AN EVALUATION OF INFORMATION LITERACY INITIATIVES: A CASE STUDY OF TAITA TAVETA UNIVERSITY LIBRARY

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DECLARATION

This research project report is my original work and has not been submitted for examination to any other University.

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This research project report has been submitted for examination with our approval as the university supervisors.

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DEDICATION

This research work is dedicated to my family, parents and siblings.

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ABSTRACT

Information Literacy (IL) skills are integral in today's information society. Efforts and initiatives put in place have a great impact on how Information Literacy skills are imparted to the targeted population. The aim of this study was to evaluate Information Literacy initiatives undertaken by Taita Taveta University (TTU) Library. The study was guided by the following specific objectives: to examine existing policies and the extent they cover Information Literacy training in Taita Taveta University; establish the extent to which Information Literacy initiatives are implemented in Taita Taveta University; examine the available Information Communication and Technology in supporting Information Literacy training in Taita Taveta University; suggest effective strategies, derived from study findings for impartation of Information literacy in Taita Taveta University; and propose a framework for Information Literacy training in Taita Taveta University. The supporting theory which guided this study was the socio cognitive theory by Bandura. The study employed descriptive research design where a case study strategy was be employed. A sample size of 13 participants, comprising of 9 library staff and 4 faculty teaching staff from Taita Taveta University was used. The sample was chosen using the purposive sampling method from a target population of 79. Data from the sample was collected through the use of an interview schedule. Besides, data for this study was also collected through document analysis. The study findings concluded that policies, right Information Literacy Initiatives, resources supporting Information Literacy training, ICT infrastructure are essential for Information Literacy training. The study findings also highlighted new strategies that can be implemented in Information Literacy training in Taita Taveta University. The study also proposed a framework for Information Literacy training for TTU. The study findings will significantly help the Librarians and concerned stakeholders on the best approach in identifying appropriate initiatives for imparting Information Literacy skills to library patrons and in effect lead to quality research output and promotion of individuals' lifelong learning.

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LIST OF ABBREVIATIONS AND ACRONYMS

ACRL   Association of College and Research Libraries

ALA   American Library Association

CUE   Commission for University Education

DL   Digital Literacy

DVC-ARO   Deputy Vice Chancellor Academic Research and Outreach

ICT   Information Communication Technology

IFLA   International Federation of Library Associations

IL   Information Literacy

NACOSTI   National Commission for Science Technology and Innovation

TTU   Taita Taveta University

UNESCO   United Nations Educational, Scientific and Cultural Organization

CHAPTER ONE: INTRODUCTION

1.0 Introduction

The American Library Association (ALA, 2000), defines Information Literacy (IL) as a set of abilities requiring individuals to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information". IL is inevitable in today's environment of dynamic technology and explosion of information. The set of attributes acquired through IL training are integral in today's information society. University students learn from printed and a variety of electronic media and platforms. This requires them to have IL attributes for purposes of formal education, everyday living and lifelong learning (Amarakoon, 2013). IL empowers students' independency and full control over their studies and learning. Besides it also assists students to extend their investigations further from what they actually intended to achieve.

The impact of IL in any institution of higher learning would largely depend on the initiatives undertaken by those institutions. One of the best initiatives is to incorporate IL into the curriculum (Debose et al, 2017). The implementation into the curriculum should be mandatory and Librarians and faculty members should collaborate (Amunga, 2011). Student's success largely depends on their ability to identify relevant information and use it in an ethical manner. This can only be realized if IL is effectively being taught. One of the key indicators to students success is Information Literacy (Kuh,Kinzie, Buckley , Bridges, and Hayek ,2006).

Initiatives undertaken by individual universities greatly determine the success or failure of the programme and in effect the success or failure of students. IL in Kenya is largely being practiced although not comprehensively. Most Universities in Kenya prefer orientation as the mode of training on IL (Kavulya, 2003; Kingori and Njiraine, 2014). There is thus need for relevant stakeholders to be proactive and identify the best initiatives in ensuring that IL realizes its intended objectives. The lack of synergy between Librarians and faculty members has led to ineffective initiatives of imparting IL education in institutions of higher learning (Amunga, 2012). IL effectiveness varies and largely depends on the program, faculty member's relationship with Librarians, and perception of the value of teaching IL. It also takes a great interest from the

stakeholders for IL to be a success (Adams et al, 2018). There is thus need for cooperation between faculty members and Librarians. Besides, there is need for students to be properly sensitized on the need for IL for lifelong learning.

1.1 Background information

Information Literacy is considered a core educational goal "Common to all disciplines, to all learning environments and to all levels of education" (ACRL, 2000). Generally, it is agreed that IL evolved towards the end of the nineteenth century. However, there is evidence of library instruction being given in the seventeenth century by German Universities in the form of library usage, study techniques and reference books lectures (Salony, 1995; Virkus and Metsar, 2004). However, IL debates have intensified in the recent past (UNESCO, 2003, 2005, 2006).

Research articles on IL in institutions of higher learning in South Africa (SA) have been published. However, the implementation of IL in SA differs from one institution to another. Some Universities offer them as stand-alone while others integrated them with course modules (Jiyane and Onyancha, 2010). However, most SA institutions conduct IL training when there is need, where Librarians organize for training in between lecture periods with the concerned lecturers. IL programmes are usually not accommodated in the institutional timetables (Jiyane and Onyancha, 2010).

In Kenya, Information Literacy is practiced, although not comprehensively. Research on Information Literacy in Kenya concluded that most Universities in Kenya prefer orientation as the mode of training IL. However there were also concerns that the contact time with the students is not enough and that not all students usually attend the sessions. In an effort to ensure Information Literacy initiatives are effective, the government of Kenya through the Commission of University Education (CUE) developed some guidelines in the year 2014 touching on IL and how best to achieve its objectives.

Some of the challenges faced in proper implementation of IL programmes in institutions of higher learning include inadequate collaboration between Librarians and faculty members, and limited contact time with the students (Kavulya, 2003). Inadequate staff capacity, inadequate funding and lack of Information Literacy policies were also cited as some of the challenges in training IL in Kenya (Kingori & Njiraine, 2016).

According to Turner (2017) one of the effective ways of teaching IL is engaging Librarians who are more knowledgeable on the subject as opposed to faculty members. This presents an opportunity for Librarians to be involved in teaching IL to students in lecture halls provided that the available guidelines are followed. However, several other initiatives for imparting IL exist as will be discussed later in the study.

Taita Taveta University (TTU) was accredited the University status in Kenya in the year 2016. Before accreditation the University was a constituent college of Jomo Kenyatta University of Agriculture and Technology (JKUAT). The current student population stands at more than 2000, while that of library staff is 13. The University Library has a collection of 9000 volumes and has also subscribed to online electronic resources available via the University website. Through the Electronic resources the University population can access more than 35,000 electronic journals and more than 50,000 Electronic books. The Library is also the custodian of an institutional repository, which showcases scholarly output from members of the University community (https://www.ttu.ac.ke/). For proper access and exploitation of available information resources, proper Information Literacy initiatives need to be established. Like other Universities in Kenya, it was assumed that Information Literacy initiatives are being undertaken in the University. This is due to the fact that the University was being mentored by JKUAT as the mother University. However, the specific initiatives undertaken by TTU Library was the main focus of this study. Besides the study findings also suggest some of the effective initiatives for proper support and impartation of IL skills to Student and the University population at large.

1.2 Statement of the problem

Information Literacy level in Kenyan Universities is relatively low. A study by Mathangani and Irura (2005), on University of Nairobi students in Kenya, observed that students' examinations and term papers showed a lack of multiplicity in variation of thoughts. The authors went ahead to postulate that the findings were an indication of student's dependency on class notes and inadequate independent studies to build on what is availed by lecturers. This might be caused by the approaches and initiatives undertaken by the University besides existing policies. However,

the study did not include students in TTU which by then was not yet established. The study sought to find out whether the above phenomenon is reflected in TTU.

IL in Kenyan Universities is mostly taught as a topic in an examinable communication skills course in almost all Universities and through students' orientation (Kavulya, 2003; Kingori and Njiraine, 2016). Student emphasis is therefore shifted from the real purpose of IL to basically that of passing an examination. The studies conducted by the authors did not include TTU which might be using other approaches to impart Information Literacy skills to the University community given the fact that the University is newly established.

Information Literacy initiatives in Kenya are ineffective. The ineffectiveness of the initiatives undertaken and available technology has led to libraries reengineering their approach towards delivery of Information Literacy programmes. Platforms such as use of social media, use of live chats, besides smart boards and projectors are some of the effective ways to deliver Information Literacy skills (Musangi et al, 2019). TTU has established physical and technological infrastructure. This is one of the requirements from CUE for a University to be operational in Kenya. However, it is not known if the University Library has initiated any mechanisms to fully exploit the infrastructure with regards to teaching IL skills.

Amunga, (2012) suggested that one of the effective ways of imparting IL skills to patrons is mandatory integration of IL into the curriculum and collaboration between the Librarians and faculty members. The study sought to establish the extent to which IL is integrated in the curriculum; and collaboration between Librarians and teaching staff.

1.3 Aim of the study

The aim of the study was to evaluate Information Literacy initiatives undertaken by Taita Taveta University Library.

1.4 Objectives of the study

i. Examine existing policies and the extent they cover Information Literacy training in Taita Taveta University.
ii. Establish the extent to which Information Literacy initiatives are implemented in Taita Taveta University.
iii. Examine the available Information Communication and Technology supporting Information Literacy training in Taita Taveta University.
iv. Suggest effective strategies derived from study findings, for impartation of Information Literacy Skills in Taita Taveta University.
v. Propose a framework for Information Literacy training in Taita Taveta University.

1.5 Research questions

i. How do existing policies affect Information Literacy training?
ii. Which Information Literacy training initiatives are being applied by Taita Taveta University?
iii. How is Information Communication Technology being applied to impart Information Literacy skills in Taita Taveta University?
iv. Which are some of the strategies which might be effective in training Information Literacy Skills in Taita Taveta University?

1.6 Significance of the study

Information Literacy is integral in today's world of information explosion. From the works cited in this document, there is proof that Information Literacy is being taught in institutions of higher learning in Kenya. In spite of commission of University Education (CUE, 2014) in Kenya propagating for embedding of IL in the curriculum, and teaching conducted by Librarians, very little has been done on the same.

The study aimed at evaluating and identifying the best initiatives to be applied in teaching IL skills in institutions of higher learning in Kenya, with special focus on TTU. The study also highlighted the enablers to effective Information Literacy training among them financial support and library staff capacity building. The study findings will promote maximum utilization of library information resources by patrons. This is because effective IL training requirements are suggested and once implemented will instill confidence towards use of library resources. The effectiveness of IL skills initiatives will also promote lifelong learning to individuals which enhances personal development and self-sustainability besides self-motivation towards pursuit of knowledge.

1.7 Assumptions of the study

It was assumed that:

   i.   Current IL programme initiatives were not effective.
   ii.   University libraries were underutilized due to low level of Information Literacy.
   iii. Libraries in universities have enough members of staff who can teach Information Literacy.
   iv.   There were few or no universities with Information Literacy embedded in the curriculum.

1.8 Scope of the study

The case study was conducted at Taita Taveta University. The study mainly concentrated on library and faculty teaching staff who are expected to train Information Literacy skills in a University setup.

1.9 Limitations of the study

Limitations to the study arose as some of the respondents were biased towards the topic. Even though respondents scheduled to be interviewed were available, it was a challenge finding time with them due to their busy schedule. Research questions were also interpreted differently depending on respondent's comprehension ability. Finding the responsible personnel for availing

of the documents needed for document review was difficult as they were reluctant to avail the documents.

1.10 Operational Terms and Concepts

Information: knowledge obtained from study, investigation or instruction.

Information Literacy: the adoption of appropriate information behavior to identify, through whatever channel or medium, information well fitted to information needs, leading to wise and ethical use of information in society.

Information Literacy skills: Information competencies comprising of ability to identify when information is needed, and the competent skills to locate, evaluate and use information effectively in an ethical manner (Lau, 2006).

Information literate person: Persons who know when information is needed, are able to identify, locate, evaluate, organize and effectively use the needed information to resolve personal, professional, and societal issues and problems (Walton, 2006).

Initiative: A new plan or action to improve something or solve a problem.

Information explosion: the rapid increase in the amount of published information or data and the effects of its abundance.

Policy: guidelines, rules, regulations, laws, principles, or directions on what should be done, who should do it, how it should be done and to whom it should be done.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

Literature review is the orderly and systematic review of scholarly output about a topic (Efron and Ravid, 2019). It is the critical analysis, evaluation and synthesis of research findings and theories by scholars related to the area of study. In the review of literature, the researcher should present a comprehensive and precise understanding of the current literature related to the study; conduct a comparison of research studies and theories; identify gaps in the current literature reviewed and identify what ought to be done to advance the already known, about the topical area of study.

Boote and Beile (2010) described literature review as a survey on scholarly literature that is available on an individual's topic of interest in relation to theory or research questions.

2.1 Policies and Information Literacy training

Policies are documents capturing the process required in carrying out a programme. Policy documents contain goals and objectives, scope and resources required to accomplish a programme. The success of an IL programme is largely dependent on IL policies available (Lockhart, 2011).

Policies are integral in running of institutions of higher learning. Librarians can benefit in University policy development through partnerships with other departments. Policy documents include; student's policies, staff training and development policies, and library policies among others. Librarians should work with faculty staff and staff in other departments, to ensure that information needs of students are accommodated in the development of such policies. For example the teaching and management plan of the University of Queensland outlines a "commitment to Information Literacy and the need for lifelong learning skills to be incorporated into academic programs" (Appleton and Orr, 2000). The example gives two possible approaches to partnerships in policy development. The first one is Librarians driven, for example in the process of IL policy development the Librarians should consult the faculty. The second approach is whereby the librarian collaborates with the faculty on any academic policy development.

Several studies on the nature of IL policies have been conducted. Whitworth, (2011) did a study on international analysis of IL policies and found out that most of them were skewed towards information processing and not empowering individuals social interaction with information. Cowan, (2013) argued that IL training and policies is mostly domiciled in the library. Cowan further went ahead and stated that for IL to be effective the policies developed should transfer ownership to other members of the University Community specifically disciplinary faculty.

Jacob and Bergs (2011) argue that for effective teaching of IL, developed policies should capture methods such as constructive pedagogical. This calls for Librarians not to work in isolation but engage other concerned parties.

In South Africa IL in institutions of higher learning is anchored on three policy domains: ICT policies, Education policies and information services and library policies (De Jager and Nassimbeni, 2002). The findings by De Jager and Nassimbeni were corroborated by, Boekhorst and Britz (2004) who did a study on Dutch and south African education system and found out that IL was captured comprehensively in the ICT curriculums of both countries.

In Kenya IL is taught in higher education in accordance to each individual University policies (Kavulya, 2003; Amunga, 2011; Kingori, Kemoni, & Chege, 2012). The lack of a national policy on IL, is the main reason why institutions in Kenya take their own policy initiatives (Amunga, 2011). The lack of national policy on IL in Kenya has led to inconsistency in teaching IL besides poor monitoring and evaluation of the success of the initiatives undertaken.

2.2 Information Literacy initiatives

Kuhlthau, (2001) suggested that for IL initiative to be successful libraries should develop programmes collectively in collaboration with teaching staff. The teaching staff will be content experts and Librarians as processes experts.

Numerous significant initiatives and efforts have taken place globally in the last decade for IL promotion and advocacy. However, many countries have not realized any significant progress in the initiatives (Spiranec & Banek Zorica, 2010). There is a strong correlation between educational reforms and IL. This is as evidenced in the often cited statement such as,

"Information Literacy is a catalyst for educational change" and "Information Literacy is a pre-requisite for Lifelong Learning," (Bruce, 2002).

The correlation has led to new education theories like constructivism suggesting initiatives such as introduction of IL in the classrooms. According to these theorists information does not only include transfer of knowledge and information but is a process involving reflection, creation, critical thinking and critical awareness. Thus the ability to relate with information is considered more integral than ever before (Spiranec & Banek Zorica, 2010).

One of the initiatives is introducing IL into the curriculum. Earlier initiatives to introduce IL in the curriculum in Australia, was inspired by Christine Bruce in the year 1994. She was instrumental in the introduction of an IL programme to staff at Griffith University whose aim was to enable staff to regularly upgrade their IL skills. This was in an effort to ensure that IL is included in teaching strategies and academic programmes (Molopyane, 2015). A study done by Amunga, (2012) on Kenyan Universities, suggested that one of the effective initiative of imparting IL skills to patrons is mandatory implementation of IL into the curriculum and collaboration between the Librarians and faculty members. However, in Kenya IL is incorporated as a topic in a course of Communication Skills for first year students. The course is taught by non-library staff and there lacks collaboration between faculty members and Librarians (Kavulya; 2003, Amunga; 2012).

Most African Universities have user education as an initiative for teaching IL. However, user education is designed to assist new students to familiarize themselves with the library and explore the available information resources. Besides it also assist students to get over the phobia associated with the complexity of information resources environment (Suleiman, 2012). A study done in Nigeria by Akalumhe (2005) found out that user education in Nigeria is thought to cover Information Literacy which is not usually effective. Baro and Keboh (2012) did a study on African Universities and found out that user education is being practiced under different names such as library tour and library orientation. IL should go beyond the conventional user education to incorporate fully, the key items of Information Literacy.

However this should not imply that user education is not important. John et al, (2015) postulated that user education should be used as a tool to propel IL skills to students in the introductory stages on library usage.

A study done in Kenya by Kavulya (2003) found out that most universities in Kenya have initiated the use of library instruction, user orientation, reference services, and user guides and manuals as the forms of teaching IL. A recently study done by Kingori and Njiraine (2016), noted that although orientation is the preferred mode of training on IL, the sessions were not attended by all targeted patrons. However, changes in the information landscape, have made Libraries to rethink their initiatives.

Technology can be used as an initiative to promote IL skills in many ways. There is a growing number of student enrollment, some classified as long distance students who at times attend online classes besides those who attend the physical lecture room setup. Libraries have an obligation of reaching all patrons irrespective of their location. This has been made possible by Information Communication Technologies (ICT) which has modernized the imparting of Information Literacy skills over the years (Bundy 2004). This provides information professionals with more options giving them more flexibility in dissemination of information.

Technology has been embraced and applied in user services including IL training, e-resource acquisition, and knowledge management among others in the field of library (Goyal and Sharma, 2014). In some of their recommendations Kingori and Njiraine (2016) noted that there was need for staff to be trained on teaching skills and new trends in information technology for enhancement of delivery of IL content.

Online IL tutorials can also be made available through the library websites. A good example of a college which has implemented online IL tutorials is the Dickinsons College in Pennsylvania, United States. This can be a very effective platform especially if promoted so that students know the benefits that accrue with being information literate. Its availability online makes it possible for students to access the content irrespective of jurisdiction and time.

Musangi (2019) noted that libraries need to embrace information technology infrastructure to provide IL content besides other library services.

2.2.1 Resources required to implement Information Literacy initiatives

Proper and successful implementation of IL programmes requires adequate resources. Universities should provide enough funding, adequate information resources, human resource

and appropriate infrastructure to support IL (Amunga, 2011). Funding as a resource is integral in ensuring other resources are acquired for successful IL training.

2.2.1.1 Human Resource

A competent human resource team is integral in training IL skills. The responsibility of training IL solely lies with the library staff. However there should be collaboration with departments such as academics and human resource. The library should initiate and steer Information Literacy with the support of personnel from other departments (Molopyane and Fourie, 2015). This will ensure acceptance of IL programmes and management support.

Staff capacity development on IL matters should also be promoted. Strategies such as staff Information Literacy development should be adopted. Information Literacy development will enable staff to regularly update their IL skills which is integral in incorporating IL training into any academic programme and teaching strategies (Bruce, 2014).

2.2.1.2 Skilled and competent Library staff in training Information Literacy

There is information explosion in today's global village. As a result identifying relevant and appropriate information is only possible to people who have the skills and competencies of IL. According to the American Library Association (ALA),"Information Literacy is a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information" (American Library Association's Presidential Committee on Information Literacy, 1989). The definition basically comprises the skills needed for an individual to be considered information literate. However, according to Cyphert and Lyle (2016), within the context of higher education the concept was broadened in the year 2015. The definition of IL skills was broadened towards appreciation for the context in which information is used and individuals capacity to contextualize and interpret the information leading to reasonable conclusion.

IL attributes are categorized into three groups. Information skills, that is, employing conventional and emerging information technology to identify, manage and present information

from a variety of information sources. Secondly, the cognitive skills of critically thinking, evaluating, analyzing, synthesizing and communicating information, besides organizing. The third is the wise, ethical and responsible use of information (Andretta, 2005, Hernon & Dugan, 2002 and Scott et al., 2000).

Factors such as motivational, emotional and personality traits play an integral role in information extraction and sharing behaviors (Teh et. al.2011). Therefore, the most important step towards achieving individual's performance is through instilling and implementation of IL competencies. Accordingly, IL competencies are defined as the acquisition, organization, sharing, development and favorable use of personal information in an ethical manner to promote professional competencies at work and everyday living (Farrell and Badke, 2015; Gross and Latham, 2012).

However, Shute (2011) postulated competency of having knowledge and skills as the main dimensions. Knowledge is the understanding our everyday environment of how it is constituted and working. Skills include the ability to practically apply, consciously or unconsciously, knowledge in different context. Skills are the technical aspects of competence, emphasizing on how things are done.

Both IL skills and competencies require individuals to ethically use information upholding the values. It should also be noted that there is a relationship between IL skills and IL competencies.

2.2.1.3 Funding

Institutional pressures on funds tend to reduce funding in most libraries. However it should be considered that Librarians serve the entire university population and that they do not specialize on a specific group. As such funds should be made available to ensure that the library staff have the capacity to train IL (Schield, 2004).

The acquisition of all other resources for training IL, need funding. In order for the programme to be effective libraries need to be funded to acquire smart boards, modern computers, adequate bandwidth for internet connectivity and regular power supply. Funds should also be availed to train and retrain library staff on latest technology applicable in IL training. This calls for university management funding for staff to attend workshops and seminars for purposes of equipping them with new skills needed in today's digital age (Baro and Zuokemefa, 2011).

2.3 Information Communication and Technology (ICT) Infrastructure

The advent of information technology has shifted the approach on how IL is being conducted. As result institutions across the world have allocated funds to libraries for purposes of establishing proper network connections and purchase of computers (Gross, 2011).

Familiarity in use of ICT is integral in interacting with web based searches, a variety of digital tools and data collection and research tools (Reyes and Brinegar, 2016). Individuals' awareness of digital tools and ability to manage and create new knowledge is largely dependent on digital literacy (DL) (Hagood and Skinner, 2015).

Despite the lack of DL education in most universities students use online database resources and frequently browse the network for information. Institutions of higher learning should invest in information technology infrastructure such as scanners, smart boards, digital cameras, remote access software such as Ezproxy enabling off campus access to information resources, Institutional repositories among others. This will enable proper delivery of IL programmes. Besides, institutions should also apply other content delivery methods such as use of live charts and social media for purposes of online interaction with patrons (Musangi, 2019). However, familiarity of using ICT is dependent on academic experience and frequency of using the technology (Bulger et al, 2014). This calls for DL skills in which patrons can apply their IL skills to identify relevant information. For digital literacy instructions to be effective there is need for cooperation between Librarians, lecturers and library patrons besides having a technological roadmap (Mohammadyari and Singh, 2015; Gonick, 2006).

Due to weak technological and financial abilities in developing countries, academic DL is rarely taught. To cover the deficit, specialists who include Librarians should be trained who in turn train students and staff in every department (Martínez and Fernandez, 2015). The training promotes proper utilization of appropriate infrastructure related to Information Literacy.

2.4 Theoretical and Conceptual framework

The supporting theory for this study was the socio-cognitive theory by Bandura. Besides, the conceptual framework was also used to highlight the items which were studied and the expected outcomes.

2.4.1 Theoretical framework

A theory is a set of definitions, prepositions and interrelated constructs that provides a systematic way of viewing phenomenon by indicating relationship between variables with an aim of predicting and explaining phenomena (Kerlinger, 1986).

Theories are integral in research as without them researchers capacity in understanding underlying issues will be limited (Norman and Schmidt, 2016).

Social cognitive theory is based on the assumptions that persons actions are influenced by what they observe, do and their relationship with external environment (Bandura, 1986). The author further went ahead and stated that the theory constitutes of overlapping and sometimes interrelated circumstances of behavioral, personal and environmental factors which greatly influence the functioning of a human being. Several studies on Information Literacy have indicated that behavioral and personal factors influence individual's Information Literacy, some of which include self-efficacy, attitudes towards ICT and individuals ICT experience (Fraillon et al, 2014; Scherer et al, 2017). Environmental factors determining IL include but not limited to library and Lecturers influence, institutions and parents (Zhu et al, 2019).

Another theory which could have been applied in this research is the constructivism by Jerome Bruner (1976). Themes discussed by Bruner include readiness for learning, motive, structure, and individual's intuition. However, the theory only concentrated on individuals know how to interact with the existing body of knowledge. Bruner's theory did not include factors which also influence IL training as captured by Banduras Social Cognitive theory which include environmental factors.

2.4.2 Conceptual framework

Robson (2002) defined conceptual framework of a study as system of assumptions, concepts, beliefs, and theories that informs research. It explains in a narrative form or graphically main items to be studied. Properties which take different values as situation and circumstances change are referred to as variables (Hoy, 2016). Conceptual framework contains the dependent variable, the independent variable, intervening variables and the expected outcomes.

A variable which is a consequence of another variable is known as the dependent variable while the variable that stands alone is the independent variable (Kothari, 2004).

The conceptual framework in figure 2.1 below covers the following items; policies and Information Literacy, IL initiatives and Information Literacy, resources for IL initiatives implementation and ICT infrastructure as independent variable. The dependent variables are Information Literacy and digital literacy. The expected outcomes are as indicated.

Independent Variables   **Dependent variables**   **Expected Outcomes**
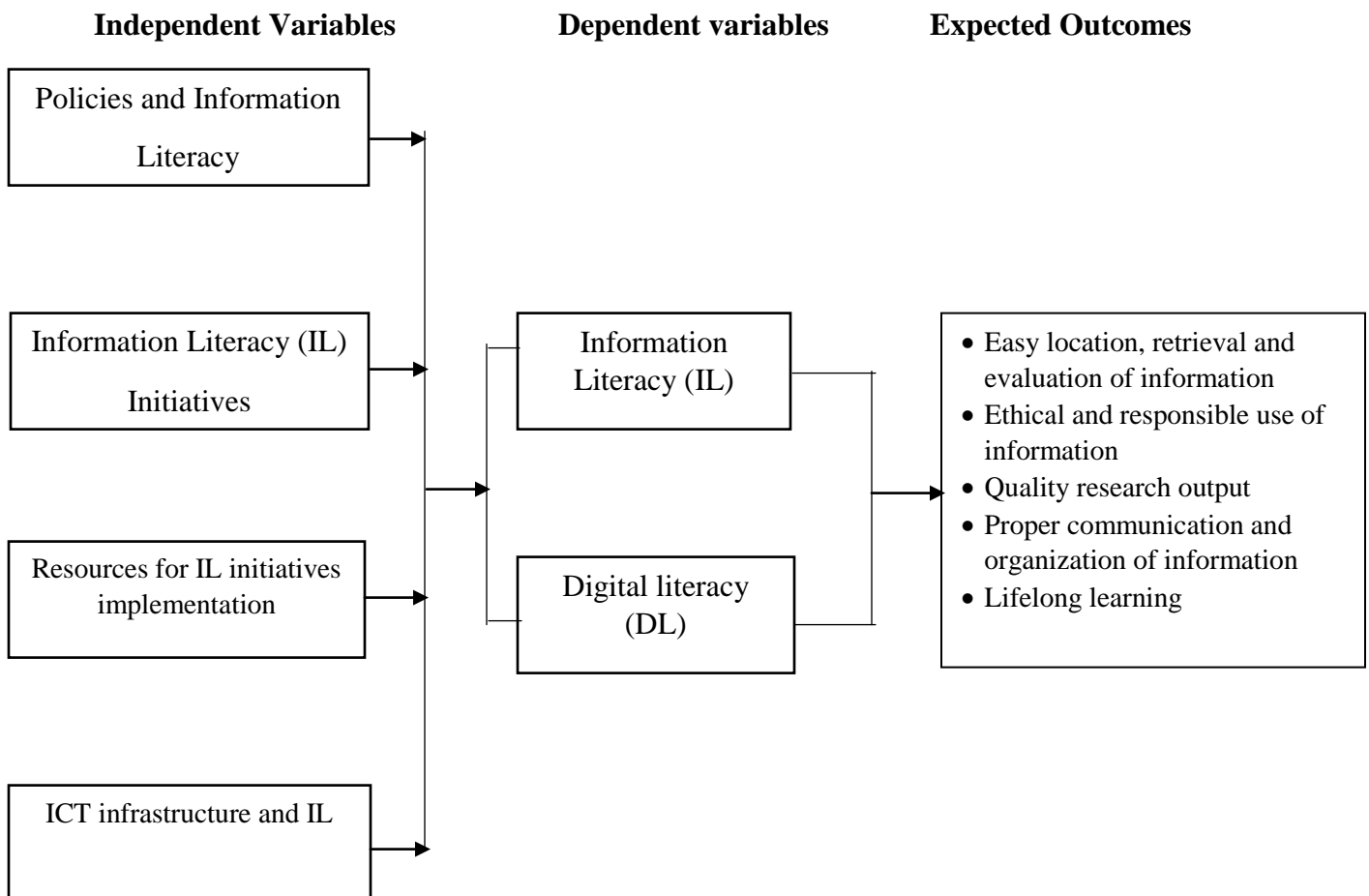
Figure 2.1 Conceptual framework. Source: Researcher 2021

2.5 Chapter summary

The chapter reviewed literature on the following key areas of the study; the extent of existing policies covering IL training; the extent in which IL training initiatives are implemented; and examined the availability and adequacy of ICT in supporting IL training.

CHAPTER THREE: RESEARCH METHODOLOGY

3.0 Introduction

Tools which are needed to explain and help a reader understand how research was conducted are given under methodology for research (Clough and Brown, 2012). This chapter discussed the research design which was descriptive research employing a case study strategy, area of study, target population, Sample and sampling techniques, data collection tools, data analysis and presentation and ethical considerations.

3.1 Research Design

The study employed a descriptive research design. A case study strategy was used because it was difficult to conduct the study outside the natural setting of the phenomenon under investigation. Ghauri and Gronhaug (2013) defined descriptive research as a research design where the problem is well structured and well understood. Cooper and Schindler (2008) defined descriptive research as formalized and structured study whose objective is to describe characteristics associated with the study population. Descriptive research was used to find out the efforts put in place towards IL training by concerned parties in TTU. Qualitative research technique was employed for the study. Cooper and Schindler (2008) defined qualitative research as one aimed at in depth understanding of a phenomena.

3.2 Area of Study

The area of study was Taita Taveta University Main Campus located 1.8 kilometers from Voi Mwatate road off Nairobi Mombasa highway. The University has other campuses in Wundanyi and Taveta. However the main campus was chosen because it has a larger number of subjects necessary for meeting the objectives of the study.

3.3 Target Population

Population is described as all elements meeting the criteria for inclusion into a study (Burns and Grove 2003). Members of faculty staff and library staff of TTU were the target population for this study. The population of teaching faculty staff of TTU is 65, while that of library staff is 12. Part time faculty teaching and non-teaching members of staff were not part of the target population.

3.4 Sample and Sampling Techniques

Sedlack and Stanley (1992) defined a sample as a smaller percentage which is representative of the total elements of the target population. The procedure which is employed in identifying the elements for inclusion to the sample from the target population is referred to as sampling.

3.4.1 Sampling techniques

Purposive sampling technique was used for the study. Mugenda (2008) defines purposive sampling as one that allows the researcher to identify cases with the required information which meets the objectives of the study. For this study, library staff and faculty teaching staff were purposively selected as they possessed the required characteristics required to meet the objectives of the study.

3.4.2 Sample size

A sample size is the number of elements obtained from the target population. Through purposive sampling a sample size for the study was obtained as indicated in the sample frame table 3.1 below. The sample size was obtained from the two (2) categories indicated in table 3.1.

Table 3.1 Sample Frame

No	Respondents	Population size	Sample size
1	Library Staff	12	9
2	Faculty teaching staff	65	4

Total		79	13

3.5 Data Collection Instruments

Data collected for the study was qualitative where face to face interviews were conducted. The data collection instrument used for this study was an interview schedule. Documents relating to the study were also analyzed for purposes of collecting more data.

3.5.1 Interview Schedule

Data for this study was collected using the interview method. Interview is the oral administration of an interview schedule (Mugenda & Mugenda, 2003). For purposes of this study personal interview method was used. Kothari, (2004) postulate that personal interviews can be carried out in a structured way. Therefore for purposes of this study, structured interview method, where a set of predetermined questions meeting the objectives of the study was used. Questions were asked in a prescribed order according to the structured interview schedule. The interviews were conducted to Library members of staff and teaching staff at TTU.

3.5.2 Document analysis

A systematic procedure for evaluating and reviewing documents for purposes of gaining understanding and empirical knowledge development is referred to as document analysis (Corbin & Strauss, 2008). The review comprises of both electronic and print documents. Documents are social facts produced organized and used in an organized manner (Atkinson and Coffey, 1997). For purpose of this study documents, specifically policy documents related to Information Literacy were analyzed. A list of what was to be explored was developed and this included ICT policy and how it has affected IL training in TTU Library. Items such as Hardware and software acquisition, access and uploading of online content, and development of ICT systems in the library were analyzed. This formed the basis of the data which was searched during document ICT policy document analysis. In the curriculum development policy: Library; Information Literacy; and Librarian, formed the basis in which the policy was analyzed. The findings are explained in chapter four of this document.

3.6 Data Collection Instruments Reliability and Validity

3.6.1 Reliability

According to Mugenda and Mugenda (1999) reliability refers to degree of measure in which after repeated trials using the instrument the results are consistent. The reliability of research instruments was established through a pilot study which informed the correctness of the questions asked and rectification of the questions asked if necessary.

3.6.2 Validity

Validity is the meaningfulness and accuracy of the research results (Mugenda and Mugenda, 2009). Validity should be a representation from the data of the area under study once the analysis is done. Validity of the collected data was ensured through objectively analyzing the responses from the respondents using the available data analysis tools.

3.6.3 Pilot Study

The reliability and validity of the data collection instruments was established through a pilot study. The accuracy of data collection instruments are integral in ensuring that data obtained is valid and reliable (Bryman, 2012). The questions in the interview schedule were checked for reliability and validity through a pilot study where weaknesses and deficiencies were addressed. Issues not limited to length of the questions, ability to comprehend the questions and ambiguity of the questions were addressed from the pilot study. For purposes of this study a similar target population and sample was identified from the Technical University of Mombasa (TUM) where piloting was done. Technical University of Mombasa was chosen as it had an environment similar to that of TTU where the study was conducted. From the findings of the pilot study conducted at TUM some the questions from the interview schedule were changed as they seemed ambiguous, for purposes meeting the objectives of the study.

3.7 Data Analysis and presentation

Qualitative data was analyzed. Content analysis tools were used to analyze qualitative data. Cooper and Schindler, (2006) postulate that the 'what' or the semantic aspect of a message should be analyzed using content analysis tools. The interpreted data was then put in categories or themes using quotes and verbatim to illustrate the findings.

3.8 Ethical Considerations

Babbie, E (2017) explains that social scientific researcher's awareness about agreements shared by other researchers on what is unethical and ethical in the entire process of conducting a study is integral. Ethics such as respondent's informed consent and voluntary participation, confidentiality, anonymity and right to privacy were upheld. Before data collection at TTU a letter of request to collect data was written to the Deputy Vice Chancellor Academic Research and Outreach (DVC-ARO) TTU. Permission was granted as is evidenced in the letter attached at the appendices after which data collection commenced. A letter form NACOSTI for permit to conduct research in TTU was also requested and granted. The analysis and reporting of the findings was objectively done as part of ethical obligations to scientific community colleagues. In the entire research work, the content consulted has been acknowledged through citations and references. The progress of the study at different stages was subjected to anti-plagiarism software for purpose of originality check.

3.9 Chapter Summary

The chapter explains the procedure which was used to conduct the study. The chapter focused on research design of the study, targeted population, sample and techniques used to obtain the sample, data collection methods and instruments, how reliable and valid the research instrument were, how data was analyzed and Ethical considerations during the entire period of conducting the study.

CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION

4.0 Introduction

This chapter discusses the analysis and presentation of the qualitative data collected. The purpose of the study was to evaluate Information Literacy initiatives in TTU. This chapter contains two sections: Section one on demographic details of the participants interviewed and section two on qualitative data findings analysis.

4.1 Participants' Demographics

The participants selected for the interviews had varied demographic characteristics. Among those who participated for the interviews were two lecturers who teach components related to Information Literacy and eight library staff. Two lecturers and one library staff were not available for the interview. The interviews were conducted between September and early October, 2021.

Table 4.1 Demographic information of interviewees

Participant	Gender	Education level	Position	Years of experience
P1	Male	MSc Information Science	University Librarian	12 years
P2	Male	BSc Information Science	Library assistant	10 years
P3	Female	BSc Information Science	Library assistant	12 years
P4	Male	PHD	Lecturer	8 years
P5	Male	Masters	Lecturer	11 Years
P6	Female	Diploma	Library assistant	6 years
P7	Female	Diploma	Library attendant	8 Years

P8	Female	Diploma	Library attendant	3 Years
P9	Female	BSc Information Science	Library assistant	12 years
P10	Female	Diploma	Library assistant	6 Years

4.2 Data Analysis

The study made use of codes derived from the responses from interviews done where thematic areas were identified. Five thematic areas were identified from the responses and are discussed in this chapter. Thematic analysis has several steps which include collected data familiarization, transcription and coding (Howit, 2010). Data familiarization was conducted for purposes of comprehending the data, and transcribing done through extracting recorded content into paper format for analysis purposes. Data coding entails assigning codes to texts in a line or lines from the transformed text (Howit, 2010).

The thematic areas for this study were; Policies and Information Literacy training, Information Literacy Initiatives, ICTs and Information Literacy training, Challenges and mitigations towards Information Literacy training, and strategies for Information Literacy training. The thematic areas were largely drawn from prior conceptual and theoretical frameworks.

4.2.1 Policies and Information Literacy

The qualitative analysis of this research began by investigating on the policies related to IL training. The focus here was to identify any policies that directly or indirectly affect IL training in TTU. As discussed in section 2.2 of chapter two of this document, having policies supporting IL is a necessity for proper training of IL in a University setup. Accordingly all the interviewees agreed on this proposition. They agreed that policies are core to operations of any institution as they give directions and guidance on how everything is to be done. All members were at least aware of one policy which directly or indirectly affected IL training. The following are parts from the respondents' transcripts of participant P1, P4 and P9.

"Policies such as Information Literacy policy which we use despite it being in draft form, and collection development policy both domiciled in the library guide us on how to train and the resources required for the training respectively……also we have the ICT Policy which guides on what we acquire in terms of equipment for training, the content we upload online including social media. Before I forget we also have the staff training and development policy which guides in relation to staff participating in seminars and workshops not only related to Information Literacy but also advancing their studies" **(P1)**.

"My understanding is that no University can operate without policies. For example we have the curriculum development policy, however mainstreaming towards Information Literacy has not come up in the revision or development of programmes. I think Information Literacy training should be mainstreamed the same way we have gender mainstreaming and HIV AIDS" **(P4).**

"Yes, for example ICT policy affects how we conduct our trainings, regarding what is availed online, training equipment's etc and we have Library Information Literacy policy which gives us direction regarding Information Literacy training" **(P9)**.

Different opinions were given when it came to implementation of the different policies which affected IL training. A majority of those interviewed agreed that policies were being implemented. During the process of interviews the focus was on the implementation of the available developed policies, however some respondents brought in the element of development of the policies which affected their implementation. Interview excerpts from P1, P5 and P9 exhibit the significance of policy development and policy implementation.

"The policies are being implemented, however during their development at times the stakeholders are not involved which in some instances make their implementation become a challenge. Maybe I can give an example where the library is not involved is in the development of curriculum development policy which essentially can be an opportunity to introduce Information Literacy training element" **(P1).**

"We implement the policies but am sorry to say that at times I feel like they are imposed on us given the fact that my or our input is not taken care of" **(P4).**

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"I would like to specifically tell you that we are training Information Literacy based on a draft Information Literacy policy of which I was consulted when it was being developed as we sat as a team……I am satisfied of its contents and believe it is meeting its objectives" **(P9).**

Policy document analysis was also used to obtain more data. The policy documents consulted were the University ICT policy, Curriculum development policy, Library IL policy and library collection development policy. The ICT Policy controls everything on matters related to Information communication and technology in the entire University. The policy contents have mentioned issues that directly affect the training of IL especially where ICT is involved. The policy touches on Purchase of ICT equipment and ICT infrastructure development which is subject to advice and approval by the ICT manager. A statement in the policy under equipment read:

"All changes in the configuration of software or hardware in any system or device that may affect operations of the University systems shall be requisitioned and only done upon approval by the HOD ICT in writing".

Besides the equipment's, the policy controls and guides on matters on software licensing, ICT network management, mail management, internet policy, network infrastructure in new premises, password management and staff ICT training.

The second policy reviewed was curriculum development policy where IL is not included anywhere in the contents. Also exclusively missing is the mention of the librarian or the library.

The policies which directly affected how Information Literacy training is done were the Library Information Literacy policy and Library collection development policy. The policies outlined how IL is to be conducted and the resources supporting the training respectively.

In summary a number of policies affecting Information Literacy were mentioned. Besides the policies being identified other factors that came up were stakeholder participation during the development of the policies and their implementation.

4.2.2 Information Literacy Initiatives and resources

The theme, besides Information Literacy initiatives exhibited three sub themes under resources namely; funding, infrastructure supporting IL and human resource capacity to train Information Literacy. All interviewees agreed that there exists some initiatives and resources that support IL in TTU. Interview findings revealed that the initiatives undertaken and the resources supporting IL training influenced IL training. Interviewees P1, P2, P3, P4, P5, P7, P9, and P10 agreed that introducing the right IL initiatives is essential for effective IL training.   The following excerpts are from Interviewees P4, P7 and P10 supporting this argument;

> *"The much information I can give is initiatives do exist and speaking from my side at least we have a topic on library skills in communication skills course. I have also observed that there is always Library orientation done to reporting first years, my assumption is Information Literacy also takes place during that time"* (**P4**).

> *"Sessions are always organized for small groups of students after they do registration for Information Literacy training. One of us usually trains them and also inform them of IL training manuals which are in the library. This is to supplement training done during orientation where the groups are usually large"* (**P7**).

> *"Initiatives such as orientation and organized trainings exist. We also have been trained in-house on Information Literacy skills by other members of staff who attend workshops and seminars outside the institution……I believe the training itself is also an initiative as it helps us deliver to our patrons. In fact after patrons training our library usage especially books borrowing statistics go up"* (**P10**).

Therefore it is evident that Information Literacy initiatives are integral and have an impact to patrons who have undergone the training as evidenced on increase of library usage from patrons. This is consistent with Bruce, (2001) who postulated that one of the catalyst to educational change and pre requisite for lifelong learning is Information Literacy.

The perception towards Information Literacy is that, the initiatives are having a positive impact. This is as evidenced by interviewee P10, who was also supported by excerpts from interviewee P1 and P2;

"A lot of questions especially on how to search for content and which source is right to extract content from usually come up after trainings……….we also receive inquiries on how to cite and to reference once we do the trainings" (**P1**).

"Students are usually sent to us to check their projects or thesis for plagiarism before submitting to their supervisors and many times the percentage is not usually bad which implies that they are doing the right thing. Usually slight changes done and the acceptable plagiarism percentage is reached" (**P2**).

Other than initiatives questions relating to resources supporting Information Literacy training were asked. Under resources three sub themes came up namely; funding, infrastructure supporting Information Literacy and human resource capacity to train Information Literacy.

All interviewees agreed that funding is inadequate and that they at times rely on other departments to use their allocated budget funds vote to support the Library. For a case in point interviewee P1 stated;

"Generally funding has been inadequate. Our budget has been decreasing over the years making us rely on funds from votes in other departments. For example we at the mercy of the ICT department to purchase equipment like computers because our budget is not enough. With adequate funds I think purchase of computers, staff training and other items which need funding will be easy to address" (**P1**).

Interviewee P6 added by stating;

"We have been having challenges in updating our collection. I don't remember the last time a significant number of books was purchased. We have been having problems with our funding. It is not enough. We are trying but we can do better with adequate funds" (**P6**).

Interviewee P2 suggested;

"Being the heart of any learning institution, the Library should always be allocated enough funds for them to effectively deliver to patrons. The 10% of the total University budget as stipulated by the commission of University education should be honored" (**P2**).

Therefore adequate funding is integral for a Libraries to operate and conduct their activities as expected. This includes Information Literacy training. This is consistent with existing literature, which postulate that, success of Information Literacy training requires adequate and continuous funding (Amunga, 2011; Kingori, Njiraine, and Maina 2016).

The other factor related to resources was infrastructure supporting IL training. When asked questions related to infrastructure, it came out clearly that ICT infrastructure was well established. However, in as much as it is well established it came out that the library lacked some of the equipment even though that was not a problem as mitigation measures were put in place. A majority of those interviewed insinuated that trainings for large groups of students is mainly done outside the library but within the institution as the library lacks enough space. They also pointed out that the digital library space is sometimes inadequate and training are at times done at the University computer lab. All of those interviewed agreed that the training materials are sufficient to train IL. Excerpts from Interviewees P5, P7, P8 and P10 to support the argued findings;

> *"Almost all offices have workstations with computers connected to the internet. I can easily access the University policies and other content online. I think the library should take advantage of this and upload Information Literacy modules for students and staff to access"* (**P5**).

> *"We organize our trainings at the University Library lounge where we use a projector and give students brochures with a summary on Information Literacy. When the number is large we use the University auditorium"* (**P7**).

P8 added to space item by stating the following;

> *"Our digital library space is not convenient for training large groups. We prefer conducting hands on trainings at the University computer lab when handling big groups and leave the digital library for patrons' individual use"* (**P8**).

Interviewee P10 averred;

"Wi-Fi hot spots are all over the University. To support the use of online information resources through Wi-Fi, the University has built sheds all over the University where students can sit and enjoy the service" (**P10**).

Lastly related to related to resources was the human resource capacity to train Information Literacy. A majority of those interviewed stressed that the human resource capacity to teach Information Literacy is sufficient. All interviewees have been training students on Information Literacy and that they have background training on Information Literacy. However some interviewees suggested that members be frequently sponsored to attend Information Literacy workshops to keep up with new trends related to Information Literacy. It also came out that there is no collaboration between teaching staff and Library staff on matters to teaching Information Literacy. The teaching staff agreed that the Librarians are best suited to train Information Literacy at TTU. There is collaboration between the dean of students and student leaders when the library organizes for training. Interviewees P1, P4, P6 and P7 statements reflect this finding;

"In terms of capacity to teach Information Literacy, we are very much fine. All members of staff have a background in Information Science and have been conducting trainings all along. I am also aware of a component on Library skills in communication skills course which is well captured in relation to Information Literacy skills. The lecturers teaching it have a background in communication. In short I believe we have the capability" (**P1**).

"I almost teach all groups of student's communication skills course. Anyway we are few of us. After teaching library skills I give my students assignments and the feedback is excellent. If you ask me who should teach the component I will boldly suggest the Librarians. We can allocate hours in a normal classroom setup where they can deliver Information Literacy content. They are the experts. I think we also need to work with them closely" (**P4**).

"A lot has changed especially on technology affecting Information Literacy training. We arrange for staff training locally but I think we should be sponsored to attend as many workshops and seminars so that we can share new developments with our colleagues from elsewhere" (**P6**).

"We have the capacity and we deliver. Each one of us is trained on Librarianship and participates in Information Literacy training. It is not left to specific individuals; anyone of us can do it" (**P7**).

4.2.3 Information Communication Technology (ICT) and Information Literacy training.

Information communication and technology as reflected in the Literature review can have a great impact if properly implemented. In regards to this a majority of those interviewed agreed that embracing ICT is integral in delivering Information Literacy content and reaching a large audience. The interviewees' responses indicated that the ICT infrastructure is good and that they were taking advantage of it. In as much as the infrastructure is well established, the library had some inadequacies when it came to some ICT equipment. The below excerpts from interviewees P2, P3, P6 and P10 reflect on the findings:

"We have Internet connection with good bandwidth which makes hands-on training especially on electronic resources smooth. I cannot complain the only thing that can disadvantage us is an event where training is going on and power goes off" (**P2**).

In relation to ICT we take advantage of the projector, Wi-Fi, Internet and I understand we are in the process of acquiring a smart board which we intent to use not only in training Information Literacy but also other library training. We also have a digital library which is open to all registered patrons" (**P3**).

In relation to projector and digital Library P6 added the following;

"The digital library is operational but has inadequate number of computers. They are not enough. Some are old and usually very slow. I can also say we use a projector, but usually borrowed from other departments. We do not own one as a Library, which rightfully we should" (**P6**).

"I can say that we are using ICT in the library because we have an Institutional repository showcasing our scholarly output. We have Information Literacy

content on it where students can access and read. On equipment we have computers, projectors which we use and also we are well connected to the internet" (**P10**).

When asked about their perception on exploitation of ICT in Information Literacy training all the interviewees agreed that library and the entire university takes advantage of this. This is as it came out from the responses to if there were any available ICTs which the library can use. Excerpts from interviewee P1 and P7 also support these findings;

"We have taken advantage of social media where we have a Library Facebook page which we use to communicate with our patrons………on our University website we have a Library link where students can access information related to Library. I was also thinking of us having 'ask a librarian' link where students can post their queries but as of now we have shared the Librarians email" (**P1**).

"During the Covid-19 Pandemic, library staff conducted orientations online using google teams' app. To add on that, the orientation also covered aspects of Information Literacy" (**P7**).

4.2.4 Challenges and mitigations towards Information Literacy training

The questions asked to the interviewees also sought to find out if there were any challenges faced in teaching Information Literacy and if there were any mitigation measures put in place. With regards to challenges a majority of the interviewees agreed that they are facing quite a number of challenges in teaching Information Literacy at TTU. The challenges which came up were related to funding, Infrastructure, human resource and Patrons willingness to attend Information Literacy training. Excerpts from Interviewees P1, P3, P5 and P8 clearly bring out the stated challenges;

"As I mentioned earlier we are always operating on a very small budget which is always chopped. This makes it very difficult to operate independently especially when it is things

to do with finances. The funds availed basically is enough for operation costs. The funds availed make it difficult to sponsor members for training. Once we pay for anti-plagiarism software and electronic resources we end up struggling throughout the financial year" (**P1**).

"Space for training especially the digital library is very small. I suggest we have our own big and spacious computer lab which hopefully has been considered in the new library building proposal" (**P3**).

Still on Infrastructure P8 stated the following;

"We rely mainly on other departments for projector for training. At times we need to reschedule our training due to unavailability of one. This inconveniences students who had already planned to attend. There is also need for the department to initiate purchase of new fast computers for the digital library" (**P8**).

"I don't know how to put it but, to be sincere there is no collaboration between teaching staff and the Library staff when it comes to teaching Information Literacy. Now that you have asked that question I will personally initiate collaboration with the library staff. I believe it will have a great impact" (**P5**).

Still on human resource and collaboration P8 added by stating the following;

"As part of collaboration with the teaching staff I suggest that we should train all teaching staff so that they be our ambassadors on matters Information Literacy" (**P8**)**.**

In relation to patrons willingness to attend Information Literacy;

"After sending out invitations, the response rate for training on Information Literacy I can say is average. May be it is because we do not liaise with the departments directly but instead we use the dean of students. Still related to students I think the time allocated during orientation is usually very little for detailed training" (**P1**).

Mitigation measures to address the challenges were also mentioned. Excerpts from Interviewees P1, P3, P8 and P10 suggested the following mitigation measures to the stated challenges;

"To address inadequate funding we have been depending on budgets from other departments which service our department. This is of course with justification" (**P1**).

"The University auditorium and the University computer labs are beings used at the moment to train large groups especially during orientation. We have also devised a system where we register students interested in Information Literacy training and once the quorum is reached we train them within the library" (**P3**).

"We use students' academic secretary and dean of students. We work with them closely. I also recently suggest in the deans committee that the library be involved in curriculum development and Information Literacy training in lecture halls as part of initiating collaboration with teaching staff" (**P1**).

"I think I mentioned a challenge and at the same time the mitigation measure we have taken as a department. Remember when I mentioned projector and stated that we borrow from other departments? That is our mitigation measure of addressing that challenge" (**P8**).

In relation to staff capacity development through training, which P1 mentioned as a challenge, the following excerpt from p10 suggest the mitigation measure that has been put in place;

"Once a member participates in a training or workshop and comes back, he/she organizes for in-house staff training. This helps in developing staff capacity and ensuring no staff is left behind." (**P10**).

4.2.5 Suggested strategies for Information Literacy training

Interviewees were also asked to suggest strategies they think can improve on what is already taking place in relation to Information Literacy training. A majority of those interviewed suggested that there is need to reengineer how Information Literacy is trained in TTU. A majority of the interviewees mentioned the conventional methods such as user studies, improving on how orientation is done and how the content is delivered. The answers which conspicuously came out from the respondents are as excerpts from interviewee P1, P3, P4 and P9 reveal;

"I champion for Information Literacy to be part of the University curriculum. I believe this is when they will know the importance of Information Literacy. As it is, most students view it as a co-curricular activity/ session. We train a lot of students, take register and many a times when they come to ask a question which was captured in Information Literacy training we find out that they had attended………… Very many students attend the sessions but very few take the trainings with the seriousness it deserves. It is sometimes discouraging but we have to do it. I have also observed that most register for training in their final year of study when they are doing their thesis or project and surprisingly even masters' students come for registration. This makes me think Information Literacy training should be introduced at the lower levels of education and progressively be taught to higher levels" **(P1)**.

"First year students are usually obedient and follow instructions specifically during the first two weeks of their studies. They usually respond almost 100% when called upon for a meeting or training. The library should take advantage of this and conduct a detailed Information Literacy training even if it means conducting the training for two days. With this at least we would have achieved something…………..wait after a month and you will end up being disappointed by those who will respond when called upon." **(P3)**

"I teach library skills together with my colleagues. Information Literacy is captured in library skills but I believe this is something that all members of teaching staff should be trained on. We are in academics and quality output should be reflected in assignments, exams and research. I repeat, Information Literacy should be mainstreamed. If all lecturers are trained then mainstreaming will not be a problem. Introducing active learning into activities and assignments related to class can then be introduced…for example one related to search methods etc. Then together as a group we transfer the knowledge to student when an opportunity arises." **(P4)**

The suggested strategy by Interviewee P4 corroborates the findings of Amunga, (2014) whose study found out that there was need to train teaching staff on Information Literacy in Kenyan Universities.

"Online Information Literacy training can also be done where videos related to Information Literacy are uploaded on our library portal. You know audio visuals are always appealing and one always concentrates. But a lot of sensitization needs to be done……., again we are dealing mostly with millennials who mostly are glued to the internet using their different gadgets. To add on that any other content related to Information Literacy should be made online" **(P9)**.

4.3 Synopsis of findings from analyzed data

The outcomes of the findings of the research are summarized in table 4.2 below. The table presents factors or dimensions related to the themes and research questions, description and the findings.

Table 4.2 Synopsis of findings from qualitative data

Factor/Dimension	Description	Findings
Policies	Policies include all policies developed in the library and other departments of the University which directly or indirectly affect Information Literacy training	Library has a policy on Information Literacy in draft form and other policies supporting Information Literacy such as collection development policy.

ICT policy which is adopted by the library is domiciled in the ICT department and controls ICT related issues in the library.

Nowhere in the curriculum development policy is Information Literacy, Library or Librarian mentioned in the entire document

There lacks stakeholders involvement in development of policies. |
| Information Literacy initiatives | Any activity or action taken geared towards Information Literacy training. | Information Literacy training is done during Library orientation.

Training sessions are organized after orientation for those who show interest. |

		Information Literacy is captured in a topic on library skills in the communication skills course
		There exists a digital library which doubles up as a training Centre for IL skills.
		Information Literacy content is available in the library Institutional repository.
		Online trainings are organized when need be.
Resources for Information Literacy training	This included funding, human resource and infrastructure.	Funding towards Information Literacy is inadequate.
		Teaching Staff training Information Literacy skills are only those taking communication skills courses
		All library staff have background in Librarianship and have undergone training on Information Literacy.
		Physical infrastructure supporting Information Literacy exists.
Infrastructure related to Information Literacy	Infrastructure refers training infrastructure and ICT infrastructure	Training space for IL is available.
		There is adoption of ICTs in IL training.
		There is training material for IL.
ICTs related to Information Literacy	The available ICTs which can be embraced in training Information Literacy skills.	Hardware equipment such as computer and projector are used for IL training.
		There is internet connection and Wi-Fi hotspots for students to access online resources.
		There is the library institutional repository with IL content.
		The Library website exists where online content can be accessed.

		Social media is also embraced in the Library.
Challenges related to Information Literacy	Refers to any factor which impedes successful implementation of Information Literacy training.	Inadequate funding. Inadequate computer for IL training. Library department lacks own projector. Inadequate staff training on IL. There is no collaboration between Library staff and teaching staff. Inadequate space for training. Limited time allocated for IL training. Poor show up by students on Invitation.
Mitigation measures to address the challenges		Library uses funds from budget allocated to other servicing departments. Library organizes for trainings in the University computer lab. In-house IL training for Staff. Library has initiated collaboration through dean of students and student leadership. Library organizes for training in the University auditorium. Library organizes training for small groups of students who show interest. Library takes advantage of student orientation and organized trainings.
Suggestion for improving Information Literacy training	Refers to ideas put forward which are thought to improve Information Literacy training.	Information Literacy component to be embedded in the curriculum. IL to be introduced from lower levels of education.

		All Inclusive IL training to be done to first year students upon reporting.
		All teaching staff to be trained on IL skills.
		Mainstreaming IL.
		IL content uploaded online should also contain audio visuals besides other formats.

4.4 Chapter summary

Qualitative data analysis and findings drawn from those who were interviewed were presented in this chapter. The chapter began with a demographic presentation of all those who were interviewed. The data collected was organized and analyzed according to themes drawn from the conceptual framework and research questions asked. The study revealed that Information Literacy training is done at TTU. The study also revealed that, Policies related to IL, the IL initiatives, resources related to IL such as human resource capacity and funding, physical and ICT infrastructure related to IL, greatly influence how IL training is done. The chapter also presented the challenges faced in IL training and the mitigation measures that TTU Library has put in place to address the challenges. Suggestions by interviewees on how to improve on Information Literacy training in TTU was also presented in this chapter. The subsequent chapter will discuss the summary of the findings, conclusion, recommendation and suggestion for further research.

CHAPTER FIVE: SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

The chapter presents the summary of data findings in relation to Information Literacy initiatives in TTU Library. The chapter summary, findings and conclusion was based on the objectives which the study intended to achieve. The conclusion is drawn afterwards and the recommendations are given.

5.1 Summary of the findings

5.1.1 Policies related to Information Literacy

The study sought to find out if there we any existing policies influencing Information Literacy training in TTU Library. Through the literature review a gap was identified on how policies

affect Information Literacy skills training based on how students answered their questions. TTU is governed by policies as is reflected by all those who were interviewed held. TTU Library has an Information Literacy policy though in draft form. The library lacks an ICT policy of their own and uses one which is domiciled in the University ICT department. Other policies which affected Information Literacy training included Library collection development policy which influenced resources to be acquired for training Information Literacy. From the document review the ICT it was revealed that the ICT policy controls all the University ICT related functions including those of Library. This included how content is online content is uploaded and used. Other document which was reviewed was the curriculum development policy which did not include Information Literacy element in any of their paragraphs. The findings also revealed that there is lack of stakeholders' involvement during policy development in TTU.

5.1.2 Information Literacy Initiatives and resources

The study findings established that TTU has established Information Literacy Initiatives. One of the initiatives is training Information Literacy skills during orientation of first year students. The library also organized for patron training on need basis where patrons show interest. Other than the physical training the library also does online training. This is as exhibited where one of the interviewees responded by saying that during the Covid 19 Pandemic training was done online. Efforts have also been put in place to ensure that Information Literacy content is availed online through the library website and the Institutional repository. Other Initiatives not emanating from the library but geared towards Information Literacy training also take place in TTU. For example under the communication skills course there is a topic on library skills which covers Information Literacy skills. Other initiatives included the establishment of a digital library which is used for Information Literacy training.

With regards to resources, the study found out that TTU Library is inadequately funded posing a challenge on how IL training is conducted. The study also established that the human resource capacity to conduct IL training is sufficient. The human resource comprises of Library staff and

lecturers teaching communication skills courses in the University. The study also found out that there is established physical infrastructure such as training spaces with appropriate equipment to support IL training. However, the study established that the space is inadequate, besides some of the equipment needing replacement.

5.1.2.1 Impact of IL Initiatives to Students

The study also found out that Initiatives undertaken are having a positive impact to the student population who underwent training on IL. There is increased usage of the Library, increased queries related to IL such as a search strategies and how to cite and reference and above all very low percentages in research projects and thesis once they are submitted to an anti-plagiarism software. With the implementations of the strategies and the IL framework suggested in this document a greater positive impact can be achieved.

5.1.3 Information Communication Technology (ICT) related to Information Literacy

The study also sought to examine the existing ICT and how they are applied in Information Literacy training. The study found out that the library embraces technology in the process of IL training. The library department uses equipment such projectors and computers in training. However, the study findings established that the Library department does not own a projector. There is internet connection, a library website, social media page and an institutional repository which are platforms used to share IL content online.

5.1.4 Challenges and mitigation measures towards Information Literacy training

The study also sought out find out the challenges which TTU library encountered in the process of IL training. As evidenced from the literature review all other activities related to IL are mainly dependent on funds. The study found out that inadequate funding was a major challenge the University Library is facing. One of the Interviewees confirmed by stating that library budged

has been going down over the years making operations difficult. Other challenges that the study found included inadequate computers for IL training, lack of a library projector, inadequate staff training, lack of collaboration between teaching staff and library staff, Inadequate training space in the library, limited time allocated to train IL during orientation and poor response rate by students when invited for IL training.

In spite of the challenges TTU Library has continued to train IL by introducing mitigation measures addressing the challenges. To address the financial challenge the study found out that the University library relies on budgets from other servicing departments in the University. However the library has to justify the need for such funding arrangement. To address the space challenge the study found out that the library uses the University auditorium and the University computer lab to train large groups. To address the projector challenge the library borrows from other departments. In house training by those who have attended seminars or workshops is organized to address the challenge of sponsoring staff for training. The library has started collaborations by involving the dean of students and student leaders. To address the problem of low response rate from students the library organizes training for small groups of students once quorum is reached. Besides they also take advantage of orientation even though the time is limited.

5.1.5 Suggestions for improving Information Literacy training

The study also sought to get suggestions from interviewees on how IL training can be improved in TTU. Some of the suggestions brought by the interviewees included IL be embedded in the curriculum for it not be considered co-curricular as it is. Having IL mainstreamed in the University was also suggested. One of the interviewees suggested that IL training be introduced at the lower levels of education and progress as one advances. Other suggestions included having audio visual IL content online which is thought to be appealing to the current generation of students, having comprehensive IL training during student's library orientation. Lastly it was also suggested that all teaching staff be trained on IL skills as will help in mainstreaming IL.

5.2 Conclusion

- Based on the findings the study has concluded that TTU has an IL policy which is not approved as it is in draft form. It was also concluded that there lacks a Library ICT policy to govern ICT related issues in the Library. IL component is also not captured in the curriculum development policy of TTU.

- On IL initiatives and resources, the study findings concluded that TTU Library has introduced some initiatives and have channeled resources towards IL. However some resources are not adequate especially funding and human resource specifically teaching staff capacity. Training space as a resource is also inadequate leading to trainings be conducted outside the library premises.

- The study also concluded that ICTs have been embraced in training IL skills in TTU. However, there are some inadequacies especially with regard to ICT training equipment.

- TTU Library has challenges in relation to IL training. This has affected the manner in which IL is conducted in the University. However there are mitigation measures put in place to ensure that trainings continue as scheduled.

- The study findings also concluded that with proper stakeholders' involvement, excellent suggestions can be gathered with regards to how best IL training should be conducted in TTU. This conclusion is based on some of the suggestions the interviewees put across.

5.3 Recommendations

5.3.1 Policies related to Information Literacy

From the findings the study recommends that the Library hasten the process of seeking approval for the draft IL proposal. This will give the library an opportunity to clarify and justify whatever they are executing in relation to IL in case they are called upon. The library should also develop a library ICT Policy which should be guided by the ICT policy emanating from the ICT department. This is to avoid conflict, repetition and duplication of functions. The University Librarian should also initiate and ensure IL is captured in the curriculum development policy.

5.3.2 Information Literacy Initiatives and resources

For initiatives and resources supporting IL training, the University management should avail adequate funds as stipulated by the commission of University Education. Having adequate funding will lead to purchase of equipment which is lacking, upgrading the existing ones and ensure staff attend seminars and workshops. The University Librarian should also liaise with management and teaching staff on how best IL can be accommodated in the curriculum. Besides TTU Library should adopt some of the suggested strategies for IL training, which the Interviewees put across. To address the problem of space the TTU should build a new big library that can accommodate large groups.

5.3.3 Information Communication Technology (ICT) related to Information Literacy

TTU Library should ensure that ICT equipment are available and properly working. For example the library should own their own projector to avoid the inconvenience it causes to students from rescheduled trainings due to lack of one. Computers should also be properly working as a proper functioning machine encourages patrons to visit Library premises.

5.3.4 Proposed framework for Information Literacy Training in Taita Taveta University

Based on the research findings the study proposed for adoption a framework for IL training for TTU as indicated in figure 5.1 below.
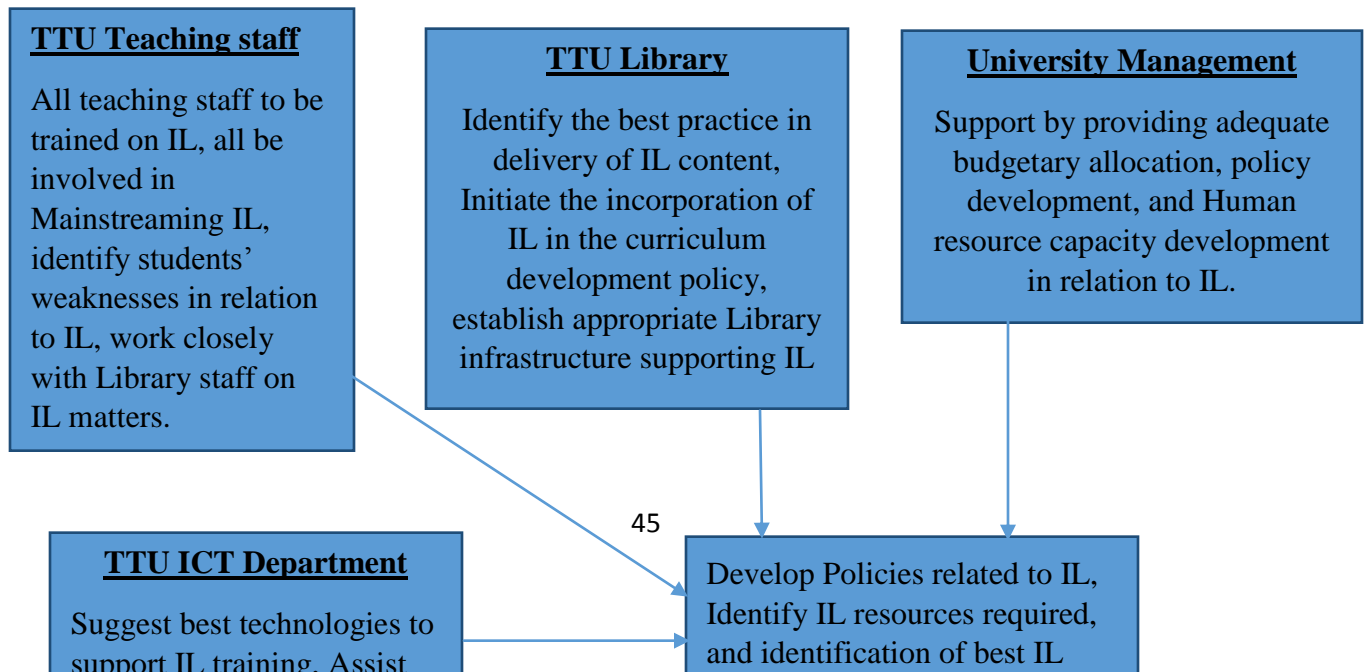
TTU Teaching staff

All teaching staff to be trained on IL, all be involved in Mainstreaming IL, identify students' weaknesses in relation to IL, work closely with Library staff on IL matters.

TTU Library

Identify the best practice in delivery of IL content, Initiate the incorporation of IL in the curriculum development policy, establish appropriate Library infrastructure supporting IL

University Management

Support by providing adequate budgetary allocation, policy development, and Human resource capacity development in relation to IL.

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TTU ICT Department

Suggest best technologies to support IL training. Assist

Develop Policies related to IL, Identify IL resources required, and identification of best IL

Figure 5.1 Proposed framework for IL training for Taita Taveta University.

5.5 Suggestion for further research

The study was conducted in TTU and the study suggests that further comparative studies on the topic involving two or more public Universities in Kenya be conducted. This will help for purposes of findings generalization. Further research on how to embed IL in Kenyan Universities' curriculum which is thought to be the best approach according to reviewed literature should be conducted.

5.6 Chapter summary

The chapter gave a summary of the key findings of the study, conclusions and recommendations. Suggestion for further research is also captured in this chapter. Policies, initiatives undertaken, availed resources, ICT infrastructure and collaboration are essential in IL training. The chapter also proposed a framework for IL training for TTU.

References

Adams Becker, S., Cummins, M., Davis, A., Freeman, A., Hall Giesinger, C. and Ananthanarayanan, V. (2017), NMC Horizon Report: 2017 Higher Education Edition, The New Media Consortium, available at: https://files.eric.ed.gov/fulltext/ED582134.pdf. (Accessed 10th January 2021).

Adam-Turner, N. ((2017). Digital literacy adoption with academic technology: Namely digital Information Literacy to enhance student learning outcomes. Doctoral thesis, Old Dominion University, Norfolk, Virginia.

Akalumhe, K.O. (2005), "Library users' education programme in Nigerian Universities: a case study of Lagos State university Ojo", International Center for Integrated Development Research, available at: https://www.icidr.org/regd/Library User Education Programme in Nigerian Universities-A Case Study of Lagos State University, Ojo.pdf. (Accessed 7th December 2020).

Amarakoon, L., Sakunthala, K. (2013). Information Literacy and higher education: with special reference to University of Bolton, Academic Centre Sri Lanka.

American Library Association (ALA) (2020). The Information Literacy competency standards for higher education. Available at:

https://alair.ala.org/bitstream/handle/11213/7668/ACRL%20Information%20Literacy%20Compe
tency%20Standards%20for%20Higher%20Education.pdf? Sequence=1&isAllowed=y.
(Accessed on 10th December 2020).

American Library Association's Presidential Committee on Information Literacy (1989), Presidential
committee on Information Literacy: Final report, American Library Association, available
at:www.ala.org/acrl/publications/whitepapers/presidential (Accessed on 7th January 2021).

Amunga, H.A. (2011). Information Literacy in the 21st century universities: The Kenyan experience.
Paper presented at the 8th International CALIBER at Goa University, Goa, and 02-04 March.

Amunga, H. A. (2014). An investigation into awareness, access & use of online information resources
for academic research by postgraduate students in Kenyan universities. Doctoral thesis,
University of Kerala, India.

Andretta, S. (2005). Information Literacy: a practitioner's guide. Oxford: Chandos.

Appleton, M. and Orr, D. (2000), "Meeting the needs of distance education students", in Bruce, C. and
Candy, P. (Eds.) Information Literacy around the World, Charles Sturt University Press:
Riverina, pp. 11-24.

Association of College and Research Libraries (2001). Information Literacy: Competency Standards for
Higher Education. Available at: www.ala.org/ala/mgrps/divs/acrl/standards.pdf. (Accessed on
16th January 2021).

Association of College and Research Libraries (ACRL) (2000). Information Literacy Competency
Standards for Higher Education. ACRL: Chicago, IL, available at:
www.ala.org/acrl/ilcomstan.html (Accessed on 11th May, 2021).

Atkinson. A. & Coffey, A. (1997). Analyzing documentary realities. Qualitative research: Theory,
method and practice, London: Sage, 45–62.

Avello Martínez,R.and Lopez Fernández, R. (2015). Digital literacy for teachers in Cuban tourism and
hotel management schools. Some experiences on its development. Digital literacy for teachers in
Cuban tourism and hotel management schools. Some experiences on its development.
Universities and Knowledge Society Journal, Vol. 12 No. 3, pp. 1-14.

Babbie, E. R. (2017). The basics of social research. Belmont, CA: Wadsworth, Cengage Learning.

Badke, W. (2010). Why Information Literacy is invisible. Communications in Information Literacy, 4(2), 129-141.

Baro, E. E., & Zuokemefa, T. (November 22, 2011). Information Literacy programmes in Nigeria: a survey of 36 university libraries. *New Library World, 112,* 549-565.

Baro, E.E. and Keboh, T. (2012), "Teaching and fostering Information Literacy programmes: a survey of five university libraries in Africa", The Journal of Academic Librarianship, Vol. 38 No. 5, pp. 311-315.

Boote, D.N. & Beile, P. (2010). Scholars before researchers: On the centrality of the dissertation literature review in research preparation. Educational Researcher 34/6, 3-15.

Britz, J. J., & Boekhorst, A. K. (2004). Information Literacy at school level: a comparative study between the Netherlands and South Africa: research article. *South African Journal of Libraries and Information Science, 70,* 2, 63-71.

Bruce, C. (2003). Information Literacy as a catalyst for educational change: A background paper. White Paper prepared for UNESCO, the U.S. National Commission on Libraries and Information Science, and the National Forum on Information Literacy, for use at the Information Literacy Meeting of Experts, Prague, The Czech Republic. Available at: http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/themes/info_lit_meeting_prague_2003.pdf (Accessed on 14th January 2021).

Bruce, C.S. (1994). Information Literacy blue print. Griffith University: Queensland, available at:www.griffith.edu.au/ins/training/computing/web/blueprint/content_blueprint.html (Accessed on 11th May 2021).

Bruner, J. (1976). Toward a theory of instruction. Cambridge: Harvard University Press.

Bryman, A. (2012). Social Research Methods - 4th Ed. Oxford: OXFORD University Press.

Cooper, D. R., & Schindler, P. S. (2008). Business research methods. New York: McGraw-Hill.

Corbin, J. &Strauss, A. (2008).Basics of qualitative research: Techniques and procedures for developing grounded theory. Thousand Oaks, CA: Sage.

Cowan, S. M. (2014). Information Literacy: The battle we won that we lost? Portal: Libraries and the Academy, 14(1), 23–32.

CUE (2014). Standards for university libraries in Kenya. Available at
https://cue.or.ke/index.php?option=com_phocadownload&view=category&id=16:standards-and-guidelines&Itemid=187. (Accessed on 14th January 2021).

Cyphert, D. and Lyle, S.P. (2016),"Employer expectations of Information Literacy: identifying the skills gap", in D'Angelo (Eds.), Information Literacy: Research and Collaboration across Disciplines, WAC Clearinghouse and University Press of Colorado, Fort Collins, CO, pp. 51-76, available at: https://wac.colostate.edu/books/infolit/collection.pdf (accessed on 11 December 2020).

De Jager, K., M. Nassimbeni, and P. Underwood. 2007. Libraries, Literacies and Learning: Retrospect and Prospects in Libraries for the Future Progress and Development of South African Libraries. Pretoria: Library and Information Association of South Africa and International Federation of Library Associations and Institutions.

DeBose, Kyrille Goldbeck, Inga Haugen, and Rebecca K. Miller. 2017. "Information Literacy Instruction Programs: Supporting the College of Agriculture and Life Sciences Community at Virginia Tech." Library Trends 65(3):316–38.

Efron, S. E., & Ravid, R. (2019). Writing the literature review: A practical guide. New York; London: Guilford Publications.

Farrell, R. and Badke, W. (2015), "Situating Information Literacy in the disciplines: a practical and systematic approach for academic Librarians", Reference Services Review, Vol. 43 No. 2, pp. 319-340.

Fraillon, J., Ainley, J., Schulz, W., Friedman, T., & Gebhardt, E. (2014).Preparing for Life in a Digital Age: The IEA International Computer and Information Literacy Study International Report. Technical report. Amsterdam: International Association for the Evaluation of Educational Achievement.

Ghauri, P. N., & Gronhaug, K. (2013). *Research methods in business studies*. Vancouver, B.C: Langara College.

Gonick, B.L.S. (2006), "New media and learning in the 21stcentury", Educause Review, Vol. 41 No. 1, pp. 68-69.

Goyal, M. and Sharma, P. (2014), "Reengineering library from Semi-Digital to digital library: a case study", International Journal for Research in Applied Science and Engineering Technology, Vol. 2No. 8, pp. 18-24.

Gross, M. (2011). Imposed information seeking in public libraries and school libraries: a common behavior? Information Research, Vol. 6 No. 2.

Gross, M. and Latham, D. (2009), "Undergraduate perceptions of Information Literacy: defining, attaining, and self-assessing skills", College and Research Libraries, Vol. 70 No. 4, pp. 336-350.

Gross, M. and Latham, D. (2011), "Experiences with and perceptions of information: a phenomenographic study of first-year college students", Library Quarterly, Vol. 81 No. 2, pp. 161-186.

Gross, M. and Latham, D. (2012), "What's skill got to do with it? Information Literacy skills and self-views of ability among first-year college students", Journal of the American Society for Information Science and Technology, Vol. 63 No. 3, pp. 574-583.

Hagood, M.C. and Skinner, E.N. (2015), "Moving beyond data transcription: rigor as issue in representation of digital literacies", Literacy Research: Theory, Method, and Practice, Vol. 64 No. 1, pp. 429-442.

Hernon, P & Dugan, R E. 2002. An action plan for outcomes assessment in your library. Chicago: ALA.

Howitt, D. (2010). Introduction to qualitative methods in psychology. Prentice Hall: New Jersey.

Hoy, W. K., & Adams, C. M. (2016). Quantitative research in education: A primer. Los Angeles, California: SAGE.

Jacobs, H. L., & Berg, S. (2011). Reconnecting Information Literacy policy with the core values of Librarianship. Library Trends, 60 (2), 383–394.

Jiyane, G.V. and Onyancha, O.B. (2010). Information Literacy education and instruction in academic libraries and LIS schools in institutions of higher education in South Africa. South African Journal of Libraries & Information Science, Vol. 76 No. 1, pp. 11-23, available at: http://dx.doi.org/10.7553/76-1-82 (Accessed on 20th May 2021).

John, H.C., Eti, C.C. and Ukangwa, C.C. (2015), "Information Literacy education among faculty and students: the role of Laz Otti memorial library, Babcock University, Nigeria", Information and Knowledge Management, Vol. 5 No. 5, pp. 25-30.

Kerlinger, F.N (1986). Foundations of behavioral research. New York: Holt, Rinehart & Winston.

Kingori, G. M., Chege, A., Kemoni, H (2012). 'Re-engineering Information Literacy programmes of Nairobi - based public and private universities in Kenya'. Paper, Presented at SCECSAL XXth Conference hosted by KLA on 4th-8th June 2012, Nairobi. Available at: http://erepository.uonbi.ac.ke/bitstream/handle/11295/70139/reengineering_information_literacy _programmes_of_nairobi__based_public_and_private_universities_in_kenya.Pdf? Sequence= 1&isallowed=y. (Accessed on 22nd December 2020).

Kingori, G., Njiraine, D., & Maina, S. (2016). Implementation of Information Literacy programmes in public libraries. Library Hi Tech News, 33, 2, 17-22.

Kothari, C. R. (2013). Research methodology: Methods and techniques. New Delhi: New Age International Publishers.

Kuhlthau, C.C. (2001), "Rethinking libraries for the information age school: vital roles in inquiry learning", Keynote Address to the International Association of School Library Conference and International Research Forum on Research in School Librarianship, Auckland, 9 July. Available at: www.iasl-online.org/events/conf/keynote-Kuhlthau2001.html (Accessed on 2nd February 2021).

Lau, J. (2006). Guidelines on Information Literacy for Lifelong Learning, Being a guideline compiled by the Information Literacy Section of the International Federation of Library. Available at https://cf2-www.ifla.org/files/assets/information-literacy/publications/ifla-guidelines-en.pdf. (Accessed on 11 January 2021).

Lockhart, J. (2011). The Before and After of an Information Literacy Policy. Proceedings of the IATUL Conferences. Retrieved March 7, 2018, from http://docs.lib.purdue.edu/iatul/2011/papers/29

Mathangani, S. & Irura G. (2005). Information Literacy training program at the University of Nairobi Library. In: User Information Literacy: case studies from University library programs in the SCANUL-ECS region. Oxford: INASP.

Mohammadyari, S. and Singh, H. (2015), "Understanding the effect of e-learning on individual performance: the role of digital literacy", Computers & Education, Vol.82, pp.11-25, available at: https://doi.org/10.1016/j.compedu.2014.10.025.

Molopyane, J., & Fourie, I. (November 16, 2015). A framework for workplace Information Literacy in academic contexts. Library Hi Tech, 33, 4, 562-583.

Molopyane, J., & Fourie, I. (November 16, 2015). A framework for workplace Information Literacy in academic contexts. *Library Hi Tech, 33,* 4, 562-583.

Muema, K. J. (2003). Challenges facing Information Literacy efforts in Kenya: a case study of selected university libraries in Kenya. Library Management, 24, 216-222.

Mugenda, A.G (2008). Social science research: Theory and principles. Nairobi: Applied Research and training Services.

Mugenda, O. M., & Mugenda, A. G. (1999). Research methods: Quantitative and qualitative approaches. Nairobi, Kenya: African Centre for Technology Studies.

Musangi, P. S., Odero, D., & Kwanya, T. (January 01, 2019). Critical success factors in library reengineering: a case of academic libraries in Kenya. Global Knowledge, Memory and Communication, 68, 534-549.

Reyes, C. and Brinegar, K. (2016), "Lessons learned: using the literacy histories of education students to foster empathy", Teaching and Teacher Education, Vol. 59, pp. 327-337.

Salony, M. (1995). "The History of bibliographic instruction: changing trends from books to the electronic world". The Reference Librarian, Nos 51/52, pp. 31-51.

Scherer, R., Rohatgi, A., & Hatlevik, O. E. (2017). Students' profiles of ICT use: Identification, determinants, and relations to achievement in a computer and Information Literacy test. Computers in Human Behavior, 70,486–499.

Scott, Craig S.; Schaad, Douglas C.; Mandel, Lynn S.; Brock, Douglas M. & Kim, Sara. 2000. Information and informatics literacy: skills, training and estimations of competence. Teaching and learning in medicine, 12 (2): 85-90.

Sedlack, R. G., & Stanley, J. (1992). Research methods: The interaction between conceptualization and empiricism. Needham Heights, MA: Allyn & Bacon.

Sekaran, U., & Bougie, R. (2010). Research methods for business: A skill building approach (5th Ed.). Chichester: Wiley.

Shute, V.J. (2011). Stealth assessment in computer-based games to support learning. In: S. Tobias & J.D. Fletcher Computer games and instruction. Charlotte, N.C.: Information Age Publishing, pp. 503-523.

Spiranec, S., & Pejova, Z. (2010). Information Literacy in South-East Europe: Formulating strategic initiatives, making reforms and introducing best practices. The International Information & Library Review, 42, 2, 75-83.

Spiranec, S., & Zorica, M. B. (2010). Information Literacy 2.0: Hype or discourse refinement? Journal of Documentation, 66(1), 140-153.

Suleiman, S.A. (2012), "User education programs in academic libraries: the experience of the International Islamic University of Malaysia students", Library Philosophy and Practice. Available at: www.webpages.uidaho.edu/mbolin/ali.htm. (Accessed on 1st December 2020).

Teh, P.L., Yong, C.C., Chong, C.W. and Yew, S.Y. (2011), "Do the big five personality factors affect knowledge sharing behaviour? A study of Malaysian universities", Malaysian Journal of Library and Information Science, Vol. 16 No. 1, pp. 47-62.

UNESCO (2003).The Prague Declaration: Towards an Information Literate Society, UNESCO, Paris.

UNESCO (2005). Information for all programme: Thematic Debate on Information Literacy, UNESCO, Paris.

UNESCO (2006). High-Level Colloquium on Information Literacy and Lifelong Learning, Bibliotheca Alexandrina, Alexandria, Egypt, 6-9 November 2005, Report of a Meeting Sponsored by the United Nations Education, Scientific, and Cultural Organization (UNESCO), National Forum on Information Literacy (NFIL) and the International Federation of Library Associations and Institutions (IFLA).

Virkus, S. and Metsar, S. (2004). General introduction to the role of the library for university education. LIBER Quarterly, Vol. 14 Nos 3/4, pp. 8-16.

Walton, G., & Pope, A. (2006). Information Literacy: Recognizing the need. Oxford: Chandos.

Whitworth, A. (2011). Empowerment or instrumental progressivism? Analyzing Information Literacy policies. Library Trends, 60(2), 312–337.

Zhu, S., Yang, H. H., MacLeod, J., Yu, L., Wu, D., (2019). Investigating Teenage Students' Information Literacy in China: A Social Cognitive Theory Perspective. (Asia-Pacific Education Researcher.)

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Ref: UON/FOA/DLIS/6/9   August 23, 2021

To whom it may concern,

RE: WILLY M. KISINGO C54/12454/2018

This is to confirm that the above-named person is a bona fide student at the University of Nairobi in the Department of Library and Information Science undertaking a degree in Master of Library and Information Science.

He is currently in the process of collecting data on his project titled *"An Evaluation of Information Literacy Initiatives: A Case Study of Taita Taveta University Library."* as part of the requirements for the course.

Any assistance accorded to him will be highly appreciated.

Dr. Dorothy Njiraine
Chairperson,
Department of Library and Information Science

APPENDIX II: ACCEPTANCE LETTER TO CONDUCT RESEARCH

TAITA-TAVETA UNIVERSITY

OFFICE OF THE DEPUTY VICE CHANCELLOR (ACADEMIC, RESEARCH & OUTREACH)

P.O.BOX 635-80300 – Voi; Tel: 0774-222064; Email: dvc-aro@ttu.ac.ke; Website: www.ttu.ac.ke

Ref: **TU/PM/02/03/02/VOL. 2**   Date: **3rd September 2021**

MR. WILLY KISINGO - C54/12454/2018
C/O UNIVERSITY OF NAIROBI
FACULTY OF ARTS
DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE
P.O. BOX 30197 00100
NAIROBI
Email: dlis@uonbi.ac.ke; dept-lisi@uonbi.ac.ke

Dear Mr. Kisingo

We are in receipt of a letter from the Chairperson of Department of Library and Information Science, University of Nairobi dated **23rd August 2021 Ref: UON/FOA/DLIS/6/9**, where you are a student undertaking a degree in Master of Library and Information Science.

This letter is to inform you that your request to conduct a research at Taita Taveta University for your project titled **"An Evaluation of Information Literacy Initiatives: A Case Study of Taita Taveta University Library"** has been approved for data collection.   You will be required to abide by our Research and Postgraduate Policies and that you will be required to keep confidential all information pertaining to Taita Taveta University (TTU) and to submit a copy of the thesis to the office of the undersigned.

Yours sincerely,

Prof. Christine A. Onyango, PhD
Deputy Vice Chancellor (Academic, Research & Outreach)

Copies to: HoD-Library Taita Taveta University
Research Officer – Taita Taveta University
Dr. Dorothy Njiraine
Chairperson, Department of Library & Information
Science
University of Nairobi

Home of Ideas

APPENDIX III: RESEARCH PERMIT FROM NACOSTI

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APPENDIX IV: INTERVIEW SCHEDULE FOR LIBRARY STAFF

Date of interview…………………………………………………………………………..

Interviewee title…………………………………………………………………………

Gender …………………………………………………………………………………….

1. How many years have you worked in the Library?
2. Are you aware of any documented policies which directly or indirectly affect Information Literacy training?
3. What are your perceptions about implementation of the policies towards Information Literacy training?
4. Does the library have any initiatives towards Information Literacy training?
5. What is your perception towards Information Literacy initiatives that Taita Taveta University Library has put in place?
6. Do you think the library gets adequate funding to initiate and support Information Literacy initiatives?
7. Do you think the Taita Taveta University Library has the appropriate infrastructure to support Information Literacy training?
8. What is your perception on Taita Taveta University library staff capacity to teach Information Literacy?
9. Which competencies do you think one ought to possess to effectively teach Information Literacy?
10. Do you work closely with teaching staff in teaching Information Literacy?
11. What available ICTs can be used to teach Information Literacy skills at Taita Taveta University?
12. What are your views on the available Information communication and technology (ICT) used to teach Information Literacy?
13. Do you think the available ICTs in Taita Taveta University are being fully exploited in relation to teaching Information Literacy skills?
14. What Challenges do you face in teaching Information Literacy skills in Taita Taveta University?
15. What Mitigation measures have been put in place to address the challenges?
16. Suggest strategies that you think can be effective in training Information Literacy which can be employed in Taita Taveta University?

Thank you for your time and cooperation.

APPENDIX V: INTERVIEW SCHEDULE FOR TEACHING STAFF

Date of interview…………………………………………………………………………..

Interviewee title…………………………………………………………………………

Gender …………………………………………………………………………………….

1. How many Years have you taught in Taita Taveta University?
2. Are you aware of any documented policies which directly or indirectly affect Information Literacy teaching?
3. What are your perceptions about implementation of policies related to Information Literacy teaching in Taita Taveta University?
4. Does your department have any initiatives geared towards Information Literacy training?
5. What is your perception towards the initiatives put in place towards teaching Information Literacy at Taita Taveta University?
6. Is there any component of Information Literacy in the Communication Skills course in Taita Taveta University
7. What are your views on the effectiveness of the course in imparting Information Literacy skills in Taita Taveta University?
8. Do you collaborate with the library staff in teaching/ training Information Literacy in Taita Taveta University?
9. What is your perception about Library staff teaching Information Literacy component in the communication skills course in Taita Taveta University?
10. Do you think your department has the appropriate infrastructure to support Information Literacy training in Taita Taveta University?
11. What available ICTs can be used to teach Information Literacy skills at Taita Taveta University?
12. What are your views on the available Information communication and technology (ICT) used to teach Information Literacy in Taita Taveta University?
13. Do you think the available ICTs in Taita Taveta University are being fully exploited in relation to teaching Information Literacy skills?
14. What Challenges do you face in teaching Information Literacy skills in Taita Taveta University?
15. What Mitigation measures have you put in place to address the challenges?
16. Suggest strategies that you think can be effective in teaching Information Literacy skills in Taita Taveta University.

Thank you for your time and cooperation.