level of agreement with the following statements

1. Mainstreaming IL into academic programs will give rise to graduates who are able to

	Strongly Agree	Agree	Disagree	Strongly disagree
i) Determine the extent/scope of information needed				
ii) Access the needed information effectively and efficiently				
iii) Critically evaluate information and its sources				
iv) Incorporate selected information into one's knowledge base				
v) Use information effectively to accomplish a specific purpose				
vi) Understand the economic, legal and social issues related to the use of information				

SECTION C: ADEQUACY OF RESOURCES TO MAINSTREAM IL INTO ACADEMIC PROGRAMS

1. Kindly tick in the table below to indicate the availability of the following resources

Resources	Available	Not available	sufficient	Not sufficient
Instruction rooms with computers				
Instruction rooms without computers				
Internet connectivity				
Overhead projectors				
IL course content				
Application programs				
Digital content(E-resources)				

2. Time too is a resource for Information Literacy. To what extent do you agree/disagree concerning the following statements about librarians as Information Literacy trainers?

	Agree	Disagree
Other activities in the library require time, leaving out no time for IL		
There is enough time in the library to teach IL		
there are enough IL trainers to handle the sessions		
There is time for preparing for an IL lesson		

3. What recommendations would you like to be considered to promote mainstreaming of IL into curriculum?

Questionnaire for Deputy University Librarian

SECTION A: PERSONAL INFORMATION

1. Do you teach Information Literacy? i) Yes [] ii) No []
2. What is your professional qualification? (i) Masters [] (ii) PhD []
3. Years of experience 0-5 yrs [] 6-10 yrs [] 11-15 yrs [] 16-20 yrs [] 20+ yrs []

SECTION B: PERCEPTIONS ON MAINSTREAMING IL INTO ACADEMIC PROGRAMS.

1. Do you think mainstreaming IL into academic programs will bring about the following?

	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
High usage of electronic resources					
Quality research output					
Responsible use of information					
Lifelong independent learners					

SECTION C: LIBRARIANS' INVOLVEMENT IN MAINSTREAMING IL INTO CURRICULUM

1. As Library management, have you been involved in the following as regards to mainstreaming IL into curriculum? Tick appropriately

	YES	NO
Designing information literacy curricular		
Setting study topics		
Establishing search strategies and information retrieval		
Writing research reports and proper referencing		
Selecting information for students		
Assessing/ evaluation of students' learning		
Preparing assignments		
Preparing information resources that support students' learning		
Making teaching plans		
Examining information literacy course		

SECTION D: RESOURCES FOR MAINSTREAMING IL INTO ACADEMIC PROGRAMS

1. Have your instruction librarians been trained on how to teach IL? i) Yes[]
ii) No[]
2. If YES in 1 above who trained them? i) KLISC [] ii) In house training []
iii) Workshop/seminar participation [] iv) Personal Initiative []
3. Time too is a resource for Information Literacy. To what extent do you agree/disagree with the following statements about librarians as Information Literacy trainers? Tick appropriately

	Agree	Disagree
i) Other activities in the library require time, leaving out no time for IL		
ii) There is enough time in the library to teach IL		
iii) There are enough IL trainers to handle the sessions		
iv) There is time for preparing for an IL lesson		

SECTION E: EXTENT OF MAINSTREAMING IL INTO CURRICULUM

1. To what extent has the library gone in mainstreaming IL into academic programs?

Tick appropriately

Activity	YES	NO	NOT SURE
We have formulated a project team to spearhead the mainstreaming project			
The team has created awareness on the importance of mainstreaming to librarians, students and faculty			
The team has developed an IL course content in partnership with faculty			
The team has sold the idea to deans			
The idea has been sold to the Vice-Chancellor			

IL has successfully been mainstreamed into curriculum			
Any other (indicate) _____ _____			

2. Which model has your institution applied to mainstream IL into curriculum?

Tick appropriately

MODEL	Tick (✓)
Intra-curricular: IL has been mainstreamed into learning activities and outcomes of an academic course	
Inter-curricular: academic staff requests the library for an IL session where attendance is mandatory	
Extra-curricular: IL is provided by the library outside the curriculum to students who are available	
Stand-alone: IL is offered as a unit either elective or compulsory by the university	

SECTION F: CHALLENGES IN MAINSTREAMING IL INTO CURRICULUM

1. What challenges has the library encountered in their pursuit to incorporate IL into curriculum as stipulated by CUE?
2. In your personal opinion how would you rate the status of IL in Kenyan universities?

Thank you for your response.

Questionnaire for Faculty Coordinating Information Literacy

SECTION A: PERSONAL INFORMATION

1. Do you teach Information Literacy? i) Yes [] ii) No []
2. What is your professional qualification? (i) Masters [] (ii) PhD []
3. Years of experience 0-5 yrs [] 6-10 yrs [] 11-15 yrs [] 16-20 yrs [] 20+ yrs []

SECTION B: VIEWS ON MAINSTREAMING IL INTO ACADEMIC PROGRAMS.

1. Do you agree with the following American Library Association (ALA) statements?

Statement	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
An IL literate student is one who can recognize when information is needed					
Have the ability to locate the needed information					
Evaluates and uses responsibly the needed information					

SECTION C: LIBRARIANS' INVOLVEMENT IN MAINSTREAMING IL INTO CURRICULUM

2. As faculty, have you involved librarians in the following as regards to mainstreaming IL into curriculum?

Statement	Yes	No
Designing information literacy curricular		
Setting study topics		
Establishing search strategies and information retrieval		
Writing research reports and proper referencing		
Selecting information for students		
Assessing/ evaluation of students' learning		
Preparing assignments		
Preparing information resources that support students' learning		
Making teaching plans		
Examining information literacy course		

SECTION D: RESOURCES FOR MAINSTREAMING IL INTO ACADEMIC PROGRAMS

1. From assumptions, faculty has indicated that librarians do not have the competencies to teach in class. Have you organized for training of instruction librarians on how to teach IL?

i) Yes [] ii) No []

2. If YES in 1 above who trained them?

i) KLISC [] ii) In house training [] iii) Workshop/seminar participation [] iv) Personal Initiative []

SECTION E: EXTENT OF MAINSTREAMING IL INTO CURRICULUM

1. To what extent has the faculty gone in mainstreaming IL into academic programs? Tick appropriately

Activity	YES	NO	NOT SURE
We have formulated a project team to spearhead the mainstreaming project			
The team has created awareness on the importance of mainstreaming to students and faculty			
The team has developed an IL course content in partnership with librarians			
The team has sold the idea to deans			
The idea has been sold to the Vice-Chancellor			
IL has successfully been mainstreamed into curriculum			
Any other (indicate) _____ _____			

2. Which model has your institution applied to mainstream IL into curriculum? Tick appropriately

MODEL	Tick (✓)
Intra-curricular: IL has been mainstreamed into learning activities and outcomes of an academic course	
Inter-curricular: academic staff requests the library for an IL session where attendance is mandatory	
Extra-curricular: IL is provided by the library outside the curriculum to students who are available	
Stand-alone: IL is offered as a unit either elective or compulsory by the university	

SECTION F: CHALLENGES IN MAINSTREAMING IL INTO CURRICULUM

1. What challenges have you encountered in your pursuit to incorporate IL into curriculum as stipulated by Commission for University Education?

.....

2. In your personal opinion how would you rate the status of IL in Kenyan universities?

.....

Thank you for your response

APPENDIX II: WORK PLAN

Proposal writing	March-September 2015
Defending the proposal	October 2015
Proposal corrections	January-December 2016
Piloting	April 2017
Data collection	June- November 2017
Data analysis, writing and revision of 1 st draft	January- June 2018
Revision of final draft	August 2018
Project examination	October 2018
Graduation	July 2019.

APPENDIX III: RESEARCH BUDGET

PROPOSAL TYPING	Kshs.5,000.00
PRINTING AND BINDING	Kshs.5,000.00
PHOTOCOPYING RESEARCH INSTRUMENTS	Kshs.2,000.00
TRAVELLING EXPENSES (DATA COLLECTION)	Kshs.3,000.00
DATA ANALYSIS, TYPING AND PRINTING	Kshs.15,000.00
BINDING	Kshs. 3,000.00
TOTAL	Kshs. 33,000.00



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Ref: No. **NACOSTI/P/17/82448/18014**

Date: **23rd August, 2017**

Selina Nabukhwami Webala
Kenyatta University
P.O. Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *“Assessment of information literacy mainstreaming into academic programs in selected Universities in Nairobi and Kiambu Counties,”* I am pleased to inform you that you have been authorized to undertake research in **Nairobi and Kiambu Counties** for the period ending **22nd August, 2018.**

You are advised to report to **the Vice Chancellors of selected Universities, the County Commissioners and the County Directors of Education, Nairobi and Kiambu Counties** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

**GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO**

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The Vice Chancellors
Selected Universities.



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Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 4150

Internal Memo

FROM: Dean, Graduate School

DATE: 9th June, 2017

TO: Selina Nabukhwami Webala
C/o Library & Information Science

REF: E65/OL/22800/2012

SUBJECT: APPROVAL OF RESEARCH PROJECT PROPOSAL

This is to inform you that Graduate School Board at its meeting of 7th June, 2017 approved your Research Project Proposal for the M.Ed Degree Entitled, "Assessment of Information Literacy Mainstreaming into Academic Programs in selected Universities in Nairobi and Kiambu Counties".

You may now proceed with your Data Collection, Subject to Clearance with Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking Forms per semester. The form has been developed to replace the Progress Report Forms. The Supervision Tracking Forms are available at the University's Website under Graduate School webpage downloads.

Thank you.

ANNBELL MWANIKI
FOR: DEAN, GRADUATE SCHOOL

c.c. Chairman, Library & Information Science Department.

Supervisors:

1. Dr. Caroline Mutwiri
C/o Department of Library & Information Science
Kenyatta University
2. Mr. Martin Gichugu
C/o Department of Library & Information Science
Kenyatta University

AM/lnn



KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke

Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

Our Ref: E65/OL/22800/2012

DATE: 9th June, 2017

Director General,
National Commission for Science, Technology
and Innovation
P.O. Box 30623-00100
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR SELINA NABUKHWAMI WEBALA – REG. NO. E65/OL/22800/2012.

I write to introduce Ms. Selina Nabukhwami Webala who is a Postgraduate Student of this University. She is registered for M.E.D degree programme in the Department of Library & Information Science.

Ms. Selina intends to conduct research for a M.E.D Project Proposal entitled, "Assessment of Information Literacy Mainstreaming into Academic Programs in selected Universities in Nairobi and Kiambu Counties".

Any assistance given will be highly appreciated.

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'Lucy N. MBAABU'.

MRS. LUCY N. MBAABU
FOR: DEAN, GRADUATE SCHOOL

AM/lnn



UNIVERSITY OF NAIROBI
OFFICE OF THE DEPUTY VICE - CHANCELLOR

(Research, Production & Extension)
Prof. Lucy W. Irungu B.Sc., M.Sc., Ph.D.

P.O. Box 30197-GPO,
00100, Nairobi-Kenya
Telephone: +254-20-2315416 (DI), 318262

Fax: 0202317251
Email: dvrpe@uonbi.ac.ke

UON/RPE/3/5

September 28, 2017

Selina N. Webala
Kenyatta University
Dept. of Library & Inform. Science
P.O. Box 43844-00100
NAIROBI

Dear Webala,

AUTHORITY TO USE THE UNIVERSITY OF NAIROBI LIBRARY

I refer to your request dated September 28, 2017 to conduct research at the University of Nairobi towards your Masters Degree at Kenyatta University, on a topic entitled: "*Assessment of Information Literacy Mainstreaming into Academic Programs in Selected Universities in Nairobi and Kiambu Counties*".

I write to inform you that your request has been approved.

You are however required to share the findings of your study with the University of Nairobi by depositing a copy of your research findings with the Director, Library & Information Services on completion of your study.

LUCY W. IRUNGU
DEPUTY VICE-CHANCELLOR
(RESEARCH, PRODUCTION AND EXTENSION)
&
PROFESSOR OF ENTOMOLOGY

Copy to: Director, Library and Information Services

LWI/no



ISO 9001:2008 CERTIFIED

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THIS IS TO CERTIFY THAT:
MS. SELINA NABUKHWAMI WEBALA
of KENYATTA UNIVERSITY, 43844-100
NAIROBI, has been permitted to conduct
research in Kiambu, Nairobi Counties

on the topic: ASSESSMENT OF
INFORMATION LITERACY
MAINSTREAMING INTO ACADEMIC
PROGRAMS IN SELECTED UNIVERSITIES
IN NAIROBI AND KIAMBU COUNTIES

for the period ending:
22nd August, 2018


.....
Applicant's
Signature

Permit No : NACOSTI/P/17/82448/18014

Date Of Issue : 23rd August, 2017

Fee Received :Ksh 1000




.....
Director General
National Commission for Science,
Technology & Innovation