# AN ASSESSMENT OF INFORMATION LITERACY ACTIVITIES AT THE

# UNIVERSITY OF EASTERN AFRICA, BARATON IN KENYA

BY

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## DECLARATION

# **Declaration by Candidate**

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# DEDICATION

To my Wife, Judith and my daughters Blessing Jepkigen and Brannie Jelimo for their inspiration.

## ABSTRACT

Librarians and other information professionals have regularly observed that undergraduate students have information-searching skill problems. Most students attend universities and other institutions of higher learning knowing very little or nothing about basic library use and information search skills, computer-related skills and other information-resource using skills in general. Consequently, students lack the information knowledge and skills crucial to effectively understand what they need in order to meet the information needs of their day-to-day academic pursuits. The University of Eastern Africa, Baraton are faced with similar daunting challenges and find it difficult to come up with sound and meaningful ways to deliver information literacy (IL) activities effectively to its students. The aim of the study was to assess Information Literacy activities among the undergraduate students at the University of Eastern Africa, Baraton and suggest Information literacy strategies that could be used to promote it at the UEAB library. The specific objectives were to: establish Information Literacy activities currently being conducted at the UEAB library; assess the effectiveness of IL activities at the UEAB library; determine skills needed by both the library staff and users to enhance Information Literacy at the UEAB; identify challenges being faced in the delivery of IL at the UEAB library; and suggest strategies and a framework for effective delivery of IL at the UEAB library. Information Literacy Competency Standards for Higher Education (ALA, 1989) was used as the theoretical framework for this study. The study adopted Case study research design and used both qualitative and quantitative research methods. The study used both stratified random sampling and purposive sampling techniques. A sample size of 194 respondents comprising of 188 undergraduate students and 6 key informants was used. With the help of semi-structured questionnaires, focus group and interview schedules, the study used both face to face techniques and self-administered data collection techniques. Qualitative and quantitative data were analyzed descriptively and by using SPSS respectively. The major findings of this study were: lectures supported IL activities but the students' enrollment in IL activities was very low; the student training period of time on the use of library skills was not enough to equip them with the library resource utilization skills; the library staff lacked leadership and library resource utilization skills; there were no IL policy guidelines; there was lack of funds to run IL activities; the library users required basic and advanced research skills and ICT skills and the library staff required training on leadership and library use skills. The recommendations for UEAB Library are: to employ competent library staff to handle orientation activities; to develop a well-structured IL curriculum and avoid offering IL activities in an informal manner; the Faculty to work hand in hand with the librarians in the design of IL courses and finally, to provide funds to run IL activities.

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# LIST OF ABBREVIATIONS

ACRL	Association of College and Research Libraries
ETS	Education Testing Service
GoK	Government of Kenya
HINARI	Health Internetwork Access to Research Initiative
ICT	Information Communication Technology
IL	Information Literacy
IT	Information Technology
MDGs	Millennium Development Goals
MOODLE	Modular Object-Oriented Dynamic Learning Environment
NEPAD	New Partnership for Africa's Development
NCSTI	National Commission of Science, Technology and Innovation
OPAC	Online Public Access Catalogue
ORC	Online Research Centre
SDA	Seventh-Day Adventist
SPSS	Statistical Package for Social Sciences
UEAB	University of Eastern Africa, Baraton

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#### **CHAPTER ONE**

### INTRODUCTION AND BACKGROUND INFORMATION

#### **1.1** Introduction

This chapter gives an overview of this study and provides the background to the study, the UEAB, global understanding of the IL as well as the national understanding. Other concerns discussed include: statement of the problem; aim and objectives; research questions; assumptions of the study; significance and scope and the limitations of the study.

#### 1.1.1 Global Understanding of Information Literacy

Information and knowledge have always been critical resources for the survival of human beings and for ensuring sustainable development. Since the dawn of human civilization, in every sphere of human activity, access to information, the creation and application of new knowledge and the communication of such knowledge to others have contributed to the evolution of societies and the economic welfare of people (Moeller et al., 2011). Currently, information literacy skills play a key role in development and the dissemination of information. Information literacy skills and knowledge are essential in a global information environment which is characterized by constant change and innovation, a multiplicity of formats and media and an explosion in the amount of information of variable quality (University of Sydney, 2011).

It has been a trend to equip library users with the necessary skills to utilize learning resources. For a long time, librarians have been occupied with educating people how to use the library resources by conducting library orientation, giving them bibliographic instruction and sharpening their research skills (Kaufman, 1992). Library-use skilltraining has gone through a number of transformations due to advances in technologies. Initially, librarians emphasized areas such as bibliographic instruction but later moved to user education and, recently, to problem-based learning, which has information literacy (IL) as its core (Hepworth & Wema, 2006). Through information professionals, the librarians and educators have been made aware the importance of IL skills in acquiring quality education and knowledge as is asserted by Candy (1993).

This situation has created a challenge in terms of the knowledge and skills that people should possess in order to handle and use information effectively. In response to this challenge, professionals in library and information science have restructured the library skills instruction programs of the 1960s into a research framework they refer to as information literacy (IL). Currently, Information Literacy has grown and gained power and recognition all over the world, both in academic institutions and workplaces. It is also considered a vital tool that will empower all information users with skills needed for lifelong learning and acquisition of global information. The significance attached to IL has led many education institutions such as universities, colleges and schools to initiate IL programmes that will equip students with enough knowledge and skills in sourcing and effective utilization of information. This study investigated the IL at the University of Eastern Africa, Baraton, as it relates to its undergraduate students. It is also hoped that this study's findings and recommendations will improve IL programmes. This study was inspired by a study that was undertaken to critically investigate the effectiveness of IL delivery in Tanzanian universities as a means for imparting and acquiring skills for effective teaching and learning in Tanzanian universities.

According to a Government of Kenya report, since 1974 when the term IL was first used, information literacy (IL) has been defined in many ways (Mokhtar, 2008). Some authors have described IL as a prerequisite for lifelong learning. Others have described it as a natural extension of the concept of literacy in our society. Some have equated IL with Information Technology, while others have used the term interchangeably with "library skills". However, one of the most widely accepted and cited definitions of IL given by the American Library Association states that an information literate individual; recognizes the need for information; is able to access, evaluate effectively and creatively use information and is an independent learner who demonstrates proactive social responsibilities (American Library Association, 1989).

According to the ALA (1989), what is called for is not a new information studies curriculum but, rather, a restructuring of the learning process which would actively involve students in the process of:

- 1. Knowing when they have a need for information.
- 2. Identifying information needed to address a given problem or issue.
- 3. Finding needed information.
- 4. Evaluating the information.
- 5. Organizing the information.
- 6. Using the information effectively to address the problem or issue at hand.

Rader (1991) defines an information literate person as one who can:

- 1. Survive and be successful in an information/technology environment.
- 2. Lead productive, healthy and satisfying lives in a democratic society.
- 3. Effectively deal with rapidly changing environments.
- 4. Ensure a better future for the next generation.
- 5. Find appropriate information for personal and professional problem solving.
- 6. Have writing and computer proficiencies.

In short, information-literate people know how to be lifelong learners in an information society. Becoming information literate is essential in the acquiring and appropriately using information to accomplish varied tasks.

Don and Melissa (2011) report that in 2002, several individuals, including the United States Department of Education, the America On-Line Time Warner Foundation, Apple Computer, Microsoft Corporation and the National Education Association, identified information literacy as one of the key skills set for successful 21<sup>st</sup> century learning. Yet, in spite of the emphasis on this important skill set, evidence suggests that many students enter college without having attained competence in information literacy. The Educational Testing Service (ETS) found that, of 3,000 college students and 800 high school students who took the ETS Information and Communication Technology Test, only 13% achieved scores that would indicate they were information literate (Fowler,

2003). A pilot study that included 51 first-semester students in James Madison University found that 45% of the students scored below proficient range on the Information Literacy Test (Gross & Latham, 2007). Moreover, a recent survey of nearly 900 college students found that 40% of them feel that they have "some gaps" in their ability to do research (Hart, 2005). Information literacy in the electronic environment is still posing challenges in many learning institutions because electronic information technology is new and many learners have not been fully trained on how to use it.

The academic libraries and most educational structures are faced with challenges due to the new information and communication development and changes that affect every educational program and process (Erich & Popescu, 2011). Searching for information in the electronic environment, in most cases, becomes time consuming and frustrating for those lacking the required skills. To date, professionals in technical communication face the challenge of providing electronic literacy at home, in school and in the workplace (Selfe & Hawisher, 2010). This, in the opinion of the researcher, brings about an educational imbalance between rapidly developing technologies and information available to the users and this is affirmed by Maharan and Mishra (2007). Bhimani (2001) noted that there is a huge gap between perception and reality, between the students' apparent ability to use digital technologies and their actual ability to conduct a basic search using electronic resources in a learning situation. In the view of the researcher, this is pandemic in IL and thus a solution was sought. According to Macdonald, Heap and Mason (2001), students' electronic information sourcing skills are low, but as can be seen clearly today, electronic information resources are increasingly in use for courses at all levels of higher education, including the University of Eastern Africa, Baraton.

### 1.1.2 Information Literacy in Kenya

Information literacy in Kenya is still low, prompting a need for information literacy programs. According to Gitonga (2011), only less than 10% of the Kenyan population has acquired information literacy skills. The search for knowledge in Kenya has greatly increased resulting in many learners enrolling in both public and private learning institution in large numbers. Kavulya (2003) observes that there are different forms of information literacy programs provided in Kenyan universities at the moment. These include library orientation, library instruction courses, individual instruction and use of library manuals and guides. He further indicates that there is a need to establish the proper use of information as a prerequisite for delivering IL effectively in universities in Kenya. He stresses the point that, in Kenya, whereas concerted efforts were put into building collections that responded to the needs of both students and faculty, training users in information access and use received little or no meaningful attention.

Information literacy is a key factor in the preparation of human resources that can contribute immensely to the development and growth of our economy. This can be easily achieved through well facilitated library services, motivation of personnel to engage in research through the World Wide Web. According to Myers, Khushbu and Díaz (2009), the Kenyan government can realize national development goals and objectives for wealth and employment creation if it prioritizes on the achievement of information-based society. Information literacy is a concept that has been recognized as a development enabler in Kenya. The National Bureau of Statistics reported that it has been recognized that information literacy is essential for national development (GoK, 2007).

The limited view of IL in Kenya hinders Kenyans' ideal participation in an information society (Shannon, 2009). Infrastructure, especially Information and Communications Technology, is a key priority action area in order to promote conducive conditions for education and sustainable development in Kenya. The Kenyan government recognizes the role of information and Information Communication Technology (ICT) in socio-economic, political and technological development if it has to make strides in achieving the Millenium Development Goals (MDGs) (Amunga, 2011).

The Kenya government enacted a goal in 2012 by putting into operation all the necessary policy, legal and institutional reforms needed to strengthen public transparency and accountability through encouraging public access to information and data (GoK, 2007).

#### 1.1.3 University of Eastern Africa, Baraton

The University of Eastern Africa, Baraton, is owned and operated by the Seventh-Day Adventist Church. It offers a broad-based curriculum, encompassing communication and presentation skills, research, ethics, technology, religion, health principles, physical activities, psychology and the arts among others. It offers academic programmes leading to Bachelor of Arts (B.A.), Bachelor of Business Administration (B.B.A.), Bachelor of Business Information Technology (BBIT), Bachelor of Education (B.Ed), Bachelor of Science (B.Sc.), Bachelor of Science, Nursing (B.ScN), Bachelor of Technology (B.T.), Master of Education (MEd), Master of Science (M.Sc), Master of Science, Nursing, (MSN). In addition to concentrating in his or her field of special interest the student pursuing any degree also takes broad range of basic courses, referred to as general education requirements (Mwita, 2011). The UEAB's Mission is to provide and advance holistic, quality, Christian education which develops men and women to be earnest seekers of truth and to be adequately equipped with the appropriate knowledge, skills and attitudes for service to God and humanity. Its vision is to be a leading centre of excellence in higher education and research producing world-class professionals equipped with moral virtues.

### 1.1.4 The UEAB Library

The mission of the UEAB's Library is to promote quality teaching, learning and the research activities of the UEAB. It seeks to achieve this by proving unhindered access to global information resources, guidance in literature searching and research activities through the provision of a conducive setting for collaborative learning and resource sharing.

The goals of the UEAB Library are:

- To foster the acquisition of current resources that will support the curriculum.
- To acquire and make available to all patrons, all kinds of information resources, such as books, periodicals, pamphlets, and other services that will address their needs to: become well informed; locate answers to important questions; cultivate the imagination and creative expression; develop skills for career and vocational advancement and enjoy leisure by means of reading and other media services.
- To establish collaborative efforts for the acquisition of electronic resources in order to achieve greater acquisition at reduced cost.
- To facilitate and promote inter-library loan services among Seventh-Day Adventist (SDA) universities' libraries in Africa.

- To promote reference and acquisition services.
- To promote the conservation of library resources.
- To provide library staff with support and skills so that they achieve their assigned duties.
- To enable other libraries access the UEAB library holdings and maximize the library's bibliographic reach through online access by means of consortia and library cooperatives.
- To create an innovative user friendly library network and provide access to global information networks
- To promote the SDA African heritage.
- To strive, consistently, to discover new methods and improvements for better services to the library's patrons.

The objectives of the UEAB library are to:

- Expand access to electronic resources through purchase and cooperative acquisition. Collaborative activities will be promoted by establishing a resource-sharing department.
- Develop interlibrary loan procedures for borrowing resources, particularly from other Adventist universities' libraries.
- Employ professional and experienced librarians to run each department and promote effective reference services.

- Acquire, through purchase and donation, a current, core collection of important and heavily used academic resources so as to increase the library's holdings and increase user/resource ratio.
- Provide a bindery for the conservation of library resources and a trained staff to manage it.
- Allocate funds for continuing the education and upgrading of qualified staff.
- Create a web site for the library using appropriate web catalog software that will enable library patrons access worldwide bibliographic information and enable external users access the libraries holdings.
- Employ a Library Systems' Administrator who will monitor and manage library networks and assist users in their use of digital information.
- Employ an archivist who will collect, organize and manage the resources on African SDA heritage and the University's Archives.

The UEAB library is maintained primarily for the use of the University of Eastern Africa, Baraton's students, faculty, staff, educators and researchers. The students', staff's and faculty's spouses and older children also use the library. Presently, the library has access to approximately 62,000 volumes of books within the library building, subscribes to about 450 print and online periodical titles and 33 electronic databases. It also has access to over 60,000 monographs and 1,000,000 journal titles through subscriptions to online libraries (Adeogun, 2011).

All students are expected to register at the Online Resource Center (ORC) where they obtain their usernames and passwords for Internet access. The library also has course

materials, such as handouts and pamphlets, for various disciplines and these are placed on reserve at the circulation desk and are available on short loan basis. Monographs identified for use for particular courses are placed on two-hour reserve. The library has an Online Public Access Catalog (OPAC) client-server library catalog system which runs on the library's LAN which is integrated with other library catalogs that are available on the internet. Currently, the UEAB library has four client computers which are connected to the main server (Adeogun, 2011).

The library has electronic resources which can only be accessed from LAN accessing workstations in the campus library by registered staff and students. Some require a login and password. Their logon information for off-campus access can be obtained from the University Librarian. Electronic Databases on CD-ROMS (Offline) are also available and, apart from the basic function of the library, such as gathering, processing and disseminating information and the library also offers bindery and photocopying services.

### 1.1.5 Information Literacy at the UEAB and UEAB Library

Universities have the noble task of providing the foundation for the continued growth of students in their later careers and as members of the society. Information literacy is one of those skills which extend learning beyond formal classroom settings as individuals move out of the university into areas of responsibility. The information revolution and rapid growth of knowledge have given birth to information age that affects all aspects of economic, social and political life. The effective provision of information creates opportunities for dealing with current problems in developing countries such as poverty, unemployment, and environmental degradation (Kavulya, 2003).

Currently, the UEAB library runs all information literacy activities. Librarians give seminars, workshops and events for teaching faculty and students so as to increase the faculty's understanding of the importance of integrating information literacy into their courses. This in line with what Owusu-Ansah (2004) suggested in that the academic library should be the natural venue for designing solutions toward information literacy in the academic arena. But those solutions could only produce desired results if the library approached information literacy as a campus-wide necessity. The UEAB Library attempts to improve lives by nurturing lifelong learning and ensuring that every member of the community has access to a huge range of ideas and information, provide students, lecturers and community access to information they need for educational and personal growth throughout their lives and maintain the University of Eastern Africa, Baraton's mission in increasing knowledge through research. IL activities seek to ensure that the university fulfills its goals and objectives.

The mission of the library is to promote quality teaching, learning and research activities of the UEAB. It seeks to achieve this by providing unhindered access to global information resources, guidance in literature searching and research activities and through the provision of a favorable setting for collaborative learning and resource sharing. For this to be achieved, structures to effective provision of IL need to be put in place.

### **1.2** Statement of the Problem

Information Literacy is a skill that enables an individual locate, identify, evaluate and use the information to perform any given task with ease at any given time. It is a life-long skill desired by many people because anyone with such a skills is able to adapt any environment with ease. Those without IL skills are not usually able to survive the pressures of life, especially in academic circles where research is crucial for success. IL has attracted a lot of discussion in the past in the institutions of higher learning since it is believed to hold the key to success in all areas of life.

The UEAB library operates unstructured IL literacy activities ranging from library orientation, library instruction courses, reference services and use of library guides and manuals.

In most cases, at UEAB, the orientation exercise is hurriedly done during the beginning of every semester. Usually, the university administration slots only one or two hours for the exercise. The effectiveness of library orientation tours is hampered by failure to come up with realistic and achievable objectives. For example, the time allocated to the lecture, demonstration and tour is inadequate to impart useful skills to new university students.

Personal attention at the UEAB library is hampered by the shortage of competent library staff. Professionals in library and information science have the noble task of restructuring library skills' instructions in information literacy (IL). Information literacy serves to develop lifelong competent skills in people so as to function in different areas.

The UEAB does not have IL policy guidelines. For any program to realize its meaningful objectives, sound policies need to be formulated and implemented.

Good libraries ensure that marketing is superb. The adequate marketing of library resources at the UEAB may not have been maximized due to issues related to finances.

### 1.3 Aim of the Study

The aim of this study was to assess information literacy activities among undergraduate students at the University of Eastern Africa, Baraton, and suggest strategies that can be used to promote it at the UEAB library.

### **1.4 Objectives of the Study**

The objectives of the study were:

- To establish Information Literacy activities currently being conducted at the UEAB library.
- 2. To assess the effectiveness of IL activities at the UEAB library.
- 3. To determine skills needed by both the library staff and users to enhance Information Literacy at the UEAB.
- 4. To identify challenges being faced in the delivery of IL at the UEAB library.
- 5. To suggest strategies and propose a framework for effective delivery of IL at the UEAB library.

## **1.5 Research Questions**

- 1. What IL activities are currently being conducted at the UEAB library?
- 2. How effective are IL activities at the UEAB library?
- 3. What skills are needed by both the library staff and users to enhance Information Literacy at the UEAB?
- 4. What are the challenges are being faced in the delivery of IL at the UEAB library?
- 5. What strategies and framework can be adopted for an effective delivery of IL at the UEAB library?

## **1.6 Research Assumptions**

This study assumed that:

- 1. IL activities at the UEAB library can be maximized if faculty members, library staff and administrators effectively collaborated with each other.
- 2. The UEAB undergraduate students' information skills deficiencies can be reduced if information literacy activities are well structured.
- 3. The delivery of Information literacy at the UEAB library can be improved significantly if challenges facing it are addressed.

## **1.7 Significance of the Study**

The findings of this study will:

- 1. Inform university libraries in Kenya in general and the university of Eastern Africa, Baraton, in particular, in improving their IL activities to its undergraduate students.
- 2. Sensitize library users on the importance of the information literacy towards their library searches and academic performance.
- 3. Help policy makers and implementers be responsive to the issues and challenges facing information literacy activities organized by the university libraries.
- 4. Generate knowledge that will trigger further research that will benefit professionals to improve information literacy activities.

## 1.8 Scope, Limitations and Delimitations of the Study

This study was limited to undergraduate students, members of staff and key administrators of the University of Eastern Africa, Baraton. This study was also limited to the information that was given by the respondents, the availability of the funds and the period of time that was given for the study to be conducted.

#### **1.9 Dissemination of the Findings**

The findings of this study are presented in tables and figures.

### **1.10 Definition of Terms**

Administrators: These refer to the UEAB's leaders who have prerogative to decision making in the institution.

**Challenges:** These are difficulties and problems encountered in the delivery of IL activities at the UEAB library.

**Collaboration:** It is the ability of the administrators, library staff and faculty to work as a team in the delivery of IL activities.

**Facebook:** Refers to a popular and free social networking site that allows registered users to create profiles, upload photos and videos, send messages and keep in touch with family, friends, and colleagues. It can be used by UEAB library to promote IL activities.

**Framework:** Refers to a structure to be followed when offering IL at different levels of undergraduate students taking into consideration their specific needs.

**Higher Institutions of Higher Learning:** These are post-secondary school institutions of learning.

**Information Communication Technologies (ICTs):** These refer to the diverse set of technological tools and resources used to communicate, create, disseminate, store and manage information in the UEAB library. They include computers, the Internet, broadcasting technologies (radio and television) and telephony.

**Information Literacy:** Information Literacy is the ability to identify what information is needed, understand how that information is organized, identify the best sources of

information for a given need, locate those sources, evaluate the sources critically and share and access that information in the UEAB library.

**Information Services:** These are services provided by the UEAB library that can be accessed online like the internet and photocopying.

**Information Technology:** This consists of all the hardware and software that UEAB library use in order to achieve its IL activities.

**Lecturers:** These are the faculty members at the UEAB who are involved in teaching and research.

Librarian: Refers to a specialist in library work.

Library Staff: These are the support staff in the UEAB library.

**Library:** A place in which literary and artistic materials, such as books, periodicals, newspapers, pamphlets, prints, records and tapes, are kept for reading, reference, research or lending. These materials are either in print or electronic format.

**Life-long learning:** This refers to endless learning throughout one's life span and is important for effective socio-economic development.

**LinkedIn:** This refers to a social networking website that the UEAB library can use to promote its IL activities.

**Literacy:** Literacy has traditionally been described as the ability to read and write, with arithmetical literacy often added to the mix.

**Marketing:** Process of distributing and promoting ideas, goods and services to create exchanges that satisfy individual and organizational objectives.

**Moodle:** Refers to open-source virtual learning software that the UEAB library can use to enhance the delivery of IL activities.

**Real Classes:** These are UEAB IL related courses that are taught, examined and credited.

**Tertiary Education:** Refers to education at middle level colleges, not university education.

**Twitter:** Refers to a messaging system that allows people send short text messages to a list of followers. Twitter can be used to promote IL at the UEAB library.

**Undergraduate students:** These are students pursuing their first Degrees in university education.

University Education: Refers to studies after middle level colleges.

#### **CHAPTER TWO**

#### LITERATURE REVIEW

### **2.1 Introduction**

This chapter focuses on the review of literature on Information Literacy Programs. The literature reviewed in this study include: the Theoretical Framework and its application; information literacy activities conducted at the UEAB library; modes of delivery for information literacy; Information literacy skills needed by UEAB library staff and users; effectiveness of UEAB IL activities and challenges facing the UEAB IL activities.

#### **2.2 Theoretical Framework**

Theory refers to a systematically organized body of knowledge that can be applied in a relatively wide variety of circumstances, especially a system of assumptions, accepted principles and rules of procedure devised to analyze, predict or otherwise explain the nature or behavior of a specified set of phenomena (Mason, 1995).

This study was anchored on the Information Literacy Competency Standards for Higher Education formulated by the American Library Association's Presidential Committee on Information Literacy in their final report in 1989. The standards reviewed by the Association of College and Research Libraries (ACRL) Standards Committee were approved by the Board of Directors of the ACRL in January 2000.

These Information Literacy Competency Standards are useful for identifying areas of emphasis that any serious institution of higher learning that intends to run a strong IL program should follow. The parameters under which a good IL program should operate according to the Thompson (2005) are discussed below:

#### 2.2.1 Standard 2: Goals and Objectives

The goals and objectives for an IL program should be in harmony with the mission, goals and objectives of programs, departments and the institution. Measurable outcomes for the evaluation of the IL activities also need to be established so as to reflect sound pedagogical practices. IL activities need to accommodate input from different areas so as to ensure the integration of IL across the curriculum. Such activities should also accommodate the students' growth in skills and understanding throughout the university years and should apply to all learners regardless the delivery system or location. It should also reflect the expected outcomes of preparing students for their academic pursuits and for effective lifelong learning.

### 2.2.2 Standard 4: Administrative and Institutional Support

Administration within an institution must identify or assign IL leadership and duties by planting IL in the institution's mission, strategic plan, policies and procedures. Funding need to be provided to establish and ensure: ongoing support for formal and informal teaching facilities and resources; appropriate staffing levels; professional development opportunities for librarians, faculty, staff and administrators; collaboration among disciplinary faculty, librarians and other program staff and among institutional units and rewards achievement and participation in the IL program within the institution's system.

### 2.2.3 Standard 5: Articulation with the Curriculum

Articulation with the curriculum so as to ensure that it is official and widely disseminated, emphasizes student-centered learning, uses local governance structures to ensure institution-wide integration into academic or vocational programs, identifies the scope (that is, depth and complexity) of competencies to be acquired on a disciplinary level as well as at the course level, sequences and integrates competencies throughout a student's academic career, rolling in sophistication and specifies programs and courses charged with implementation.

## 2.2.4 Standard 6: Collaboration

There should be collaboration among disciplinary faculty, librarians and other program staff concerned with IL program. The collaborative efforts: centre on enhanced student learning and the development of lifelong learning skills; stimulates communication within the academic community to garner support for the program; results in a fusion of information literacy concepts and disciplinary content; identifies opportunities for achieving information literacy outcomes through course content and other learning experiences and takes place at the planning stages, delivery, assessment of student learning and evaluation and refinement of the program.

## 2.2.5 Standard 7: Pedagogy

Pedagogy for an information literacy program: supports diverse approaches to teaching; incorporates appropriate information technology and other media resources; includes active and collaborative activities; encompasses critical thinking and reflection; responds to multiple learning styles; supports student-centered learning; builds on students' existing knowledge and links information literacy to ongoing coursework and real-life experiences appropriate to program and course level.

### 2.2.6 Standard 8: Staffing

Staff for an information literacy program: include librarians, disciplinary faculty, administrators, program coordinators, graphic designers, teaching /learning specialists, and others as needed; serve as role models, exemplifying and advocating information literacy and lifelong learning; are adequate in number and skill, to support the program's mission; develop experience in instruction/teaching and assessment of student learning; develop experience in curriculum development and expertise to develop, coordinate, implement, maintain and evaluate information literacy programs; employ a collaborative approach to working with others; receive and actively engage in systematic and continual professional development and training and receive regular evaluations about the quality of their contribution to the program.

## 2.2.7 Standard 9: Outreach

Outreach activities for an information literacy program: communicate a clear message defining and describing the program and its value to targeted audiences; provide targeted marketing and publicity holders, support groups and media channels; target a wide variety of groups; use a variety of outreach channels and media, both formal and informal; include participation in campus professional development training by offering or co-sponsoring workshops and programs that relate to information literacy for faculty and staff; advance information literacy by sharing information, methods and plans with peers from other institutions; and are the responsibility of all members of the institution, not simply the librarians.

## 2.2.8 Standard 10: Assessment or Evaluation

Assessment or evaluation of information literacy should be undertaken under the following areas:

#### 2.2.8.1 Program evaluation

Establishes the process of ongoing planning or improvement of the program; measures directly progress toward meeting the goals and objectives of the program; integrates with course and curriculum assessment as well as institutional evaluations and regional professional accreditation initiatives and assumes Multiple methods and purposes for assessment or evaluation.

### 2.2.8.2 Student outcomes

Acknowledges differences in learning and teaching styles by using a variety of appropriate outcome measures, such as portfolio assessment, oral defense, quizzes, essays, direct observation, anecdotal, peer and self review and experience; focuses on students' performance, knowledge acquisition and attitude appraisal; assesses both process and product and includes student, peer and self-evaluation.

Hunt and Birks (2004) asserted that all the categories stated above are the characteristics of programs of Information Literacy that illustrate Best Practices. It is with this view in mind that the researcher chose this Theoretical Framework hoping that it will shape the discussion under study.

# 2.3 Relevance of the Theory to This Study

This theoretical framework emphasizes the value of including IL courses in the university curriculum. This will ensure that the courses are formally offered in line with the university's official timetable. The students will also take the IL courses seriously because they are examined and credited.

This framework makes sure that library staff and lecturers given the mandate of conducting IL classes explore different teaching styles so as to stimulate learners to learn new IL skills in a more relaxed environment. IL teachers should use different methods to teach IL in their classes trying as much as possible to link IL to ongoing coursework and real-life experiences.

The aspects of creating awareness about the existence of IL activities need not to be forgotten as stated in category number 9. This area of theory is about the marketing of IL activities within the institution so that all the library users remain informed all the time of all the IL activities taking place in the university library.

The framework encourages institutions of higher learning to put in place the mechanisms of conducting user surveys in order to get feedback on IL activities as a way of evaluating a program. Evaluation is also critical in any institution claiming to run IL activities in the sense that feedback through the administration of user surveys communicate to stakeholders, librarians, faculty member and even the library users on what needs to be corrected to ensure that quality services are offered. The theory addresses the need for collaboration between library staff and faculty from different departments within an institution of higher learning so as to team and teach IL as a united entity.

According to Hunt and Birk (2004), there is need for administrative support to ensure that IL activities are incorporated into the curriculum. This point is well stated in category 4 of the ACRL's best practices. This kind of administrative support will also ensure that the librarians and faculty members team-teach. Librarians, however, have a task of making sure that IL is understood by administrators so as to fully support IL.

In summary, Information Literacy Competency Standards for Higher Education provides a structure for assessing the IL activities in institutions of learning. It also extends the work of the American Association of School Librarians Task Force on Information Literacy Standards, thereby providing higher education an opportunity to articulate its information literacy competencies at all levels of an individual.

#### 2.4 Information Literacy Activities

Library-use orientation is an essential activity done to equip the new learners with skills they require to effectively utilize the library's resources. According to Kavulya (2003), library orientation is mandatory and takes place in the first and second weeks when new students report to the university. Library orientation aims to make students aware of the library facilities, information resources and services available to them. It includes activities such as the distribution of informational material that describes the library system, the resources and services, introductory lectures, tours conducted by the staff and demonstrations on how to find and retrieve information using different tools such as catalogues, and journal indexes. The length of orientation session differs from one university to another. However, on average, for each group of twenty students an orientation session of thirty minutes is assigned.

The greatest advantage of providing personal instruction as part of the reference service is that skills are imparted when the learner is most motivated to use them. The reference service not only leads to the answering of specific questions but also facilitates personalized instruction in the methods of identifying and retrieving library materials. Students are given detailed instruction on how to prepare search strategies, construct bibliographies, write term papers and citation practice. Library orientation is a useful remedial measure to help the learners to know how to use specific information aids such as indexes, catalogues, bibliographies and plan and accomplish their written assignments (Kavulya, 2003).

Workshops play a significant role in ensuring that undergraduate students acquire new IL skills. According to Don and Melisa (2011), a survey conducted at Florida State University revealed that students who attended IL workshops were more confident in their searching skills after attending the workshops. Students testified that their skills were stronger after attending the workshops. The students, in other words, admitted that the workshops had a positive impact on their information skills.

Giving incentives during IL courses should be considered. Rewards will motivate the students to attend any IL-related activity. Survey conducted at Florida State University indicates that students who participated in the workshop were paid for their participation and they acknowledged that money was a strong motivator (Don & Melisa, 2011).

Another activity that can motivate students to attend these workshops in the absence of money is to attach a credit to a library course or to provide community service credit.

# 2.4.1 Modes of Delivery for Information Literacy Activities

There are various modes of delivering IL activities in academic libraries. The modes are discussed below.

### 2.4.1.1 Course Integrated Instruction

According to Young and Harmony (1999), course integrated instruction is instruction in which members outside the library are involved in the design, implementation and assessment of programme, the instruction of the programme is curriculum based in the sense that it is directly related to the students' course work and/or assignment. Students are required to participate and the students' work is graded or credit is received for participation. Because of its effectiveness in imparting IL knowledge and skills, this approach is most preferred by many authors and IL practitioners. Mackey and Jacobson (2005) further add that the implementation of IL within other main courses challenges student to gain awareness of the role and importance of information in society.

# 2.4.1.2 Non-Integrated Instruction

Unlike course integrated instruction, a non-integrated course is not an essential component of any specific course or research assignment. Though some members of academic staff may be involved in deciding the content or connecting it to particular assignments, this type of programme, according to Young and Harmony (1999), lacks two aspects: first, members of academic staff do not aggressively collaborate with

librarians in designing and providing the content and, secondly, librarians have very little involvement in the design and evaluation of research assignments.

According to Young and Harmony (1999), non-integrated instruction programmes can be delivered as either stand-alone presentations or a one-time lecture. Stand-alone programmes are scheduled and presented by librarians, independent of academic course schedules and assignments. What is taught in these programmes depends on the assessment by librarians of what may be needed by students, such as an introduction to the on-line catalogue, databases and specific resources or specialized topics. Attendance by students is also voluntary, as they do not receive assignments, grades or credit.

The one time-lecture method mainly consists of a lecture delivered in class by a librarian invited by a lecturer to come and speak on specific resources or on an information search topic that may be considered important and needed for accomplishing a particular piece of work or an assignment. This type of programme, according to Young and Harmony (1999), is considered to be inadequate for delivering IL skills because it provides limited chances to include aspects of evaluation and problem solving that are very important in IL programmes.

# 2.4.1.3 Online Tutorials

Online tutorials are instructions offered through Web interfaces. These tutorials can be used to give assignments or self-paced IL learning modules. The web is an integrated teaching tool that allows students to use the actual resource itself to learn, as well as to conduct their research (Young & Harmony, 1999). Web tutorials exist in a variety of sizes and forms. Web tutorials range from the simple to the complex and focus on issues such as online-searching, evaluating web sites, citing sources, information ethics and broader information literacy topics (Eisenberg, Lowe & Spitzer, 2004).

### 2.4.1.4 Handbooks

A handbook is a book that provides assignments and activities that users can write in and practice lessons on skills or concepts. Handbooks can be in paper form or electronic (Young & Harmony, 1999). A library handbook is a resource for both new and experienced Teacher-Librarians to spark conversation and to push toward continuous improvement in our programs and the learning of our students (Jansen, 2007). According to the California School Library Association (1997), a library handbook is intended as a useful guide for classroom teachers, library media specialists and others who wish to integrate information literacy into their curriculum. The library handbook guides the library user and enables him or her to acquire first hand information on how to easily access library information (Adeogun, 2011). The library handbook gives the learner information on how to source and utilize information. The library handbook facilitates the students' intellectual growth in information literacy by giving individualized guidelines on how to source library information (Wong, 2010).

# 2.4.1.5 Other Methods

Other useful methods that can be used to complement the above approaches and methods include signage, tours, exhibits, slides, audio tapes and videotapes. Signage, usually paper-based and posted in conspicuous areas, can be used for different purposes, including providing information, instruction and procedures for using equipment like computers, databases and printers. Signage can also be used to provide warning and directions. On the other hand, maps can be used for self-help in locating materials, service points and other important locations in a single building or in multi buildings within larger areas such as a campus (Grassian & Kaplowitz 2001).

Tours can be guided by librarians or be self-guided. Self-guided tours can be provided on paper, electronically by audiotape, CD-ROM or can be Web-based. In most cases, librarians combine the physical tour with a brief introduction to the set up of the library and instruction in the use of various resources that are available (Grassian & Kaplowitz, 2001).

Signs that are hand-lettered or computer printed, glossy photos, printed posters, enlarged sample websites and sample research papers constitute an exhibit or display that can become very useful for information users. Slides, tapes and short, instructional video programmes with live dialogue and voiceovers are also effective means of instruction to information users. A combination of images and voices are effective tools for capturing an audience's interest (Grassian & Kaplowitz, 2001).

It is important to note, in conclusion, that contemporary teaching and learning practices are now characterized by student-centered, problem-based and/or inquiry-based approaches. All these approaches have their philosophies drawn from various learning and teaching theories. What needs to be emphasized is that, in order to achieve maximum IL outcomes, the whole process of IL teaching should be considered part of contemporary learning theories because, as pointed out by Moore and Page (2002), IL exists in pedagogical terms at the confluence of resource based learning practice, constructivist and meta cognitive theories and derives from the practice of developing thinking skills through modeling and scaffolding. It is, therefore, important for educators engaged in IL (librarians inclusive) to be knowledgeable about various learning theories. This stance is clearly affirmed by Grassian and Kaplowitz (2001) in saying that:

The most effective information literacy instructors are those who are familiar with a variety of learning theories and the teaching techniques that are based on those theories. Effective instructors remain flexible and are willing to mix and match various techniques as needed.

Whitmire (2001) adds that academic librarians need to involve library users in activities such as bibliographic instruction in the classroom, the provision of library tours, demonstrations in the computer labs, lecturing to students, the use of computer programs, audiovisual materials and small group presentations. Online tutorials can also be used to offer bibliographic instructions. Such online tutorials assist undergraduate students to access library resources remotely and during hours when the library and reference desk are closed.

# **2.5 IL Effectiveness**

#### 2.5.1 Library Orientation Exercise

The library orientation exercise is the main factor that affects the sourcing and utilization of information. However, the effectiveness of library orientation is hampered by failure to come up with realistic and achievable objectives. Kavulya (2003) points out that the effectiveness of library orientation conducted in Kenyan university libraries is hampered by failure to come up with realistic and achievable objectives. For example, the limited time allocated to the lecture, demonstration and tour is inadequate to impart useful skills to new university students. Salisbury (2003) comments that time constraints forces librarians to tackle many foreign complex topics in one sitting. Students, in most cases, are not presented with opportunities for subsequent strengthening.

The timing of library orientation programs in the first and second week of students' lives in the university is poor since, at this time, students have little motivation to participate, and may not be in a position to appreciate the centrality of the library in academic life. Parang (2000) observes that, during the summer 1997, instruction librarians at Pepperdine University's Payson Library began restructuring Freshman Seminar library instruction sessions because they observed that students were not acquiring the needed library and information literacy skills. Too much material was being presented in too short a time with no opportunity for hands-on experience.

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It has been observed that the lack of computer literacy skills amongst students hinders the delivery of IL activities in university libraries especially in this era where most learning resources are available in digital formats. Kinengyere (2007) noted that limited knowledge in ICT greatly influences IL programs. It has been observed that the lack of students and staff competencies in the use of available ICT structures hinders the optimization of IL programs at UEAB, especially in this era where most learning resources are available electronically. A survey conducted by Adeyoyin (2006, as cited in Korobili & George, 2008) among staff of university libraries of West Africa to ascertain their information and communication technology (ICT) showed that that only 48.38 percent of the professionals and 15.97 percent of the paraprofessionals were ICT literate .

Kavulya (2003) reported that some new students lack basic computer operation skills and therefore cannot be able to optimally utilize the available IT infrastructure. Being unfamiliar with information technology, new university students are reluctant to use electronic resources because they are not competent in the use of ICT to source information. Kinengyere (2007) noted that the limited knowledge in ICT greatly influences IL programs.

Training the students how to use computer based technologies to source information can greatly improve the students' skill in acquiring information and utilizing it effectively. Kohrman (2003) noted that the growing use of technology in academic libraries can cause computer anxiety as well. Students come to realize that their research skills are usually outdated. Many students report that they fear losing information or break a button by hitting it wrongly and/or wreck a machine. Many library users do not have enough computer literacy skills and awareness of existing information literacy programmes (Hepworth & Wema, 2006).

# 2.5.3 Collaborative Assessment of IL

The evaluation of IL activities in order to ascertain its effectiveness is very important. Oakleaf and Leah (2011) noted that four levels exist to assess the outcomes of IL: within the library; in the classroom; on campus and beyond the campus. It is observed that the librarians, working alone, can only perform the first of these. Faculty participation is, therefore, a valuable asset in evaluating the lasting impact of IL instruction on students' knowledge, skills and abilities outside the library. Feedback from the faculty and students is needed to enable librarians refine IL instructions and meet stakeholder needs and expectations. Results from collaborative assessment can be used to reiterate the importance of IL instructions to faculty and encourage new faculty members and departments to become involved with IL creativities.

A survey conducted at the Trinity University indicated that faculty and librarians need increased time, knowledge, structures and rewards to participate in collaborative assessment of student IL skills (Oakleaf & Leah, 2011). The same results can be used to plan for future efforts to engage faculty and staff in IL assessment in institutions of higher learning, such as the University of Eastern Africa, Baraton.

# Time

Librarians who intend to include faculty in IL assessment efforts need to schedule time dedicated to the activity of meeting the faculty. Administrators have a role of making

sure that they support the process by allowing faculty to delegate a percentage of their existing responsibilities to make time for new assessment activities.

# Knowledge

The faculty needs extra understanding so that they can contribute wholly in collaborative IL assessment efforts. They need to know more about IL as a concept, assessment and major assessment tools, including rubrics. To close these knowledge gaps, librarians can engage faculty in professional development opportunities, providing readings or arranging consultant visits. Administrators can provide support and travel funding to allow faculty participates in non-local professional development opportunities.

#### **Structures**

For faculty to be completely involved in IL assessment, structure is required. Librarians should communicate the structural and curriculum connections between IL assessment and existing assessment and strategic plans for the overall institution as well as academic and student support departments and programs. Administrators can appoint both persons and groups to assist in assessment efforts. They can also provide funding for employing extra staff with assessment knowledge as well as the acquisition of assessment tools and software.

### Rewards

Prizes and motivations supplement other strategies for engaging faculty in IL efforts by communicating the value placed on assessment within the institution.

Incorporating information literacy across all curricula and programs requires the collaborative efforts of all staff, including academics, librarians and administrators (University of Sydney, 2011).

The assessment and evaluation of any teaching and learning programme is very important. Like any other teaching or learning activity, IL needs to be evaluated as a means of determining its success and facilitating continuous effectiveness. The reasons for doing evaluations of various IL activities, according to Cameron (2004), include:

- To establish a base line of students' skills around which IL might be built.

- To assess the effectiveness of particular library instruction sessions or approaches to instruction.

- To determine the impact of library instruction programmes on student IL skills and academic success.

- To generate data with which to communicate with faculty.

Despite evaluation being stressed frequently both in education and library and information science literature, a number of authors, including Young and Harmony (1999) and De Jager and Nassimbeni (2003), have registered their dissatisfaction concerning IL evaluation. Librarians were, therefore, asked to confirm the presence of system for assessing or evaluating IL activities in their libraries.

# 2.6 IL Skills

Although it cannot be stated downright that one particular IL aspect is more important than the others, it is important to provide balanced training that would enable students acquire skills in all aspects so that they can link one particular skill to another because skills are interrelated and interdependent. For instance, for students, the benefit of being information literate will be limited if they are able to search for information from the Internet, but are not able to critically evaluate the information they access. What needs to be stressed at this point is that, in order to provide students with adequate IL knowledge and skills, the coverage for IL teaching should be as wide and in depth as possible. IL courses that can be offered include:

- Information searching skills.
- Use of library facilities.
- Information evaluation.
- Use of information sources.
- Citation and references.

Burkhardt (2007) further suggested that an information literate student needed to develop skills that will enable him or her:

- 1. Understand the organization of information systems.
- 2. Recognize and articulate a research problem.
- 3. Develop appropriate and effective search strategies.
- 4. Select and use information retrieval tools.

- 5. Locate and retrieve information sources.
- 6. Analyze and critically evaluate information.
- 7. Organize and synthesize information.
- 8. Use and apply information effectively.

Knowledge about how to do things, how to communicate and how to work with other people has been regarded, since ancient times, as the most precious wealth that humans possess but the students' skills to acquire it are still low (Moeller et al., 2011). In Kenya, many students enter higher education with a very limited idea of the role of and how to access information. Young people, generally, have restricted access to reading materials due to very poorly developed school and public library systems and book collections in primary schools (Odini, 1991).

Most first year students in Kenyan Universities have been found to lack the sophisticated skills that are needed to exploit the library's research potential. Most students are stunned by the complexity and size of a large library, are reluctant to ask for assistance in the use of library and little awareness of the resources available in the university library.

Studies concerning school libraries in Africa, including those by Dike and Amucheazi (2003), reported that most libraries in Nigeria and many other African countries are poorly stocked with learning facilities and resources. The problem of insufficient information and knowledge skills is worsened by the fact that many African universities lack significant programmes geared to improve the level of information skills education

(Mgobozi & Ocholla, 2002). This situation has a detrimental outcome on the development of independent learning skills essential for successful educational development among students.

There is an increasing global recognition of the importance information literacy skills, both personally and professionally, particularly in the learning environment (University of Sydney, 2011). Tilvawala and Andrade (2009) indicate that there are a growing number of information and communications technology (ICT) initiatives in developing countries. They also add that international and regional leaders have declared information literacy (IL) a basic human right that empowers people in all walks of life to seek, evaluate, use and create information effectively to achieve their personal, social, occupation and educational goals.

The success of the twenty first century university largely depends on how much quality, timely and relevant information its academic community is able to access and utilize and how much the same community is able to generate and give back to the global information and knowledge basket (Amunga, 2011). The level of competitiveness in modern society requires increased information literacy skills for daily decision making (Gitonga, 2011).

Librarians, in collaboration with teaching faculty and IT professionals, can and must develop information literate students by teaching research and evaluation skills that go beyond the mechanical skills necessary to use computers and online databases (Pask & Saunders, 2004).

### 2.7 IL Challenges

Information literacy in developing countries is faced with many challenges. Hepworth and Wema (2006) indicate that a lack of technology and qualified staff has made it difficult to develop meaningful information literacy programs and projects that would lead towards optimal exploitation of the available information resources. Computer illiteracy among students and staff is an impediment to Information Literacy efforts in Kenya (Amunga, 2011).

# 2.7.1 IL Policy Guidelines

Information literacy guidelines in many libraries are ineffective and overtaken by the ever changing technological advancements. According to Lorenzo and Dziuban (2006), there is a great concern on libraries' information literacy policies, especially on students' information gathering, technology use and critical thinking approaches. Some library information literacy policies are outdated and therefore unable to fully foster the information literacy activities. Blackcode (2006, as cited in Grafstein, 2007) reports that, in some library information literacy procedures, it seems practically impossible to identify all possible and relevant ways of delivering information literacy activities.

Grafstein (2007) suggests that a policy should be drafted by institutions of higher learning to ensure that IL is amalgamated into campus-wide academic mandates of colleges and universities in the form of mission statements, strategic plans, syllabus templates and academic assessment measures.

# 2.7.2 Lack of Real Classes

For learning to take place effectively, there must be a curriculum accompanied by ways of evaluating the effectiveness of the curriculum. Kinengyere (2007) suggests that IL programs should be embedded in curricula to be able to give it more seriousness. Owusu-Ansah (2004), on the other hand, indicates that librarians perceived a credit course as a viable option for teaching such IL skills.

Other non-credited courses being offered by the library, for example, Online catalog searching and retrieval, Indexes and abstracts (print and electronic), internet searching and evaluation and e-mail as an information management medium, have no credits attached to them.

Owusu-Ansah (2004) indicates that librarians perceived a credit course as a viable option for teaching such skills. Davidson (2001, as cited in Kimberly, 2000) concluded that credit-bearing courses provide an important method for teaching library and research skills and a strong instructional program should provide this opportunity. Kimberley (2000) reports that the availability of a credit course demonstrates the campus commitment to information literacy and can change the way students perceive the library.

Burkhardt (2007) illustrates the need for credit courses in institutions of Higher Education by using the example of University of Rhode Island (URI) whose library faculty task force, in 1988, began crafting a comprehensive plan for information literacy for the university. In addition to traditional bibliographic instruction sessions and the creation of guides and tutorials, a needs assessment indicated that students wanted or needed in-depth instruction that would allow them to learn how to create a research question, identify and use the appropriate tools for finding information, evaluate and select information and apply the selected information to their original question. To address these needs in the comprehensive plan, several methods of instruction were envisioned. One of these methods was to offer one or more for-credit classes in which students could get in-depth instruction in the skills and concepts of information literacy.

#### 2.7.3 Collaboration Between Faculty and Librarians

Collaboration between faculty and librarians is a key factor in achieving the objectives of information literacy activities. Korobili and George (2008) argues that librarians should have the responsibility to teach information literacy skills and that cooperation with faculty will probably give better results.

They further state that, for sound collaboration to take place, the following should be borne in mind:

- Improved communication between faculty and librarians by appointing faculty representatives working with librarians who have similar subject backgrounds.
- Team-taught courses with librarians and faculty being accepted and supported.

Warnken (2004) asserted that library administrators must also garner support and develop collaborative partnerships for such programs with academic administration at all levels. They must ensure that librarians participate in every campus initiative that involves educational reform. They must provide librarians with opportunities to work with others in designing curricula that integrate the research process with information retrieval tools.

They must continue to be articulate and act as strong advocates for the central role the library is assuming in the educational process.

Oakleaf (2011) suggests that the responsibility of teaching IL rests on both librarians and faculty members. For the success of IL instructions, the two parties must team up together since they both teach students complimentary skills and concepts. Librarians are experts in information retrieval, new technology and electronic information resources. Faculty members provide disciplinary context for IL instruction therefore contributing to student motivation to learn since such IL skills are presented within disciplinary contexts. Collaborative efforts are hampered by failure by faculty members to team up with the librarians because they do not recognize the importance of teaching IL. They also believe that IL is something students already know, something they will "pick up" or something they cannot be taught. If faculty members, by any chance, recognize the importance of teaching IL, they may not make time to integrate it into their courses. Some faculty members perceive librarians as support staff occupying a lower status. The librarians according to such faculty members are not meant to have a teaching role. This perception greatly hinders collaboration. Wallace (1999) explains that there is a concern about insufficient time given to the discipline content to be covered in curricula, as well as low levels of confidence among teaching staff regarding their ability to move up the learning curve on new technologies. He further noted that the challenges to a curriculumintegrated approach exist and include academic staff resistance to teaching the particular skills and knowledge within discipline specific subjects. On the same note, Stevens (2006) indicated that librarians' negative attitudes towards the teaching staff may also undermine the development of collaborative IL initiatives. One way of enhancing the

collaboration between librarians and teaching staff is by integrating IL programs into UEAB curriculum. For example, effective teaching at the university can be achieved by incorporating discipline specific IL programs such as online database searching with that of the Faculty on Searching and Retrieval.

Stevens (2006) further postulates that targeting those instructors who teach first-year experience writing and research courses provides an essential link to a quality information literacy program for lower division undergraduates. The opportunity to collaborate with faculty coordinators provides a unique connectivity among the library's information literacy initiatives, teaching faculty and a targeted student population. He further argues that one of the goals of our Library Instruction Program is to tailor instruction to each class so that students learn new information elements each time they visit the library for instruction. This is especially important when targeting freshmen groups because if they see little or no value in their library instruction classes at this lower level, they will expect little value as upper-division students.

### 2.7.4 Internet Savvy Students

Modern day students claim to know a lot of information that is available online and need not to waste precious time going to the library to be taught on how to access electronic resources. This presents a challenge to the librarians as well as faculty members because the students are reluctant to learn. Bennett (2007) supported this observation when he noted that librarians face a challenge of internet savvy students whose ease of electronic resources is not matched with the critical judgment about the credibility of those resources and whose understanding of research has often been shaped by technical expertise rather than critical questions.

# 2.8 Summary

The literature reviewed indicated that there is increasing global recognition of the importance information literacy skills, both personally and professionally, particularly in the learning environment. The success of any learning institution largely depends on how much quality, timely and relevant information its academic community is able to access and utilize and how much the same community contribute back into the global information and knowledge basket. ICT on the other hand has brought many advantages and disadvantages at the same time. There is need to train information users on emerging issues related to technology to enable them accomplish tasks that require them to use modern technology for example the use of Moodle in an e-learning environment. The literature reviewed also indicated that there is need for sound collaborative efforts between librarians and faculty members in offering IL courses in academic institutions of higher learning.

### **CHAPTER THREE**

# **RESEARCH METHODOLOGY**

# **3.1 Introduction**

This chapter describes the research design that was adopted in the study, rationale for methodology, study population, sample and sampling techniques, data collection instruments, validity of the research instruments, reliability, data collection procedure, data analysis and ethical considerations.

### **3.2 Research Design**

This study applied qualitative and quantitative research strategies. These strategies helped the researcher to collect data from a large population and obtain in-depth information. A case study approach, using a descriptive research design, was employed in this study. "A descriptive research is a type of study which mainly uses questionnaires and interviews in order to determine the opinions, attitudes, references and perceptions of persons of interests to the researcher" (Gay, Mill & Airasian, 2006, pp. 10). According to Oso and Onen (2005), a case study is an intensive, descriptive and holistic analysis of a single entity. Yin (1994) also states that case studies are preferred when the focus is on a contemporary phenomenon within some real life context. In this context the nature of the phenomena studied and the researcher who is currently attached to an academic library justified the case study as one of the most suitable way by which the research was conducted.

This type of research design was chosen because it helped the researcher: establish Information Literacy activities currently being conducted at the UEAB library; assess the effectiveness of IL activities at the UEAB library; determine skills needed by both the library staff and users to enhance Information Literacy at the UEAB and identify challenges being faced in the delivery of IL at the UEAB library. This study sought to thoroughly investigate a single entity in order to gain insight into larger cases. It sought to describe and explain rather than to predict. The researcher studied smaller samples and performed in-depth analysis.

### 3.2.1 Rationale for Research Design

This study used both quantitative and qualitative research methods. A questionnaire was used to collect quantitative data while face-to-face interviews and focus group interviews were used to collect qualitative data. The use of the questionnaire helped the researcher collect data from a large population by exposing them to a set of standard questions within a relatively short period of time. The use of face-to-face interviews and a focus group interviews helped the researcher gather in-depth information from the respondents in order to back up and verify the findings obtained through the questionnaire.

### **3.3 Study Population**

This study was conducted at the University of Eastern Africa, Baraton, in Nandi North District, Nandi County, Kenya. The university draws students from over sixteen African countries and other parts of the world. The University is located on three hundred and thirty nine acres of land. It is situated at an altitude of about 2,500 metres above sea level and receives sufficient rainfall favorable for farming with the main activities being maize and dairy farming. The university also grows beans, potatoes and vegetables. The institution is served by a well-maintained earth road which joins a good tarmac road

network and an international airport. It is near Kapsabet Town, the County's headquarters, commercial and administrative centre. The institution was purposively chosen because it has a modern and well facilitated library. This study's population was comprised of all one thousand, four hundred and forty five (1,445) undergraduate students and one hundred and fifty (150) members of staff.

# 3.4 Sampling and Sample Size

Sampling is the process of selecting a number of individuals (a sample) from a population, preferably in such a way that the individuals selected represent the larger group from which they were selected (Gay, Mill and Airasian, 2006). This study used both stratified random sampling and purposive sampling techniques. The stratified random sampling method was used to select 188 respondents who participated in the study. Stratified sampling is a variant on simple random and systematic methods and is used when there are a number of distinct subgroups within each of which it is required that there is full representation (Birchall, 2009). The 13% sample was arrived at because many authors such as Kasomo (2006) indicate that a 10% sample is a minimum for descriptive studies and is considered a manageable sample within time and expense constraints as well as the easy proximity of the target population.

Table 1 shows the sample frame for the undergraduates. The researcher also used purposive sampling to select the key informants (i.e. UEAB administrators, heads of departments and library staff) for this study because it was decided that this specific sample was best suited to provide the information. Table 2 shows the sampling frame for the key informants. Purposive sampling is used for validation of a test or instrument with a known population, collection of exploratory data from an unusual population and it is

used in qualitative studies to study the lived experience of a specific population (Zina, 2004).

Gay, Mills and Airasian (2006) add that purposive sampling refers a process of selecting a sample believed to be representative of a given population. That is, the researcher selects the sample using his experience and knowledge of the group to be sampled. For example, if a researcher plans to study exceptional high schools, he can choose schools to study based on his knowledge of exceptional schools. Prior experience leads the researcher to select exceptional high schools that meet certain criteria, such as high school proportion of students going to four-year colleges, a large number of Advanced Placement students, extensive computer facilities and a high proportion of teachers with advanced degrees.

Category		Number	% Sample
Students	1 <sup>st</sup> years	400	52
(undergraduates)	2 <sup>nd</sup> years	385	50
	3 <sup>rd</sup> years	360	47
	4 <sup>th</sup> years	300	39
Total		1445	188

 Table 1: Sample Frame for Undergraduate Students

Category		Number	Purposive sample
		<i>.</i>	2
Key informants	Administrators	6	2
	Selected Heads of departments	10	2
	Library staff	11	2
	Liotaly staff	11	2
Total		27	6

# **Table 2: Sample Frame for Key Informants**

# 3.4.1 Justification of the Sample Size

The key informants were purposively sampled since they were few in numbers and were all directly or indirectly involved in offering IL courses. Creswell (2008) asserted that the information usually given by the key informants gives the study the right focus.

# **3.5 Data Collection Instruments**

Data collection is used to refer to the process of collecting and preparing ordinary bits and pieces of information found in the environment. They can be concrete and measurable, as in class attendance, or invisible and difficult to measure, as in feelings (Merriam, 2009).

This study used open- and close-ended questionnaire, focus group discussions and an interview schedule to collect data. From the sample of 190 undergraduate students who filled the questionnaires, the researcher purposively requested 24 of them to participate in a focused group discussion. This ensured that the researcher got details that were not captured by the questionnaires. The researcher also interviewed the selected UEAB key informants.

# 3.5.1 Questionnaire

A questionnaire is a written collection of questions to be answered by a selected group of research participants. Questionnaires are usually mailed or e-mailed to potential participants. A questionnaire administered in this way is relatively inexpensive and usually permits the collection of data from a much larger sample than an interview or personally-administered questionnaire. The demerits are that paper and pencil questionnaires mailed to respondents do not allow any opportunity to establish rapport with the participants and the investigator cannot explain any unclear terms. The merits usually outweigh the demerits, especially if the sample is large or geographically scattered (Gay, Mills & Airasian, 2006).

According to Bryman (2008), a self-completion questionnaire is quicker to administer, can be distributed in very large quantities and, at the same time, eliminate the interviewer effects. The researcher administered one set of questionnaire to collect data from the undergraduate students sampled from the entire population. This approach was appropriate for studying the respondents' experiences, knowledge and opinions, especially from a large population. The respondents had enough time to think through their answers at their convenient time. A semi-structured approach was employed for ease of coding while allowing the respondents to freely express their opinions.

# 3.5.2 Face-to-Face interviews

Lichtman (2010) defines interviewing as a term used to describe a group of methods that permit the researcher to engage in a dialogue or conversation with the participant(s). Although it is a conversation, it is usually coordinated and focused by the researcher. It is considered a conversation with a purpose. Several types of interviews exist: structured interviews; guided (semi-structured) interviews; in-depth interviews and casual, or unplanned, interviews.

The researcher developed and used an interview schedule to gather more information from the key informants at the university. The interview schedule helped the researcher collect data that could not be obtained through the use of a questionnaire. Hussey (2003) observes that interviews are a method of collecting data from selected participants who are asked questions so as to find out their thoughts and feelings. According to Kerlinger (2000) and Hannabus (1996), interviews, if conducted properly, can yield more information than any other data collection method. Hannabus (1996) and Odini (1991) recommend the use of personal interviews because they yield a high percentage of returns as everyone can be reached and respond to this approach. They add that information from interviews is useful for fuller explanation of the phenomenon under investigation. Interview schedules give the researcher and opportunity to probe the respondents further so as to clarify issues.

### 3.5.3 Focus Group Interviewing

Focus group interviewing provides opportunities for the members of a group to interact with each other and stimulate each other's thinking. It is not desirable or necessary for the group to reach consensus in their discussion (Lichtman, 2010). Lewis (1995) is of the opinion that the group interaction may trigger thoughts and ideas among the participants that do not emerge during an individual interview.

According to Bryman (2008), a focus group is a group of individuals, usually six to eight, brought together for a more or less open-ended discussion about an issue. This qualitative research tool provides a subjective, but not statistically valid, understanding of the larger community's attitudes.

The researcher developed a purpose statement to achieve this:

To gain understanding of how undergraduate students view IL at the UEAB and explore potentials ways, if any, to encourage undergraduate students to participate more during IL trainings or activities offered at the UEAB Library.

### **3.6 Validity of the Instrument**

Validity is an indication of how sound an entity is. It applies to both the design and the methods of the research. Validity in data collection means that the findings truly represent the phenomenon measured. It is the degree to which a test measures what it is supposed to measure (Mugenda & Mugenda, 2003). The questionnaire designed to gather information from the respondents was content validated by research experts in the department of Library, Records Management and Information Studies, Moi University. The suitability of items and appropriateness of language was also determined.

#### **3.7 Reliability**

Reliability is concerned with the findings of the research and relates to the credibility of the findings (Welman, 2005). It is the extent to which an instrument produces a consistent result every time it is used. For an instrument to be reliable it must have a correlation coefficient of at least 0.5 (Mugenda & Mugenda, 2003). The researcher conducted a pilot study at The University of Eastern Africa, Baraton, on a different sample from the study population. To ensure the consistence of the result every time the research instrument was used, the first set of questionnaires was administered to ten respondents and collected

back and after two weeks, a second set was administered to the same population. The data from the pilot study was analyzed and used to determine the reliability of the instruments. A minimum Cronbach Alpha Coefficient of 0.6 and above was found to be acceptable for the study.

# **3.8 Data Collection Procedure**

The researcher obtained an introduction letter from the Department of Library, Records Management and Information Studies, Moi University. After this, he sought a research permit from the NCSTI who after going through the researcher's application forms for the research permit, granted permission and copied the same letter of permission to the UEAB Deputy Vice-Chancellor (Academics). The researcher, with the help of two research assistants, personally administered the questionnaires to the sampled population of undergraduate students. After one week, the research assistants collected the instruments to be analyzed.

#### 3.9 Data Presentation, Analysis and Interpretation

The researcher first established if the questionnaires were duly completed. The data on the questionnaires were classified and coded for analysis. The data collected by the use of questionnaires was analyzed by the use of the Statistical Package for Social Sciences (SPSS) computer program. Descriptive statistics were used to analyze the data. frequencies, percentages, means and standard deviation data analysis techniques were used to analyze the data obtained from the administered questionnaires. The mode was used to analyze the data obtained through the use of face-to-face interviews and the focus group interviews whereby the most reported variables were recorded. The results obtained were presented in form of tables and charts.

# **3.10 Dissemination of Findings**

Both hard and soft copies of the thesis will be availed at the School of Information Sciences and the Margaret Thatcher Library, Moi University, as well as the library of the University of Eastern Africa, Baraton, where they will be available to other scholars.

# **3.11 Ethical Considerations**

The informed consent of the University of Eastern Africa, Baraton, was sought before the commencement of this study. Informed consent of all respondents selected in the sample was also sought at the time they were approached to participate in the study. All data was treated in a way that protects the confidentiality and anonymity of the respondents involved in the study.

# 3.12 Summary

The chapter above discussed research methodology structure that acted as a corner stone for data collection, analysis and presentation. The ideas of this chapter were helpful in making sure that the approaches taken in the study relating to data collection, analysis and presentation adequately served the aim and objectives of this study. The procedures given by the chapter were also vital in ensuring observance to ethical concerns in the research throughout this particular study.

#### **CHAPTER FOUR**

#### DATA PRESENTATION, ANALYSIS, AND INTERPRETATION

#### 4.1 Introduction

This chapter consists of data presentation, analysis and interpretation. This study had five research objectives as listed below:

(a) To establish information literacy activities currently being conducted at the UEAB library.

(b) To assess the effectiveness of IL activities at the UEAB library.

(c) To determine skills needed by both the library staff and users to enhance information literacy at UEAB.

(d) To identify challenges being faced in the delivery of IL at UEAB library.

(e) To suggest strategies and propose a framework for effective delivery of IL at the UEAB library.

Data in this study was grouped into five sections: the first section sought to determine activities that help students to know how to access information; the second section sought to establish activities that improve information literacy skills of the students as well as the library staff; the third section analyses the effectiveness of the IL activities in place in UEAB; the fourth section investigated the challenges faced in delivery of IL courses in UEAB and, finally, to come up with the strategies that will improve IL levels among the

students in UEAB. Frequencies and percentages were used in the analysis while data obtained through interview scheduled were summarized and reported directly.

# 4.2 Demographic Information

The majority (99, 52%) of the respondents were aged between eighteen and twenty two (18-22) years of age. Thirty nine percent (73) were aged between twenty three and twenty seven (23-27) years. Nine percent (16) were aged between twenty eight and thirty two (28-32) years, zero point five percent (1) was aged between thirty three and thirty seven (33-37) years while another zero point five percent (2) were aged between thirty eight and forty-two (38-42) years while the remaining zero point five percent (1) were aged between thirty three aged between thirty eight and forty three and forty seven (43-47) years.

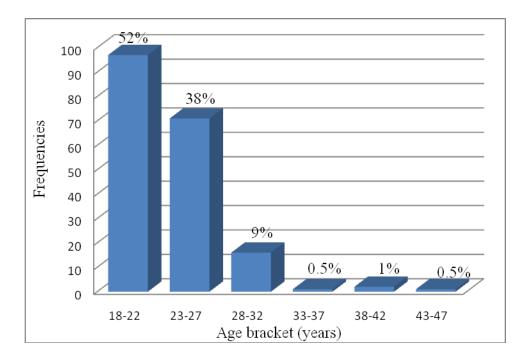


Figure 1: Age of the Respondents

The majority (101, 54%) of the respondents of the students were female while the remaining forty-seven percent (87, 46%) were males.

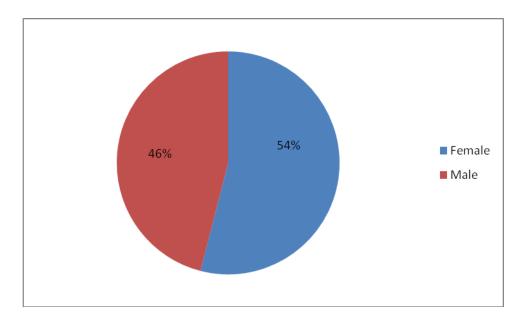
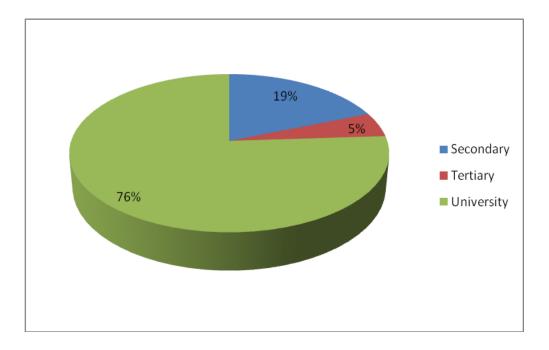


Figure 2: Gender Distribution of the Respondents

The majority of the respondents (143, 76%) were university students; eighteen percent (35, 19%) had attained secondary school education and the remaining five percent (10) had attained tertiary education.



# Figure 3: Academic Qualifications of the Respondents

The majority (188, 97%) of the respondents were students, two percent (4) were support staff and the remaining one percent (2) were administrators.

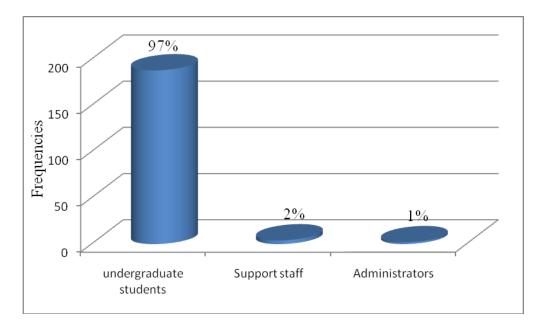


Figure 4: Professional Status of the Respondents

#### 4.3 IL Activities Currently Running at the UEAB Library

Students were asked to list activities that educated them on how to access information and the results are as shown in Table 4.5. Many of students (37%) stated distribution of library handbooks, 11 students (6%) mentioned library guided tours, 24 students (13%) stated short introductory lectures, 25 of them (13%) stated work programme in the library section, 34 students (18%) stated cyber and internet services, 11 of them (6%) stated online database research while 4 (2%) mention demonstrations on how to use OPAC and card catalogue and, lastly, 9 of them (5%) said that writing of online CVs demanded online research. Twenty three of the undergraduate respondents interviewed said that the distribution of brochures showing online databases the UEAB library subscribes to, library guided tours and library handbooks have helped them access information. The responses from the respondents emphasized the statement that handbooks could be used by students to find resources, services and other vital places within a library building.

Activity	Frequency	Percentage	Cumulative
			percentage
Distribution of library handbooks	70	37	37
Library guided tours	11	6	43
Short introductory tours	24	13	56
Work program	25	13	69
Cyber and internet services	34	18	87
Online database research	11	6	95
Demonstration on how to use OPAC	4	2	97
and Card Catalogue			
Writing of online CVs	9	5	100
Total	188	100	

Table 3: Activities That Help Students Know How To Access Information (n=188)

\*Multiple responses

The students were asked to state the skills they require and ways the university should adopt to enhance their information literacy and the findings are summarized in Table 4. The majority (120, 64%) of the students stated that a common course on information literacy be introduced in the curriculum to enable them improve their information literacy skills; 19 of them (10.0%) stated that workshops on information literacy could be organized by the university regularly; 12 respondents (6%) said that improvement in the wireless network will enable students use their own lap tops to access internet hence reducing congestion in the ORC in the library; 28 students (15%) responded that passwords for search engines be placed in the library notice board for easy access by the students while 19 students (5%) mentioned increase in the number of computers in the computer lab to improve access of computers by the students. According to Table 11 (effectiveness of IL skills), on the question on whether library orientation equip students with skill on library search, 88 (46%) disagreed and 37 (20%) agreed. Undergraduate students who failed to complete the UEAB IL training, as per Table 11, said that such trainings were handled by incompetent library staff. The need for competent professionals is supported by Candy (1993) when she stated that the technological advancements of the 21<sup>st</sup> century have resulted in information explosion both in terms of quality and quantity. This has created a challenge in the knowledge and skills that library staff and users should possess, in order to handle and use information effectively both within the academic circles and in socio-economic arenas. Similar challenge is also faced by the UEAB's library.

Activity	Frequency	Percentage	Cumulative
			percentage
Introduce additional courses on IL	120	64	63
Regular workshops on IL be held	19	10	73
Improve the wireless network	12	6	79
Passwords and usernames for search engines be placed in the library notice	28	15	94
boards			
Increase the number of computer in the	9	5	100
computer lab			
Total	188	100	

 Table 4: Activities That Improve Information Literacy Skills of the Students (n=188)

\*Multiple responses

# 4.4 Effectiveness of IL Activities at the UEAB Library

The students were asked whether they were aware of the information literacy courses offered in the university library. 110 of them (59%) were not aware of the information literacy courses offered in the university library while 78 (41%) were aware.

The students were asked if they have enrolled in literacy courses offered by the UEAB library and the results are as shown on table 5 above. Many (98, 52%) of the students had not enrolled while 90 students (48%) had enrolled in literacy courses offered by the UEAB Library.

The students were asked if they completed information literacy courses. The majority (110, 59%) did not complete the course while 78 (43%) completed the course they had enrolled.

The students were asked whether they are granted permission by the lecturers to attend information literacy courses. 141 (75%) said that they were allowed to a attend information literacy course while 47 (25%) said that they were not allowed.

The students were asked whether they were given leaflets when they attend literary training and the results are as shown in Table 9. 126 students (67%) agreed that they are given leaflets while 62 (33%) stated that they are not given leaflets during literacy trainings.

The students were also asked if they are given hands-on practice in the On-line Research Centre and the results are as shown in Table 10. 147 students (78%) agreed that they were given hands-on practice while 41 (22%) stated that they were not given hands-on practice.

The students were asked to respond to a statement that relates to their level of satisfaction on the current Information Literacy activities carried out by the UEAB library and the results are summarized in Table 11.

The students were asked to respond to questions by indicating the extent to which they agree or disagree to statements relating to delivery of information literacy activities offered in UEAB library. When asked if library orientation was adequately communicated to all students, 120 (63%) disagreed while 22 (12%) agreed. When they

were asked if the objectives of library orientation were clearly stated, 120 (63%) disagreed and 22 (12%) agreed. When they were asked if they were aware of the IL courses offered by the UEAB library, 95 (50%) disagreed while 36 (19%) agreed. When they were asked if the orientation offered during the first week to new students by the UEAB library was enough to enable students use the library's e-resources, 38 (20%) agreed while 66 (35%) disagreed. When asked if they enjoy library orientation, 96 (51%) disagreed and 41 (32%) agreed and when asked whether the library provides opportunities for further learning and utilization of library resources, 34 (71%) disagreed while 26 (14%) agreed. When asked if the library provided enough time for orientation, 75 (40%) disagreed while 32 (17%) agreed.

The students were asked if the orientation offered by the library meets the needs of the users, 78 (41%) disagreed while 33 (17%) agreed. Asked whether the instruction methods used during orientation is understandable and appropriate, 98 (52%) disagreed and 39 (20%) agreed.

Asked whether the library conducts seminars and workshops, 63 (34%) disagreed while 55 (29%) agreed. The students were also asked if the library orientation equips students with information they can use in class, 105 (56%) disagreed while 43 (23%) agreed.

The respondents among undergraduate students who failed to complete the UEAB IL training gave varied reasons ranging from boring courses, poor timing of course offerings (they were offered during the middle of the semester hence making it difficult to balance between attending real classes and attending library's IL trainings) to insufficient time allocated for such trainings. Seven undergraduate students respondents interviewed

during focus group discussions mentioned that they had taken part in the IL courses offered by the UEAB library. When prompted to explain why they had not taken part, the respondents who said that they had not taken part in such courses answered that they were not aware of the existence of such courses.

With the exception of four respondents interviewed under the category of the key informants, the other (two) key informants answered that they were not aware of information literacy courses offered at the UEAB library.

Table 11 (effectiveness of IL activities), on the statement that there is enough library staff to handle orientation exercise, shows that 85 (45%) disagreed and 42 (22%) agreed.

When asked to rate the frequency of application to class work of what was learnt in the IL training, two of the key informants who directly deal with the undergraduate students stated that the application was fairly often, an indication of ineffectiveness.

All the key informants responded that the library orientation for the new students do not equip the undergraduate students with enough knowledge to understand the library.

The key informants said that the UEAB library IL instructions were not being enhanced by the addition of web-based tutorials. According to Eisenberg, Lowe and Spitzer (2004), web-based tutorials focus on vital issues such as online-searching, evaluating web sites, referencing, ethics relating to information use and IL topics.

All the interviewed key informants responded that the UEAB library has not been conducting user needs surveys. User needs surveys help to ensure that IL is evaluated as a way of determining its success and facilitating its sustained effectiveness. One of the most important reasons for conducting user needs surveys according to Cameron (2004) is to establish the usefulness of IL activities on student IL skills and academic success.

The key informants interviewed stated that the methods used by the library to teach literacy skills included lectures and guided library tours. There is need to combine several approaches to assist students perfect their research skills, library skills and/or information literacy skills. This is supported by Thompson (2003), who posits that there is need to evaluate the extent to which those approaches are applied so as to create the desired impact to learners in the process of them acquiring the IL skills.

	Strongly Agree		Agree		Undecide d		Disagree		Strongly Disagree	
	F	%	F	%	F %		F	%	F	%
Library orientation is well	18	10	4	2	48	26	72	39	46	24
communicated to all students										
Objectives of Library	12	6	10	5	46	24	74	39	46	24
orientation are clearly stated										
I am aware of the availability of	26	14	10	5	57	30	58	31	37	20
the library information literacy										
courses										
The library orientation offered	61	32	5	3	84	45	31	16	7	4
during first week to new										
students is enough to enable										
them use library's e-resources										
I enjoy attending library	33	17	8	4	51	27	72	38	24	13
orientation										
Library always provides										
opportunities for learning										
further the utilization of library		12	4	2	28	15	93	49	41	22
resources										
The library allocates enough	28	15	4	2	81	43	61	32	14	7
time for orientation exercise										
The library orientation offered		11	11	6	78	41	61	32	17	9
at the university meet the needs										
of the users										-
The instruction methods used	26	14	13	7	51	27	81	43	17	9
during library orientation is										
appropriate and understandable				_						-
Library conducts workshops	42	22	13	7	70	37	48	25	15	8
and seminars to enable student										
use library resources										
The library orientation provide 2		12	20	1	40	21	86	45	19	10
students information they can				1						
use in class				_						6
Library orientation program	25	13	12	6	63	34	71	37	17	9
provided equip us with enough										
skill to handle library search		1 -	10	_		- 22	<b>.</b>	00	1.4	
There are enough library staff	28	15	13	7	62	33	74	39	11	6

Table 5: Effectiveness of IL Activities (n=188)

\*Multiple responses

# **4.5 Skills Required by the UEAB Library Staff and Users to Improve Delivery of IL Courses**

The students were asked if they had library facilities in high school and 151 (80%) of the students had library facilities in high school while 37 (20%) of the students did not have libraries in high school.

The students were further asked the type of information resources that were available to them in high school: 121 (64%) of the students mention text books, 42 (22%) said magazines while 25 (13%) said newspapers. 20 students, out of the 24 interviewed, stated that they accessed information in print format and hence can be assumed that they did not have competency and/or skills in computer operation and such introductory lectures serves to minimize the already existing gap of insufficient computer skills. All the twenty four students interviewed during focus groups discussions failed to state the activities put in place in their respective high schools to help them find and use information resources.

The students were asked to rate the extent to which they agree or disagree with statements relating to their proficiency in ICT, research and presentations skills. The results are summarized in Table 14.

Information	Frequency	Percentage	Cumulative percentage
Textbooks	121	64	65
Magazines	42	22	87
News papers	25	13	100
Total	188	100	

 Table 6: Information Resources Available in High School (n=188)

\*Multiple responses

On having difficulties in accessing information from the internet, 48 (26%) agreed while 46 (25%) disagreed with the statement. On the question of knowing over five search engines, 88 (47%) disagreed while 52 (27%) agreed. When asked if they sought assistance from a computer lab technician on how to access information, 106 (56%) agreed and 31 (16%) disagreed. Asked about the difficulties in accessing electronic journals from the internet, 113 (60%) disagreed while 33 (17%) agreed. When asked if they take long time to access information from the internet, 76 (40%) agreed while 68 (36%) disagreed.

On the question on whether they assisted other students access information from the internet, 134 (72%) disagreed while 29 (16%) agreed. On the question on whether they researched for other students, 86 (46%) disagreed and 55 (29%) agreed.

The students were also asked if they could troubleshoot computer network problem: 72 (38%) disagreed while 53 (28%) agreed. This was followed by the question that inquired if students copied information from the internet using a pen 80 (42%) disagreed while 45 (24%) agreed with the statement.

On the question of whether they use all the online database available in the library 51 (27%) agreed while 48 (26%) disagreed. The students were asked whether they can use Boolean operations to use the search engines so as to access electronic information, 72 (38%) disagreed while 54 (28%) agreed. The researcher sought to find out if the students were able to write term papers with a complete reference list and 70(37%) disagreed while 54 (28%) agreed.

Asked whether they know referencing styles such as APA and MLA, 82 (43%) said that they did not know while 52 (28%) admitted knowledge. When asked to comment on their competencies when using OPAC, the majority (99, 53%) said that they were not competent while 41 (22%) said they were competent.

The researcher also wanted to know if students were able to find journal articles using an online index and 87 (46%) disagreed while 48 (26%) agreed. Students were also asked if they relied on the librarian when doing research and 111 (59%) agreed while 59 (31%) disagreed. On the students' knowledge about the availability of electronic databases at the UEAB library, 85 (45%) stated that they were not aware of such a database while 60 (32%) stated that they were aware. The students were asked if they were able to present in front of a group and 86 (45%) said that they were unable and 62 (33%) said they were able.

Finally, the researcher asked students if they were able to do a presentation using power point and 98 (52%) stated that they were unable to while 34 (18%) said they were able to. Among those interviewed in the focus group, 10 out of 24 can write term papers, 10 out of 24 can use APA and MLA referencing styles, 8 out of 24 can use online indexes to

locate journal articles, 7 out of 24 can use OPAC, 18 out of 24 rely on librarians to do research, 11 out of 24 know about the existence of electronic databases, 14 out of 24 can stand in front of a group and present, 7 out of 24 said that they had taken part in the IL courses offered by the UEAB library and, finally, 8 out of 24 said that they can present using power point.

From the below results (Table 14), it can be summarized that undergraduate students struggle when confronted with ICT, research and presentation related tasks. A study done in Kenya shows that most of the universities have low ICT skills as most of them were trained in the absence of an ICT environment. A similar situation applies to many universities in developing countries, Tanzania included. This calls for ICT training for staff, structured through grouped short courses in order not to interfere with their daily activities (Lwoga et al., 2005).

The questionnaire to six key informants (2 library staff, 2 administrators and 2 lecturers) had an open-ended question on the skills required by the library staff to improve delivery of IL courses, the responses are summarized below:

- Teaching methods.
- Computer literacy and information technology skills.
- Communication skills.
- Data collection, presentation and analysis skills.
- Library use skills.

	Strongly Agree		Agree		Undecided		Disagree		Strongly disagree	
	F	%	F	%	F	%	F	%	F	%
I have difficulties in accessing information from the inter net	41	22	7	4	94	50	33	18	13	7
I Know over five internet search engines	42	22	10	5	48	26	53	28	35	19
Sometimes I request library lab assistant to show me how to get information from the inter net	75	40	31	16	51	27	19	10	12	6
I have some difficulties in locating electronic Journals from internet	23	12	10	5	42	22	84	45	29	15
I take long time to access information from the internet	38	20	38	20	44	23	47	25	21	11
Sometime I assist students access information from the internet	22	12	7	4	25	13	86	46	48	26
Sometimes I research for other students	49	26	6	3	47	25	63	34	23	12
I can trouble shoot computer network failure problem	43	23	10	5	63	34	51	27	21	11
Whenever I research I use a pen to directly copy information from the internet	26	14	19	10	63	34	57	30	23	12
I use all the existing online data bases available in the library website	40	21	11	6	89	47	35	19	13	7
I can use Boolean operators to search the search engines so as to access electronic information	42	22	12	6	62	33	51	27	21	11
I term papers including a reference list	29	15	25	13	64	34	49	26	21	11
I know how to use referencing styles such as APA and MLA	28	15	24	13	54	29	51	27	31	16
I can search for UEAB resources using the library's OPAC	25	13	16	9	48	26	63	34	36	19
I can find journal articles using an online index such as SDA Periodical index	30	16	18	10	53	28	47	25	40	21
I rely on the help of a Librarian	60	32	51	27	20	11	34	18	25	13
I know most of the Electronic databases being subscribed by the UEAB library	45	24	15	8	43	23	56	30	29	15
I can present in front of a group	19	10	43	23	40	21	55	29	31	16
I use power point in presentations	19	10	15	8	56	30	70	37	28	15

 Table 7: ICT, Research and Presentation Competencies (n=188)

All the interviewed key informants pointed out the insufficiency of competent library staff as the major impediment in the implementation of information literacy activities in the library. According to Lwehabura and Stilwell (2008), effective IL activities rely upon well-staffed libraries. The staff should be enough with appropriate levels of educational qualifications. If the library do not have enough staff, the librarians cannot fulfill their duties adequately. If the library employs staff with low academic qualifications, their range of understanding and executing various tasks will be limited as well. They also mentioned that the time allocated for the library orientation was not sufficient to cover all that was needed to be covered. Kavulya (2003) noted that most university libraries in Kenya allocated very little time to the orientation exercise and the result was that the activity was not given the seriousness it deserves.

The key informants said that there were no information literacy policy guidelines in the UEAB. The benefits of instituting an IL policy so as to run IL activities meritoriously have been emphasized by several authors such as Bruce (2002) and Kavulya (2003). Bruce (2002) noted that policies at institutional, national and international levels are vital because they direct and sustain the implementation of IL education.

It emerged from all the key informants that the UEAB library IL courses are not embedded in the UEAB curriculum hence they are not examined. Young and Harmony (1999) suggest that IL instruction courses should be curriculum based. If this was done, it would be directly related to the student's course work or assignment and the students' work would be examined and credits awarded and this ensures that students fully participates.

It was also noted from the responses of all the key informants that there was no proper collaboration between UEAB teaching staff and the library staff offering library IL courses. According to Asher (2003), collaboration between faculty and librarians was of paramount importance for effective IL development, planning and delivery of training. Collaboration ensures that ideas and expertise are shared. Collaboration enables the two professional groups to contribute their expertise and specialized knowledge to the university's curriculum (Hunt & Birks, 2004).

Through the key informants, it was also made clear that there were no official time within the university time table allocated for IL activities.

Through the key informants, it also came out clearly that the UEAB did not provide funds to run IL activities.

# 4.7 Summary

This chapter presented, analyzed and interpreted the data collected. Quantitative data was analyzed using SPSS whereas qualitative data was descriptively analyzed. Tables and figures were provided throughout the chapter to illustrate the statistical patterns of the findings following the arrangement of research questions. The next chapter presents a discussion of the findings, conclusion and recommendation to the results of the above mentioned data analysis and interpretation.

#### **CHAPTER FIVE**

#### **DISCUSSION OF FINDINGS**

#### **5.1 Introduction**

This chapter discusses the research findings. The following discussion presents each of these features. This study investigated information literacy at the university of Eastern Africa, Baraton. This objective was achieved through the examination of the information obtained by six research questions and presented in Section 5.4. Related literature was reviewed and the relevance of the ACRL theoretical framework to this study was discussed. Respondents were sampled from the UEAB as shown in Table 1 and 2, respectively. This study targeted one thousand four hundred and forty five (1445) respondents from UEAB. Questionnaires were administered to one hundred and eighty eight (188) UEAB undergraduate students while twenty four (24) focus group participants and six (6) key informants were interviewed. All the respondents participated in the study. The data on the questionnaires were classified and coded for analysis using the Statistical Package for Social Sciences (SPSS) computer program. Qualitative data was analyzed descriptively. The results obtained were presented in form of tables and charts. Recommendations have also been given based on these results and conclusions, for the provision of IL at the University of Eastern Africa, Baraton. Finally, this study suggested areas for further research.

# **5.2 Overview of Assumptions**

This study confirmed the following assumptions:

- 1. UEAB faculty members, library staff and administrators have not maximized their collaborative efforts.
- 2. The UEAB undergraduate students' information skills are indeed not sufficient and can be reduced if IL activities are well structured.
- 3. There are myriad challenges facing the delivery of IL at the UEAB library.

#### **5.3 Summary and Discussion of Research Findings**

This section summarizes the results of this study based on the research questions of the study which included:

- I. What IL activities are currently being conducted at the UEAB library?
- II. How effective are IL activities at the UEAB library?
- III. What skills are needed by both the library staff and users to enhance Information Literacy at the UEAB?
- IV. What are the challenges are being faced in the delivery of IL at the UEAB library?
- V. What strategies and IL framework can be adopted for an effective delivery of IL at the UEAB library?

The respondents pointed out some activities the librarians needed to enhance to ensure that the information literacy skills of the students were improved. Activities ranging from the introduction of additional IL courses 120 (63%), regular IL workshops 19 (10%), improvement of wireless networks 12 (6%), strategic placement of usernames and passwords 28 (15%) for online databases, to increasing the number of computers in the undergraduate online research centre were mentioned. Among the above-listed activities, most respondents mentioned that there was need for additional IL courses to be taught as summarized in Table 4. Some respondents from the focus group discussion stated that there was a need for ICT infrastructure to be enhanced.

This study found that activities such as the distribution of library handbooks with information on how to use the library effectively, library's guided tours, introductory lectures, work program, use of ORC, demonstrations on how to use OPAC and the card catalogue, cyber and internet use, online database research and writing of online CVs positively impact users in accessing and, eventually, utilizing the library's resources. Such activities existing at the UEAB library help many users get relevant and accurate information for their research. These activities available at the UEAB library go a long way in meeting the information needs of undergraduate students. The introductory lectures, especially the ones dealing with the use of bibliographic databases such as the UEAB library OPAC, helps the students, especially the ones with the poor background computer operation skills.

The focus group discussion and the findings from the questionnaires showed that library users mostly accessed only print format of information. This might be an indicator that they did not have competent skills in computer operation and in depth information searching skills and such introductory lectures during orientation serves to minimize the already existing gap of insufficient computer skills. All the twenty four students who participated in the focus group discussion failed to state the activities put in place in their respective high schools to help them find and use information resources. This further affirms the importance of the introductory lectures given to the new students on how to find information during orientation.

The activities noted above forms an important component in information access. UEAB's library needs to ensure that all its patrons benefit from high quality information access-related activities. The majority of the undergraduate respondents who participated in the focus group discussion said that the distribution of brochures showing online databases the UEAB library subscribes to helped them access information. The library handbooks and the guided library tours also played an important role and, therefore, should be enhanced. All the interviewed key informants pointed out that activities used by the library to teach literacy skills included lectures and guided library tours. This agrees with what was collected through questionnaires as well as responses from the focus group discussion.

The effectiveness of any activity is measured by the level of its impact on its beneficiaries. If the beneficiaries are not aware of the existence of an activity, the possible and obvious conclusion is that the activity is not effective. According to the respondents, as per Table 11, many (122, 64%) stated that they were not aware of the IL activities being run by the UEAB library. Very few respondents (90, 47%) have enrolled into UEAB's library IL activities. The few (52, 58%) who enrolled into such courses unfortunately failed to complete the courses.

The positive thing is that most respondents (143, 75%) stated that they were granted permission by the lecturers to attend the IL courses. The conclusion here, therefore, is that it is possible the respondents have some laxity towards the said IL courses. This assertion is further supported by the fact that that the respondents admitted that they were given leaflets during the IL training to support what they have learnt. Most of the students in the focus group discussion said that they had not taken part in IL courses offered by the UEAB library because they were not aware of the existence of such courses. This partly explains the ineffectiveness of UEAB library IL activities, especially the publicity aspect of it. Those students among the focus groups who failed to complete the UEAB IL training gave varied reasons, ranging from boring courses, poor timing of course offerings in that they were offered during the middle of the semester hence making it difficult to balance between attending real classes and attending library's IL trainings, to insufficient time allocated for such trainings. This calls for sound collaborative efforts between teachers of English 112 and the librarians. This is in line with one of the recommendations by the key informants interviewed, i.e. that librarians are in a better position to teach IL-related courses.

All the key informants interviewed responded that the UEAB library has not been conducting user needs surveys. Users needs surveys are supposed to be conducted to enable the library staff offering the IL training communicate effectively with the users. Library users are given an opportunity to evaluate the services given to them. If the services offered to them do not meet their expectations, they are allowed to give feedback to the concerned people by stating areas that need to be improved. User needs surveys are very critical to any organization that needs to offer the best to its users. With the exception of four respondents interviewed under the category of the key informants, the other two key informants answered that they were not aware of information literacy courses offered at the UEAB library. This is a clear indication that only those closer to the library, in this case, the two librarians and the two lecturers who normally bring the students to the library for English 112 course were aware of what was being offered at the library. This indicates that there is publicity of course offerings at the UEAB library and therefore IL related activities were effective.

When asked to rate the frequency of application to class work of what was learnt in the IL training, two of the key informants who directly deal with the undergraduate mentioned that the application was fairly often. This means that the IL trainings are relevant and should be continued.

All the key informants affirmed that the library orientation for the new students did not equip the undergraduate students with enough knowledge to understand the library. It is, therefore, very important to revise the way the library orientation is structured so as to impart enough knowledge to students.

All the key informants stated that the UEAB library IL instructions were not being enhanced by the addition of web-based tutorials. The implication here is that learning was not reinforced and this goes a long way to explain why some of the undergraduate respondents labeled library's IL trainings "boring". From the results (Table 14), it can be summarized that undergraduate students struggled when confronted with ICT, research and presentation-related tasks. Studies done in Kenya have shown that most of the universities have low ICT skills as most of them were trained in the absence of an ICT environment. A similar situation applies to many universities in developing countries, Tanzania included. This calls for ICT training for staff, structured through grouped short courses in order not to interfere with their daily activities (Lwoga et al., 2005).

From the data derived from Table 14, it is clear that undergraduate students do not have adequate basic and advanced research skills. This is further backed up by the data obtained by the researcher from those interviewed during focus group discussions that revealed that most of those interviewed do not have adequate ICT, research and presentation skills. For example, 20 students out of 24 interviewed pointed out that they accessed print format of information an indication that they lacked competent skills in computer operation. Therefore, the introductory lectures serve to minimize the already existing gap of insufficient computer skills.

The questionnaire to the six key informants (2 library staff, 2 administrators and 2 lecturers) had an open-ended question on the skills required by the library staff to improve delivery of IL courses. They commended that some library staff do not have sufficient ICT skills, inadequate basic and advanced research skills, do not have adequate training. Finally, they stated that leadership and teaching skills among them were noticeable.

Fowler (2003) emphasized that the contributions raised by the key informants by commenting that, in order to implement IL activities, there must be ways for librarians to learn teaching, management and leadership skills. The skills can be acquired while the librarians are earning their professional degree. All the above skills are pivotal to the successful development and delivery of IL program. At UEAB, there is need for librarians to prepare themselves well. More important is the fact that power will largely rest with librarians that poses multiple skills based on technology applications. Librarians will be expected to provide leadership in computer application, internet capabilities and CD-ROM applications among others. This, therefore, means that the librarians in the new digital era should be more knowledgeable, forward looking, creative, productive, more focused and competitive.

Librarians should tactfully engage in activities that will raise their status and profile within the university. They must strategically showcase their skills and knowledge through activities such as presenting papers at conferences, co-authoring articles with faculty members or by organizing a library week on campus where they can share their knowledge and library facilities. Such activities may help improve their low profile and help change the university's low perception of librarians. The librarians need to market themselves, as well as their library. Ultimately, librarians have to bear in mind that "real change comes from within." IL is very specific in terms of its demands and, therefore, its leadership must be entrusted to a specific librarian.

This study's findings confirmed that respondents faced difficulties in accessing information from the internet and this can be attributed to the poor computer literacy

skills. Most of the respondents only accessed print versions of learning resources at the high school as shown in Table 13.

The findings from the focus group discussion showed that the undergraduate students were not given enough time to grasp what they were supposed to learn during orientation in that topics were rushed over and in most cases those offering the library guided tours were incompetent student workers employed by the library department under student work program.

All the interviewed key informants stated that the lack of competent library staff as the major impediment in the implementation of information literacy activities in the library. They also mentioned that the time allocated for the library orientation was not sufficient to cover all that was needed to be covered. This is true because, in most cases, the library is allocated only about one to two hours during the first one week when new students join the university. This is the time the new students are expected to know almost everything about the library.

The key informants said that there were no information literacy policy guidelines in the UEAB. The respondents, however, registered a very strong indication that policy guidelines must be drawn by the University of Eastern Africa, Baraton, to enable streamline the UEAB's library IL activities.

It emerged from all the key informants that the UEAB library IL courses are not embedded in the UEAB curriculum hence they are not examined. If these courses are to be given the seriousness they deserve, then they must be embedded in the university's curriculum and be examined to avoid students giving such courses a casual treatment though they are very important. The key informants said that there is need to set up a committee to ensure that the IL courses are embedded in the curriculum. Deborah (2009) supported this idea by indicating that the faculty should lead by example by embedding IL elements in classes for which they have primary responsibility.

It was also noted from the responses of all the key informants that there is no proper collaboration between UEAB teaching staff and the library staff offering library IL courses. The key informants emphasized the idea that there is need for a proper collaboration and such collaborations can be easily achieved by inviting the librarians to actively participate in the process of designing of the university bulletin where they will have an opportunity to suggest IL courses to be included in the university bulletin.

Through the key informants, it was also made clear that there was no official time within the university time table allocated for IL activities. This shows that the UEAB's administration appears not to value IL activities.

Through the key informants, it came out clearly that the UEAB does not provide funds to run IL activities. This is a big challenge since there is need to fund IL activities to ensure that its impact is felt. Proper marketing has to be done and this can be achieved by providing funds to make posters, brochures and any other activity related to publicity.

The findings from the undergraduate respondents and the key informants gave the following strategies that can be used for an effective delivery of IL at the UEAB library:

• UEAB IL trainings to be conducted at the beginning of every semester.

- UEAB IL trainings should be lively. This can be achieved by including audiovisual and web-based tutorials on the library's website.
- Teachers teaching English 112 should collaborate with the librarians during their lessons at the library.
- Increase time allocated for the library orientation.
- Use competent library staff to run library orientation as well as IL trainings.
- Policy guidelines governing the UEAB library IL related activities to be drawn.
- UEAB IL trainings to be embedded in the UEAB curriculum and be made examinable.
- UEAB to fund UEAB Library IL related activities.
- Current awareness on the existing IL activities to be enhanced so as to increase the students who can attend.
- Regular user needs surveys to be conducted.

The library handbooks, library's guided tours, introductory lectures, work program, use of ORC, demonstrations on how to use OPAC and the card catalogue, cyber and internet use, online database research and writing of online CVs positively impact users in accessing and eventually utilizing library's resources. There is need for additional IL courses to be taught. The library users might have demonstrated laxity towards the said IL courses since 75% of them stated that their lecturers granted them permission to attend IL courses yet quite a number failed to complete the trainings. The publicity of course offerings at the UEAB library is inadequate hence IL-related activities ineffective. The IL trainings at UEAB are relevant and should be continued. The UEAB library IL

instructions were not being enhanced by the addition of web-based tutorials. This is in line with the fact that inadequate marketing through current awareness affects IL and the exploitation of several information resources for which the institution's libraries subscribe to as well (Buschman & Warner, 2005; Kiondo, 2004).

## **CHAPTER SIX**

### CONCLUSIONS AND RECOMMENDATIONS

## **6.1 Introduction**

This chapter discusses the research conclusions and recommendations. The following discussion presents each of these features.

#### **6.2** Conclusion

Conclusions below were drawn from the study qualified by the key data from the study's findings.

This study's findings revealed that the UEAB's library has a number of IL-related activities currently running. Distribution of the library handbooks as well as introduction of additional courses on IL was stated by the majority of the students as one of the activities that assisted them to access information.

From these findings, it can be concluded that distribution of library handbooks plays a big role in assisting users to access library information and, therefore, the library management needs to increase the production of such literature. It can also be concluded that UEAB library management need to ensure that additional courses on IL are introduced in the curriculum to enable them improve their information skills.

This study's findings revealed that a good number of students were not aware of the library's IL courses offered in the university library. They had also not enrolled themselves for the IL courses available at the UEAB library, did not complete IL course, were not clearly informed about the objectives of the library orientation and were not given enough time during the library orientation. They learners were also not given

opportunities to learn further how to utilize the library's resources when they are not in the library.

From these findings, it can be concluded that the library staff should market the IL courses, encourage students to enroll and complete the IL-related courses offered at the library, increase the time for orientation and clearly states the objectives of orientation. The librarians should also provide follow up sessions after the first orientation exercise, and apply the knowledge taught to students during orientation to real class experiences.

This study exposed that both library users and staff do not have sufficient basic ICT, research and presentation skills to enable them benefit from the world of information. From these findings, it can be concluded that the UEAB library's management needed to constantly hold workshops and seminars for both library staff and users on issues related to ICT, especially, on areas such as online information retrieval. Library staff should also be encouraged to attend international conferences where emerging issues in the field of library and information science are discussed.

This study revealed that the UEAB library lack adequate and skilled library staff to deliver quality IL activities. Other IL challenges that came up through this study includes: limited time allocated for the important library orientation exercise; unavailability of IL policy guidelines to govern the delivery of IL activities; failure to embed IL courses into the formal university curriculum; limited enhanced collaboration between faculty members and librarians; inadequate IL user surveys; inadequate funding to facilitate IL related activities such as running frequent workshops and, finally, the printing of enough library handbooks and aggressive marketing materials.

The conclusion arising from the findings stated above is that the UEAB library's management with the support from the university's administrators should make sure that information literacy activities challenges are minimized by all means.

Findings from this study reveal that the following strategies need to be adopted by the UEAB library in an attempt to streamline the existing IL activities and taking such activities a step higher.

There is also a need to embrace open source virtual learning software platforms, such as Moodle, to market and ensure enhanced delivery of IL activities.

Peer teaching. Librarians need to identify some students and train them so as to teach other students the basic IL concepts.

Collaborative teaching with other universities within and outside the country can also be explored when handling IL issues.

The UEAB's library staff, in collaboration with the faculty, should develop an IL curriculum with clearly stated objectives that will ensure that IL courses are embedded into the university timetable. Their objectives should reflect the mission of the university and the university library. IL courses will, in turn, be taught, examined and credited.

Aggressive marketing should also be done by making use of available technologies. Social media accounts, such as twitter, Facebook, LinkedIn and blogs should be set and, consequently, used to market IL-related activities. The UEAB library's staff, administrators and members of the faculty should develop a policy that would seek to ensure that all IL activities taking place are recognized and offered just like other courses taught at the university.

## **6.3 Recommendations**

From the findings of this study, and the conclusions drawn from them, the following recommendations were made.

#### 6.3.1 IL Curriculum to be Developed

The library's staff, alongside the faculty's members, should seek to increase and embed the IL courses into the curriculum. The IL courses need to be embedded in the university's curriculum to give them the seriousness it deserves. All IL activities need to be offered in a structured way. The faculty should co-operate with librarians in designing IL courses. The curriculum should also be designed in such a way that enough time is allocated for library orientation which is usually scheduled at the beginning of every semester. Follow up sessions should also be included into the curriculum, making sure that the content of what to be taught is appropriate. Different teaching methods if possible need to be used to capture the attention of the users who stated that they failed to complete the available IL courses because they get bored. The IL courses should be designed in such a way that the users are able to apply what they learn in the library to their class work and/or assignments.

# 6.3.2 Aggressive Marketing

The marketing standards of the UEAB library's IL activities have to be developed by the library staff and promoted. The administrators will then be requested to support the

standards. Marketing is vital because the findings from this study showed that users were not aware of IL undertakings at the UEAB library. Marketing can be done through the publication of Current Awareness Bulletin and the use of social media, for instance Facebook and Moodle. Besides this, regular workshops and seminars should also be done regularly to provide users with the opportunities to be taught new topics related to information literacy. Leisner (1995) supports the spirit of marketing by observing that present-day management practices propose, very strongly, that advertising is a vital constituent of any institutional business plan.

#### 6.3.3 Establishment of Feedback Mechanism

Conducting user surveys is the only way of ascertaining the library's users' satisfaction or dissatisfaction of IL activities. The library staff should undertake regular user surveys on the library's users as a way of soliciting for their feedback, especially in ways of improving IL activities. The purpose of the evaluations of various IL activities is to establish a base line for students' skills around which IL might be built, assess the effectiveness of particular library instruction sessions or approaches to instruction, and determine the impact of library instruction programmes on student IL skills and academic success and to generate data with which to communicate with faculty.

#### 6.3.4 Library Staff Employment and Continuous Training

There is need to employ additional library staff to assist, especially during the library's orientation time. The library's staff's development should be given a priority to enable them sharpen their skills. Findings revealed that some users doubted the competencies of the library staff offering guided tours during library orientation.

#### 6.3.5 ICT Infrastructure and Skills

There should be sufficient investment in ICT infrastructure to support IL delivery. Wireless hotspots should also be given a priority to enable students with laptops use them in hotspots areas hence reducing congestion in the ORC. Research findings showed that the library's users struggle while handling ICT related tasks and this can be attributed to the poor ICT background during their High school training. It is, therefore, advisable that basic computer operation skills should be imparted to the users to assist them get the most out of the electronic databases that the UEAB library subscribes to. This will, eventually, improve the quality of research carried by the library users by avoiding overreliance on the librarians to assist them do research. Presentation skills will also be improved if basic computer skills are to be taught. The number of desktop computers, if possible, should be increased to enable the users who may not be able to purchase laptops equally benefit from the library's e-resources.

## 6.3.6 Budgetary Allocations for IL Activities

The UEAB should provide funds to run IL activities at all times. Currently, IL activities are not funded and this has a negative implication when it comes to raising money to market the IL activities by printing literature, inviting key experts, holding workshops and printing of the IL related literature for advertisement purposes.

### 6.3.7 Policy Formulation

Sound policy guidelines governing the delivery of IL activities need to be developed. The policy will streamline IL activities. The UEAB's administrators, faculty and library staff should sit together and formulate the appropriate IL policy.

#### 6.3.8 Administrative Support

For IL to succeed, the UEAB's administrators as well as other stakeholders must accord it the same commitment. Such commitment should be visible through university ILrelated activities where the administrators are invited to participate in them and even contribute to the discussions. Workshops targeting administrators should be arranged regularly and during such workshops, they are explained in depth why there is need to run IL activities in a more professional way more that before.

# 6.3.9 Proposed IL Framework

The Researcher summarized the first three Wale's IL framework to be used at the UEAB as one of the ways of promoting IL. The purpose of the framework is to outline learning objectives to be implemented at each of the mentioned levels. The framework's entry levels according to Information Literacy Framework for Wales (2011) are as tabled below:

# Table 8: Entry level 1 of Ueab Il Framework

Entry 1 recognizes progress along a continuum that ranges from the most elementary of achievements to beginning to make use of skills, knowledge, or understanding that concerns the learner's immediate environment

PILLAR	LEARNING OBJECTIVES
Identify	Define the information needed
	• Start to frame simple questions on the topic
	• Begin to understand that some things are 'fact'
	Brainstorm information already known
Scope	Become aware that information exists in a variety of forms
	• Identify common sources of information that can be accessed orally
Plan	Identify the key words to locate in written sources
	• Choose from given options where to find information and ideas
	• Identify where specific information may be found
	• Frame simple questions for obtaining information
	• Identify, in response to questions, some basic success criteria for
	what is going to be done
Gather	Use questions to obtain information orally
	• Identify key information from simple texts
	• Listen and respond to others in familiar contexts, asking questions
	to obtain simple specific information
Evaluate	Check that the information found is what was required
	• Begin to link outcomes to success criteria
Manage	Be able to make a decision using information obtained
Present	Become aware that ICT can be used to communicate ideas
	Present information found
	• Use information for a specific purpose

# Table 9: Entry level 2 of Ueab Il Framework

This entry enables an individual to have the ability to make use of skills, knowledge and

understanding to execute basic, familiar tasks and activities with guidance.

PILLAR	LEARNING OBJECTIVES
Identify	Define the information needed
	• Brainstorm information already known and areas of
	interest
	• Form a variety of questions about the topic
Scope	• Identify which information can be obtained orally and which may be paper based or electronic
	• List where oral and written sources of information may
	be found
Plan	Indicate the keywords required for searching written
	information
	Select potential resources
	• Prepare questions for obtaining information orally
	• List the steps to find information required
Gather	Begin to find common sources of information
	• Recognize that some information sources can be
	accessed by using simple menus or indexes
	• Use a web browser to locate a pre-selected webpage
	• Locate a book in a pre-selected section or index
	• Use an index and table of contents
	• Decode text and begin to find simple information using
	organisational devices and available clues to deduce meaning
	• Extract information from lists, tables, simple bar charts and diagrams
	• Use simple questions to gather information orally
	• Listen to the detail of responses
Evaluate	Select relevant, and current information
	• Sort objects, using one or more criteria
	• Identify if more information is needed
Manage	• Begin to develop information and ideas, combining text and images.
	• Record information sources in a simplified format
	• Use information to make a decision
Present	• Use given ICT resources to help create, present and
	safely share their ideas, including text/word-banks and
	images

## Table 10: Entry level 3 of Ueab Il Framework

Accomplishment at entry 3 reflects the ability to make use of skills, knowledge and understanding to carry out structured tasks and activities in familiar contexts, with appropriate guidance where needed.

PILLAR	LEARNING OBJECTIVES
Identify	Define the information problem Brainstorm known
	information and areas of interest about the topic
Scope	• Form a variety of questions about the topic with support
	• Identify gaps and begin to build on existing skills,
	knowledge and understanding required for the task
	• Create a list of the information required
	• Identify general, reference, and people resources with support and guidance
Plan	Suggest how to find relevant information and ideas
	• Plan the process/method to be used
	Identify keywords most relevant for searching
Gather	• Use library catalogue to locate an item by keyword, author or title with guidance support
	• Find suitable information from given sources using simple searches, to support a range of activities
	<ul> <li>Select best potential resources that are relevant, valid and</li> </ul>
	current
	<ul> <li>Use questions to guide listening, viewing, and reading</li> </ul>
Evaluate	Link outcomes to success criteria
	<ul> <li>Look for trends, inconsistencies, or missing information</li> <li>Select relevant, understandable, current, and objective information with support</li> </ul>
Manage	Choose data from given information presented in a variety of numerical and graphical ways
	• Record information sources with support and guidance
	• Safely share information with others, including the use of e- mail; virtual learning environments (VLEs)
Present	Read and interpret information from graphs with support and guidance
	• Paraphrase or summarize information with support and guidance
	• Use numeric sequencing (e.g. page numbers)

#### **6.4 Areas for Further Research**

This study has established that IL has some impact on the UEAB's undergraduate students. The researcher, therefore, proposes the following studies be undertaken:

- A comparative study to be conducted in other private university and colleges in Kenya to allow for generalizations.
- ii) ICT literacy among the UEAB's undergraduate students.
- iii) A study on the technology-anchored teacher-student interaction in the process of student learning.
- iv) A study on impact of technology or learning for younger and older learners.
- v) Information seeking behavior of Undergraduate or Postgraduate students at the UEAB

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#### **APPENDICES**

#### **Appendix I: Research Authorization letter**



#### NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

P.O. Box 30623-00100

NAIROBI-KENYA Website: www.ncst.go.ke

Date: 28<sup>th</sup> February 2011

Telegrams:"SCIENCETECH", Nairobi Telephone: 254-020-241349, 2213102 254-020-310571, 2213123. Fax: 254-020-2213215, 318245, 318249 When replying please quote

Our Ref:

NCST/RRI/12/1/INF-011/09/5

Benjamin Butuk Moi University P. O. Box 3900 ELDORET

#### **RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on "*Information literacy at the University of Eastern Africa, Baraton*" I am pleased to inform you that you have been authorized to undertake research in Nandi Central District for a period ending 31<sup>st</sup> July 2011.

You are advised to report to **the Vice Chancellor, University of Eastern Africa, Baraton** before embarking on the research project.

On completion of the research, you are expected to submit **one hard copy and one soft copy** of the research report/thesis to our office.

P. N. NYAKUNDI FOR: SECRETARY/CEO

Copy to:

The Vice Chancellor University of Eastern Africa - Baraton P. O. Box 2500 – 30200 ELDORET

## **Appendix II: Research Permit**

PAGE 2	PAGE 3
THIS IS TO CERTIFY THAT: Prof./Dr./Mr./Mrs./MissBENJAMIN BUTUK	Research Permit No Date of issue 28/02/2011 Fee received SHS 1,000
of (Address)MOI_UNIVERSITY P.O. BOX 3900, ELDORET has been permitted to conduct research in Location, NANDI CENTRAL District, RIFT VALLEY Province, on the topicINFORMATION LITERACY AT. THE UNIVERSITY OF EASTERN AFRICA, BARATON. for a period ending. 31ST JULY	Applicant's         Signature

## Appendix III: Research Budget

The following are cost estimates required by the researcher to undertake the study on the proposed project.

ITEM	COST (KSH)
Stationeries	
Feelseens	1910
Foolscaps	
DVD-RW	
Flash Disc	
Pens	
Traveling Expenses	10,000
Text books	10,000
Computer, Printer, Printing papers	99,700
Supervision and consultation	
Tying final report	6000
Photocopying final report	
Binding final report	
Telephone services	11,000
Data collection analysis	
Total	138,610

## **APPROXIMATED BUDGET**

#### **Appendix IV: Introductory Letter**

Dear Respondent,

My name is Benjamin Butuk and I am a Msc student registered in the department of Library, Records Management, and Information Studies, School of Information Sciences, Moi University.

I am conducting research on Information Literacy Delivery at the University of Eastern Africa, Baraton: An Investigation of its Effectiveness. The study will be undertaken with the main objective of coming up with best strategies that can be adopted by UEAB library to improve or develop effective IL activities to assist students to gain the knowledge and skills necessary for life-long learning in the contemporary information environment.

Kindly spare a few minutes and answer all questions sincerely. The information given will be treated with full confidence.

Your assistance will be highly appreciated.

Thank you in advance.

Benjamin Butuk

IS/MSC/02/09

Moi University,

P.O. BOX 3900-30100,

Eldoret.

KENYA

#### **Appendix V: Students Questionnaire (SQ)**

#### SECTION A: BACKGROUND INFORMATION

1. Age bracket?

23-27[]	28-32 [ ]	33-37[]	38-42 [ ]
Above 47 [	]		
Female [ ]			
alifications			
Tertia	ary College [ ]	Uni	versity [ ]
	Above 47 [ Female [ ] alifications	Above 47 [ ] Female [ ]	Above 47 [ ] Female [ ] alifications

4. What is your professional status

Student [ ]	Support Staff [ ]	Lecturer [ ]
Administrator [ ]		

#### **SECTION B: IL ACTIVITIES**

5. What activities were in place to educate you on how to find and use the information resources in the school?

\_\_\_\_\_

6. Are there any activities in the university that have generally helped you to learn how to find, evaluate and use information? Yes  $\circ$  No  $\circ$ 

If yes, please, list them.

7. Has each of these activities assisted you? Yes  $\circ$  No  $\circ$ 

If no, please explain what you think the university should do to impart the necessary skills.

	<u>TION C: EFFECTIVENESS OF IL ACTIVITIES</u>
8.	Have you fully completed any information literacy training offered at the UEAE library? Yes $\circ$ No $\circ$
9.	Has each of these activities assisted you? Yes $\circ$ No $\circ$
	If no, please explain what you think the university should do to impart the necessary skills.
10	Are you given leaflets containing library information IL skills?
10	
11	Are you given leaflets containing library information IL skills?
11	<ul> <li>Are you given leaflets containing library information IL skills?</li> <li>Yes  <ul> <li>No </li> <li>Are you given opportunities to have hands- on practice in library's undergraduate Online Research Centre?</li> <li>Yes <ul> <li>No <ul> <li>Yes <ul> <li>No <ul></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul>
11 12	<ul> <li>Are you given leaflets containing library information IL skills?</li> <li>Yes O NO O</li> <li>Are you given opportunities to have hands- on practice in library's undergraduate Online Research Centre? Yes O NO O</li> <li>Are you aware of the current IL trainings being offered by the UEAB library?</li> </ul>

### Note: IL stands for Information Literacy

Section two of the questionnaire uses the following scoring framework: Tick the appropriate response according to you.

- SA = Strongly Agree
- A = Agree
- UD = Undecided
- D = Disagree

#### SD = Strongly Disagree Library orientation

No.	QUESTION	SA	A	UD	D	SD
1	Library orientation is well communication to all students					
2	Objectives of library orientation exercise are always clearly stated.					
3	I am aware of the availability of the library information literacy courses					
4	The library orientation offered during the first week to new students is enough to enable the use library internet					
5	I enjoy attending library orientation					
6	Library always provides opportunities for learning further the utilization of library resources					
7	The library allocates enough time for orientation exercise					
8	There are enough library staff to handle the orientation exercise					
10	The library orientation offered at the university meet the needs of the users					
11	Instruction method used during the library orientation is appropriate and understandable					
12	The library orientation programs provided do equip us with enough skill to handle the library search					
13	The library conduct workshops and seminars to enable students use library resources					
14	The library orientation provide students with information they can use in class					

### SECTION D: SKILLS NEEDED BY BOTH LIBRARY STAFF AND USERS

14. Did you have access to a library in high school? Yes  $\circ$  No  $\circ$ 

If yes, what information resources were available for your use?

If not, in what ways did the school avail information resources to you?

15. Who undertake IL trainings?

#### **Note: IL stands for Information Literacy**

Section two of the questionnaire uses the following scoring framework: Tick the appropriate response according to you.

\_\_\_\_\_

SA =	Strongly Agree
------	----------------

A =	Agree
-----	-------

- UD = **Undecided**
- D = Disagree
- SD = Strongly Disagree

#### ICT, RESEARCH AND PRESENTATION SKILLS

No.	QUESTION	SA	A	UD	D	SD
1	I have difficulties in accessing information from internet					
2	I know over five internet search engines I can use to do my research					
3	Sometimes I request the library internet lab assistants to show me how to get information from internet					
4	I have some difficulties in locating electronic journals from internet					
5	I take long time to access information from the internet					
6	Sometimes I assist other students to access internet					
7	Sometimes I research for other students					
8	I can trouble shoot a computer network failure problem					
10	Whenever I research, I use the pen to directly copy information from the computer					
11	I use all the existing online databases available in the library's website					
12	I can use search strategies such as Boolean operators to access information electronically					
13	I write term papers including a reference list					
14	I know how to use referencing styles such as APA and MLA					
15	I can search for UEAB resources using library's OPAC					
16	I can find journal articles using an online index such as SDA Periodicals Index					
17	I rely on the help of a librarian					
19	I can present in front of a group					
20	I use power point during presentations					

### SECTION D: CHALLENGES FACED IN THE DELIVERY OF IL

- 16. Have you ever taken part in any information literacy course offered at the UEAB library? Yes  $\circ$  No  $\circ$
- 17. Do your lecturers allow you to attend IL seminars or workshops organized by the UEAB library? Yes o No o
- 18. How many PCs are provided by the UEAB library for hands-on practice?

## **SECTION E: STRATEGIES FOR EFFECTIVE DELIVERY OF IL**

19. Please, give any other additional comments or recommendations.

#### **Appendix VI: Focus Group Discussion leading questions**

#### SECTION B: IL ACTIVITIES

1. Are there any activities in the university library that have generally helped you to learn how to find, evaluate and use information? Yes  $\circ$  No  $\circ$ 

If yes, please, explain.

### SECTION C: EFFECTIVENESS OF IL ACTIVITIES

2. Have you ever taken part in any information literacy course offered at the UEAB library? Yes  $\circ$  No  $\circ$ 

Ifno,explain\_\_\_\_\_

Have you fully completed any information literacy training offered at the UEAB library? Yes  $\circ$  No  $\circ$ 

Ifno,explain\_\_\_\_\_

3. Is the timing for the Library orientation appropriate?

If no, explain

4. Is the time allocated for library orientation enough to enable you cover all what you are expected to cover?

\_\_\_\_\_

#### SECTION D: SKILLS NEEDED BY BOTH LIBRARY STAFF AND USERS

- 5. Do you encounter difficulties in accessing information from internet?
- 6. What are some of the search engines that you can use to do research?
- 7. Can you trouble shoot computer network failure problem?
- 8. Do you know how to cut and paste while using a computer?
- 9. Do you write term papers with reference list?
- 10. Do know how to use referencing styles such as APA and MLA?
- 11. Do you comfortably search for UEAB resources using library's OPAC?
- 12. Can you find journal articles using an online index such as SDA Periodicals Index?
- 13. Do you rely on the help of a librarian?
- 14. Do you know most of the Electronic databases being subscribed by the UEAB Library?
- 15. May I know if you can comfortably present in front of a group
- 16. Do you use power point during presentations during your class presentations?
- 17. Did you have access to a library in high school? Yes  $\circ$  No  $\circ$

If yes, what information resources were available for your use?

If not, in what ways did the school avail information resources to you?

18. Do you think the staff offering IL courses at the UEAB library is competent? Yes  $\circ$  No  $\circ$ 

If no, please, explain.

19. Do you think you have sufficient skills needed to assist you find, evaluate and use information at the UEAB library? Yes  $\circ$  No  $\circ$ 

If yes, please, explain.

If no, please, explain.

SECTION D: CHALLENGES FACED IN THE DELIV	VERY OF IL
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20. What are the challenges that are being faced in the delivery of IL at the UEAB library?

\_\_\_\_\_

#### SECTION E: STRATEGIES FOR EFFECTIVE DELIVERY OF IL

21. What strategies can be adopted for an effective delivery of IL at the UEAB library?

22. Please, give any other additional comments or recommendations.

#### Appendix VII: Interview Schedule for Key Informants

#### **SECTION A**

#### **BACKGROUND INFORMATION**

1. Age bracket?

38-42 [ ] 18-22[] 23-27[] 28-32 [ ] 33-37[] 43-47 ] Above 47 [ ] 2. Gender? Male [] Female [] 3. Highest level of qualification Certificate [] Diploma [] Bachelors degree [] MA/MSc. [] PhD [ ] 4. Current position held in the university Librarian assistant [ ] assistant librarian [ ] Librarian [] Teaching staff [ ] Head of department [] Administrator [] Other [], specify \_\_\_\_\_ 5. Number of years of service in current position 6-10 [ ] above 10 [ ] 1-2[] 3-5[] **SECTION B: IL ACTIVITIES** 6. Does the library conduct user need's survey? Yes No 0 0 If yes highlight who are involved in conducting the survey?

### SECTION C: EFFECTIVENESS OF IL ACTIVITIES

3.	Which way does the library ensure the identified user needs are met?
€.	How often do you think students apply what they have learnt in the IL training their class work?
	[] <sub>1</sub> Very often [] <sub>2</sub> Often [] <sub>3</sub> Fairly often
11.	Does the library orientation program equip students with enough knowledge to understand the libraryYesNoOAre your instructions being enhanced by the addition of Web-based tutorials learning can be reinforced?YesNoOWhat is the size of your information literature instructions classes?
	$[]_1 15-20  []_2 21-30  []_3 31-40  []_4 \text{ Over } 40$
13	3. How are information literacy policy guidelines utilized to ensure that student use the library resources effectively?

	What are the post university library ca		which the Informat	ion Literacy at						
	offering library IL o	courses? Yes	UEAB teaching sta							
	library IL programs	and University teach	ning staff?							
19.	How many minutes	are allocated for eac	h of the IL course dur	ing the lectures?						
	[] about <b>2</b> 0	[] <sub>2</sub> about 30	[] <sub>3</sub> about 40	[] <sub>4</sub> Over 40						
	[] <sub>1</sub> about 20		Does the faculty create environments that challenge students to learn about a to or solve a problem using information resources students have located?							
20.	Does the faculty cre		-							
20.	Does the faculty cre		-							
20.	Does the faculty cre or solve a problem Yes o	using information res $No$ $\circ$	-	located?						
20. <u>CTI</u>	Does the faculty cre or solve a problem Yes 0 ION D: SKILLS N	using information res $No$ $\circ$	sources students have	located?						
20. <u>CTI</u>	Does the faculty cre or solve a problem Yes 0 ION D: SKILLS N	using information res No ○ EEDED BY BOTH	sources students have	located?						

23. Who do you think are in a better position to teach IL?

	<b>ION D: CHALLENGES FACED IN THE DELIVERY OF IL</b> Which problems does the library encounter in implementing the information literacy activities in the library?							
25.	Are there information literacy policy guidelines in the University of Eastern Africa, Baraton? Yes $\circ$ No $\circ$ If Yes, please explain the policies							
26.	Is there an	official t	ime allo	ated for IL withi	n the university t	ime table?		
	Yes	0	No	0				
27.	Is the unive	ersity adı	ninistrat	on providing fun	ds to run IL activ	vities?		
	Yes	0	No	0				

# SECTION E: STRATEGIES FOR EFFECTIVE DELIVERY OF IL

28. Please, give any other additional comments or recommendations.

