ASSESSING THE ROLE OF INFORMATION LITERACY IN ENHANCING UTILIZATION OF INTERNET RESOURCES FOR INDEPENDENT LEARNING AMONG UNIVERSITY OF DAR ES SALAAM STUDENTS: A CASE OF COLLEGES OF SOCIAL SCIENCES AND HUMANITIES.

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CERTIFICATION

The undersigned certifies that the supervisor has read and hereby recommends for acceptance by University of Dar es Salaam a dissertation entitled *"Assessing the Role of Information Literacy in Enhancing Utilization of Internet Resources for Independent Learning Amongst University of Dar es Salaam Students"* in partial fulfillment of the requirements for the Bachelor of Arts in Library and Information Studies (BALIS) of the University of Dar es Salaam.

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Dr. Evans Wema

(Supervisor)

DECLARATION AND COPYRIGHT

I, Kasuke, Lucy Bakari declare that this independent study is my own original work and that it has not been presented and will not be presented to any other University for a similar or any other degree honor.

Signature

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LIST OF ABBREVIATIONS

IL	Information Literacy
OPAC	Online Public Access Catalog
UDSM	University Of Dar es Salaam
COHU	College of Humanities
COSS	College of Social Sciences
UDBS	University Of Dar es Salaam Business School

ABSTRACT

Internet Resources plays a great role or implication in information accessibility, usability, and effective retrieval. This has added more value to students in their performance and endeavors towards career goals achievement. However, effective use of internet resources by students absolutely depends on information literacy and awareness on available internet resources. Thus, the study was conducted to assess the role of information literacy in enhancing utilization of internet resources among university students, specifically the study intended to examine students' awareness of the information literacy programs and available internet resources, to find out the relationship between awareness, perception, and use of internet resources, and identifying training programs that relate to information literacy at university level. The study was carried out at the University of Dar es Salaam and adopted an exploratory research design. The study used an electronic questionnaire for data collection and probability sampling technique for identifying a sample of respondents at the University. The study indicated most of the students are computer literate and are aware of the availability of electronic information resources. The study also revealed that students who were aware of available internet resources demonstrated high usage of internet resources. It also noted that Information literacy and lifelong learning are the only courses that relate to information literacy at the University. However, the study revealed that most of the respondents agreed that lack of proficiency in information and computer literacy skills are the limiting factors towards efficient utilization of internet resources. It is therefore recommended that information literacy should be offered as a core course during the first semester of the first year to all students across the university so as to enhance effective use of internet resources for excellence in academic and research.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

<div align="center">**CHAPTER ONE**</div>

<div align="center">**INTRODUCTION AND BACKGROUND OF THE PROBLEM**</div>

1.0 Introduction

Information literacy has been defined by Scott (2012) as the ability to find, to evaluate and use required information effectively, efficiently, and ethically answer the information need. Again Bothma (2008) also defined information literacy as the ability to know when the information is needed, being able to find and evaluate information as well as use the information found. This is used in day to day activity such in schools, university, workplace as well as at home, as it is used in accessing and using information with varied needs. Thus, an information literate individual is the one who should be able to; - determine the extent of needed information, access the needed information effectively and efficiently, critically evaluate the information and its sources and incorporate selected information into knowledge base, effectively use the information to accomplish exact purpose as well as understanding the economic, legal and social issues regarding the access and use of information legally and ethically (American Library Association, 2000).

The term utilization according to the Oxford English Dictionary (2018) can shortly be defined as the act of making effective and practical use of something.

Internet resources these are electronic resources accessed online via the internet and these information includes academic journals, search engines, digital or electronic libraries, blogs or forums, etc. (Sahin, Ercan, & Balta, 2010).

Information literacy as it has been defined it has clear association or relationship with access and use of internet resources, as it helps information seekers specifically students to effectively and efficiently access and use internet resources in tackling information needs necessary for independent learning. Thus the study will be conducted so as to test students' awareness on the utilization of internet resources and assessing the role of Information Literacy in supporting and increasing utilization of internet resources to students.

1.1.   Background to the problem

The concept of information literacy was first introduced in 1974 by Paul Zurkowski, former President of the U.S. Information Industry Association, for the National Commission for Libraries and Information Science (NCLIS), he recommended that, if they were to survive and compete in

an emerging information society, there is a need for people to become "information literate". He stated this because information literacy is critically vital for every nation, its institutions, and its citizens, for being competitive and productive in a Digital World and/or 21st Century Global Information Society and promoting superior inclusive society (Doyle, C. 1994). For example in 1994 the Finland ministry of education formed an expert committee to prepare a strategy for education, training, and research in the information society of the 21st century as they published information skills for business, adult, students, and teachers. Teachers were needed to acquire new skills and competences so as to be able to use information technology as tool in their teaching work where all teachers were ought to know how to utilize information technology and take account of the requirements of internet resources in their work (Eisenberg, M.B., Lowe, C. A. and Spitzer, K. L. 2004).

It is believed that most of the Information users are challenged with information overload resulted from diverse sources especially internet sources, which has led to challenges in its validity and usefulness. However, young students (who might become teachers, etc.) have an even stronger need to be able to identify what is relevant for learning and recreational purposes as exposure to too much information may be counter-productive as a result of information overload (Yan, Sha, Yan, & Shang, 2015). Information Literacy (IL) provides individuals with the critical skills needed to find and evaluate the information they need for either academic work and/or personal lives. For example, after graduating, Information Literacy can help newly-graduated students to make an easier transition to young adulthood. A lot of research on information literacy has centered so much on the academic environment (Rader, 2002).

Currently, due to the results associated by information explosion which overloads users, much concern has been revealed in the transition of information literacy from education to the workplace. As most professional workers are supposed to integrate information literacy with their working environment so as to effectively use information resources available in order to upsurge efficiency in work performance. Using the school setting like a workplace environment for teachers, for example, they need to understand and use available information resources in their schools setting as well as information available online to support their teaching activities. There is the need to use different information resources in the workplace, e.g. from textual, physical and social sources (Lloyd, 2006).

Teacher's use of internet resources to support teaching activities depends on their level of information literacy skills. Their knowledge in using internet resources and other information as well as its sources available in the school comprehensively will go a long way to affect their student's academic performance. To a larger extent, much of it is greatly dependent on the facilities available in the school. For example, a school library, relevant library materials, a qualified librarian, computers, an ICT laboratory, and internet connectivity. In the absence of all these facilities, an information literate teacher will be limited in accessing the resources that these facilities bring i.e. internet resources.

In Africa, information literacy, the KNUST, (2008) composed the Proposal for Information Literacy Course wherein 2009 the Planning & Resources Committee of KNUST approved Information Literacy as part of graded courses on academic and research skills and the Academic Board was expected to authorize implementation. This course was designed and approved so as to assist students to achieve greater success by accessing, using, and applying information effectively by equipping them with workable knowledge on resources, methods, and services. And enable them to be an information literate for their university education and also to develop lifelong learning for their ongoing career development, etc. as it encompasses a wide range of individual functionalities. Though the proposal fails to establish measurable outcomes for evaluation of the program despite the anticipated aftermaths (Van 't Hof, Sluijs, Asamoah-Hassan, & Agyen-Gyasi, 2010). Furthermore, a few public and private universities in Ghana have commenced teaching IL to their first-year students. Secondary school students need a basic understanding of this concept before entering university where expectations to be independent in using information is high.

In Tanzania, information literacy is still problematic as some scholars especially information professionals like librarians have witnessed that, a great number of information users, especially students, have information skills deficiencies. Most of the students attend school knowing very little or nothing about the basic library use and information search skills, computer-related skills, and other information resources use skills in general. Consequently, students lack information knowledge and skills necessary to effectively comprehend what they require in order to meet the information needs of their day-to-day academic pursuits. As a result, this leads to incompetent teachers and other professionals in the context of information literacy. Thus, as a result, most of the professional workers lack information literate skills supportive in their workplace. The main

reason behind this situation is the poor base of library systems, including school libraries in most developing countries, both in rural and urban centers. A number of studies concerning school libraries in Africa. Also, Obajemu (2002), report poor library resources generally, as well as the absence or poor school library facilities and services.

1.2. Statement of the problems

Information literacy as is the constitutions of computer and technology literacy, cultural literacy, basic literacy which involves speaking, reading and writing and library literacy such as knowing a different kind of materials. Also, it involves knowing to access information and organize them in a usable form, etc. That is expected to be acquainted by any information user, as it plays the great role as it helps information users to understand rules prevailing to information ownership and copyright, enhance lifelong learning, effective use of abundance information available in various format. This is in the sense that, information literacy embed users with the ability to effectively locate, evaluate, and use the desired information; therefore, information literacy is regarded as the precondition for knowledge creation and lifelong learning (Naik & Padmini, 2014).

Currently, what is more, emphasized in educational paradigm is students independent learning, this actually is facilitated by the ability of the student in utilizing a variety of information which is available either physically or electronically available and accessed online i.e. internet resources. Perhaps this information is not optimally utilized, for example at the University of Dar es Salaam most of the internet resources subscribed are not significantly used (Mwantimwa, E. & Ndenje, S. 2018). However, this has been hindered by various issues as claimed by some scholars, for example, the study conducted by Manda (2005) has concluded that the prominent challenges are insufficient infrastructures since most of the high learning institutions are at developing stage towards the improvement of prominent requirements. In addition, students have witnessed the endless problem of unawareness of available specific and potential internet resources resulted in unsupportive marketing strategies, lack of skills, knowledge, and competence in utilizing internet resources. In addition, the inadequacy of ICT infrastructure, unreliable internet services and power supply, decreased number of databases, limited computer literacy, etc. impose problems in access and utilization of internet resources (University of Dar es Salaam, 2018).

Similar studies have been conducted and indicated that there is lack of substantial information literacy skills amongst teachers, instead, most of them depend on curricular based information

instead of searching for new relevant additional information from other electronic or internet resources to include in their teachings (Laverty & Reed, 2006). In addition, some other studies on the same topic have shown that lack of information literacy skills is the one amongst prominent factors that limits access and utilization of internet resources (Angello, 2010). Another research finding has shown that there was a positive correlation between information literacy, computer competence, and electronic information resources use by lecturers and concluded that "information literacy and computer competence are basic, useful and necessary skills needed to maximally exploit electronic information resources" (Abiodun, O. & Aluko-Arowolo, T. K., 2018). Yet little is explored on the role played by information literacy skills amongst university students in Tanzania in utilizing internet resources effectively so as to facilitate independent learning. Thus, there was a need to carry out a study to assess how information literacy enhances the utilization of internet resources amongst university students particularly those studying at Colleges of Humanities and Social Sciences (CoSS and CoHU).

1.3.   Research objective

1.3.1 General objective:

The main objective of this study is to assess the role of information literacy in enhancing the utilization of internet resources among university students in the Colleges of Humanities and Social Sciences.

1.3.2 Specific objectives:

i.   To assess students' awareness of the information literacy programs and available internet resources.

ii.   To find out the relationship between awareness, perception, and use of internet resources.

iii.   To identify training programs in relation to information literacy at the university level and use of university's available internet resources for independent studies.

iv.   To identify challenges encountered by students in accessing and utilizing internet resources at the University of Dar es Salaam.

1.3.2 Research hypothesis:

"Proficiency information literacy skills to students supports maximum utilization of internet resources"

"Competent Information literacy skill is directly proportional to internet resources utilization"

1.4. Research questions:

i. What is the level of students' awareness of the computer and information literacy programs and available internet resources?

ii. What is the relationship between awareness, perception, and use of internet resources?

iii. At the University of Dar es Salaam, is there any training programs in relation to information literacy at the university level and use of university's available internet resources for independent studies?

iv. What are the challenges encountered by students in accessing and utilizing internet resources at the University of Dar es Salaam?

v. What are the challenges encountered by students in accessing and utilizing internet resources?

1.5. Significance of the study

Due to the importance of Information Literacy, developing the capacity of students especially those who pursue bachelors of education i.e. upcoming teachers will be of great benefit to both them as upcoming teachers and the students whom they will be taught by them. One way to do this is to formulate policies that will enable the said group even all students to become the most effective information users so as to impart and utilize what is valuable and relevant with the current glob as well as sheer to the information age or information society, this is because most of developing countries specifically Tanzania, tend to lag behind in academic excellence because of lack of proficiency skills in utilizing internet resources. This study will, therefore, create awareness to administrative staff and faculty members at the University of Dar es Salaam to make provision for the inclusion of Information Literacy programs for all students to foster optimal utilization of internet resources. Furthermore, the Information Literacy Program that would be designed is expected to offer necessary guidelines for planning, implementing, managing and evaluating Information Literacy program for all university students.

1.6. Scope and Limitations of the study

1.6.1. Scope of the study

The study will cover only University of Dar es Salaam undergraduate students at college of humanities

1.6.2. Limitations of the study

There will be a number of hindrances that a researcher might face in conducting the research. The basic factors are such as,

I. Limited Time

Time is not enough for the researcher to conduct the research in a broad context because the research takes a long process that ranges from data collection which uses different techniques up to report writing. To overcome this limitation, the researcher will use the available time effectively based on the schedule.

II. Lack of sufficient funds

The fund which will assist the researcher buys different resources that might be needed to purchase enough materials and services that facilitate the research process. So due to lack of fund, the researcher tried to solve that problem by reducing the less important expenses so that researcher can meet with the available amount that can complete the research report and collect accurate data for low cost which will not affect the quality. and quantity of the needed research data.

III. Poor cooperation from respondents

The respondents may not provide good cooperation to the researcher due to the fact that they may be very busy with their own activities. To solve the problem a researcher will convince them to provide their full cooperation by telling them the significance and purpose of the study.

1.7. Definition of key terms

Asses: To evaluate or estimate the nature, ability or quality (Oxford Living Dictionary, 2019). In this paper, this was used to mean evaluating so as to understand the role of information literacy skills.

Enhance: According to Merriam Webster Dictionary this refers to the act of increasing, improving value or quality. In this, it was used as facilitating and simplifying.

Information Literacy: Is the ability to find, to evaluate and use required information effectively, efficiently, and ethically answer the information need Scott (2012).

Internet resources: Internet resources these are electronic resources accessed online via the internet and these information includes academic journals, search engines, digital or electronic libraries, blogs or forums, etc. (Sahin, Ercan, & Balta, 2010).

Role: This simply means the functions assumed or part played by a person or thing in a particular situation (Cambridge Dictionary, 2019).

Utilization: The term utilization according to the Oxford English Dictionary (2018) can shortly be defined as the act of making effective and practical use of something. In this study, this term will be used as the process-wise lifelong act of using and benefiting from internet resources.

University Student: This is all students who are pursuing different faculties or program at the University of Da es Salaam. Specifically, undergraduate students from COSS and COHU.

CHAPTER TWO

LITERATURE REVIEW

2.1. Students' awareness of the computer and information literacy programs and available internet resources.

Various studies have been carried out in the area of information literacy to find out whether students are aware of computers and information literacy programs as well as the available internet resources. For example, Dincer (2016) discovered that students' basic computer literacy level ware low. Other studies show that there is a significant relationship between computer literacy and information literacy embedded with computer use practices (Kumar P., 2012). Moreover, other study findings revealed that students who were quite aware on available internet resources and skilled in the use of electronic information resources (Information Literacy) demonstrated high use electronic information resources (Akpojotor, 2016). Therefore, students' awareness of computer literacy, information literacy, and available internet resources has a great role in the effective utilization of available internet resources.

2.2. Relationship between awareness, and use of internet resources.

Earlier studies revealed that use of internet resources largely depends on users' awareness and perception. Studies show that there is a significant relationship between the level of awareness of electronic information resources and their usage. According to the study conducted on "Awareness and usage of electronic information resources among postgraduate students of library and information science in Southern Nigeria" (Akpojotor, 2016), the findings revealed that students who were quite aware of available internet resources and skilled in the use of electronic information resources demonstrated high use of electronic information resources. In addition, other studies revealed that lack of awareness to electronic resources provided by the library leads to underutilization of internet resources (Ibrahim, 2004). Therefore, Universities or university library has to create more awareness on internet information resources by arranging effective orientation and training programs to optimize the usage of internet resources (Khatri & Gudadhe, 2003). Therefore, there is a significant relationship between awareness of internet resources and its usage, as awareness influence usage of internet resources.

2.3. Training programs in relation to information literacy at the university level and use of university's available internet resources for independent studies.

Information Literacy is essential for lifelong learning where the vital mission of higher education institution is developing lifelong learners and this done by firming user education to influence effective use internet resources (Van 't Hof, Sluijs, Asamoah-Hassan, & Agyen-Gyasi, 2010). Library orientation and other library user education activities do not adequately impart proficiency information literacy skills to students, thus there is a need for the university's curriculum to embrace Information Literacy course to equip students with proficiency Information Literacy skills ULSP 2K14 (2005). In addition, conferring to the study conducted by Kumar (2010), agreed that it is vital for the university professionals working with the academic community proactively develop training programs aimed at enabling information users to use electronic information sources more effectively. Association of College and Research Library (ACRL) recommended that "teaching faculty have a greater responsibility in designing curricula and assignment that foster enhanced engagement with the core ideas about information literacy" (ACRL, 2019). For effectively equip students or researchers with proficient Information literacy skills for effective information use some recommendations to be included to better suit African conditions. These are, "digital library infrastructure, to be in place at an early stage, including an OPAC, subject directories, user-friendly database access, adequate training capacity, and library automation; and adequate opportunities for practicing and maintaining minimum information skills, not only for students, but also for faculty and library staff" (Van 't Hof, Sluijs, Asamoah-Hassan, & Agyen-Gyasi, 2010). Information Literacy is a vital aspect in influencing utilization of e-resources.

2.4. Challenges encountered by students in accessing and utilizing internet resources.

In accessing and utilizing internet or electronic information resources, students or users encounter the number of challenges. These challenges includes lack of information literacy skills, i.e. required skills for effective use of the internet, and inability to find relevant information, lack of information about how to use electronic information resources, lack of time to acquire skills needed to use electronic information resources, computer illiteracy, etc. (Luambano & Nawe, 2004). According to the study conducted by Mwantimwa, Elia, & Sichalwe (2017) reported the challenges discouraging effective utilization of internet resources includes "slow internet connectivity, inability to access full-text articles, unreliable power supply, inaccessibility of e-

resources outside university premises due to IP address limitations, inadequate ICT infrastructure, and inadequate skills and knowledge". In addition, most of the studies show that there are common challenges encountered by users when accessing internet resources. The study conducted on "challenges of the utilization of online information resources by undergraduate students: Implications for information services". Reported that, direct challenges include lack of browsing skills, low internet bandwidth and insufficient ICT infrastructure where indirect challenges are such as include lack of internet access at home, absence of online assignments, lack of motivation to use online information (Ugwu & Orsu, 2017). Kumar (2010) reported that information literacy training is the main influence on the usage of electronic resources. Generally, studies recommended that university library should embark on a more active role to promote the usage of e-resources through web technologies to enhance the quality of teaching and research (Mwantimwa, Elia, & Sichalwe, 2017). Moreover, provision of more computers with Internet facilities, increasing Internet access speed, as well as providing more chances of training in Internet use to enable full exploitation of potential electronic information (Luambano & Nawe, 2004; Togia & Tsigilis (2010).

The literature reviewed indicates that different studies have been conducted to examine the level of student's awareness of computer literacy and information literacy as well as the use of internet resources in higher learning institutions and challenges associated. Most of the studies focused more on individual aspect without examining the role played by Information literacy skills in the use of internet resources. Moreover, reviewed studies did not clearly examine the causal relationship between information literacy, awareness of internet resources and its use. This study clearly addressed the gap.

CHAPTER THREE

RESEARCH METHODOLOGY

III.1. Introduction

This refers to as the part of the research methodology that includes all methods used by the researcher during research operations or during the course of studying his or her research problem (Kothari, 2002). This is differing from the research technique but it has some relations because it influences the choice of research instruments. The section also includes information about the research design, the population, sample size, and the methods used in data collection and analysis.

III.2. Research design

According to Kothari, (2004) Research design is the conceptual structure within which research process is conducted which encompasses conditions for data collection and analysis aiming at combining relevance to the research purpose, it generally includes what, where, when, how much and by which means should the research be done. This is important in research because it enhances the smooth running of the research procedures. The study used exploratory research design for data collection, measurement, and analysis as well as guiding on which kind of data to be collected, when, where and how data should be collected. This was the most appropriate design for this study because the researcher owes to gain familiarity with the research population sample i.e. university students. The researcher explored a thorough understanding of students' awareness of information literate skills in access and utilization of internet resources as well as staff perception towards the role of information literacy in enhancing the utilization of electronic resources. Also since researcher wanted to test hypothesis that; **"**proficiency information literacy skills to students support maximum utilization of internet resources" Thus, exploratory design was suitable for the study as the researcher was able to understand the causal relationship.

III.3. The study area

The study was carried out at the University of Dar es Salaam located in Dar es Salaam. The University of Dar es Salaam is located 13km West of Dare es Salaam city center. The University of Dar es Salaam was officially established by the University of Dar es Salaam Act No 12 of 1970 as a National University. The study focused on CoSS and CoHU due to the fact that these were

one of the major colleges at the university with the highest enrollment having a higher possibility of utilizing electronic resources.

III.4. The study population

A population is a totality of the objects under investigation (Adam, 2008). On the other hand, Kothari (2003) refers to the population as a group of individuals, events, objects or items from which samples are taken for measurement. This study drew its sample from the population of students at the University of Dar es Salaam College of Social Sciences and Humanities. This is because the colleges cover a large population at the University. Also, the samples from each category were conveniently selected. The convenience sampling techniques were used because the researcher was familiar with the institute as most of the respondents are always busy with daily routine so it was vividly difficult to have an arranged appointment or enough time to stay with them. Available students from COSS and COHU were selected from different courses that are offered by the University of Dar es Salaam.

III.5. Sample size and sampling techniques

The total number of respondents was fifty (60) who were obtained through a probability sampling technique. In total 60 undergraduate students were selected from COSS and COHU. According to Tunis (1988), the sample size of 30 is sufficient to represent a population in the social research study.

III.6. Data collection methods

This entails research instruments which refer to all tools a researcher uses to collect both qualitative and qualitative data for answering the research question, it is generally depending on research question as the instrument should be ethically sound, practicable and appropriate to the topic under study (Eng, 2013). The data were collected using Questionnaires in studying the research problem. The questionnaire was distributed electronically to students so as to gain insight understanding of the study. These methods were useful and suitable for studying this research problem because, it saved researchers' time, yield up high response and more standardized data which allowed for statistical analysis, and also questionnaire and interview methods are generally cheap.

III.6.1. Primary data

Primary data were collected through survey methods employing a questionnaire. This method was useful in relation to the nature of the problem under study. However, the questionnaire has both

advantages and disadvantages in the research process, but this was useful due to some limitations of the study.

III.6.2. Secondary data

A critical literature survey was done to gather information relevant to electronic resources use. The variety of data sources including research publications were gathered in order to establish relevant past and current information on the role played by information literacy skills amongst university students in utilizing internet resources. Articles from different journals, published, unpublished reports, books, brochures and internet sources cited were consulted.

III.6.3. Students' questionnaires

The purpose of the student questionnaires was to document information on the awareness and perception of students regarding information literacy and usage of internet resources. A structured and standardized questionnaire with both open-ended and closed-ended questions was used in this research. The questionnaire was selected as the main data-gathering method because it facilitates the collection of large amounts of data and information in a short period of time. The questionnaire is also simple to handle, simple to answer, quick and relatively inexpensive to analyze (Kothari, 1990). With open-ended questions, the respondents were free to respond to questions asked in their own words. In this case, respondents were able to express their own feelings, opinion, and attitude on the research problem and study.

III.6.4. Data quality control

This involves ensuring reliability and validity of data which refers to the extent to which an instrument measure or perform what is supposed to measure and perform (ResearchRundowns, n.d.). For ensuring reliability and validity of data, this ensured that correct data were obtained from the respondents. This was done by the use of pilot study methods as well as translation of the research questions.

III.7.   Ethical and moral issues

This deals with the response to awareness rising of ethically sensitive issues in the research process where the respondents should be assured that their all physical, social and psychological well-being is ethically protected and not abused by research, this is done by the researcher through avoiding any actions which will lead to deleterious effects or undermine other researcher's

reputation. Thus, research should ensure informed consent, confidentiality, anonymity and deceptive research (University of Research Degrees Committee, 2008). In this study, the researcher ensured informed consent, anonymity as well as the confidentiality of the respondents by providing or including the note in the research instruments. This was usefully for the study because it helped to reduce respondents' anxiety during data collection.

III.8. Data processing

The data were organized, labeled, coded to facilitate data analysis. This was done through the editing of the collected raw data to remove errors, incompleteness, inconsistency, and omission. This ensures that the data are accurate and consistent.

III.9. Pilot study

A pilot study was carried out before the main fieldwork, in order to establish the validity, reliability, and significance of the instruments. The instruments were pre-tested at the UDSM main campus at the Information Studies Program. The questionnaires were administered to 10 students.

III.10. Data analysis

The Statistical Package for the Social Sciences (SPSS 11.5) and content analysis was used to aid the analysis of primary data. The primary data were then organized and analyzed in relation to the specified research objectives. The results of the analysis were illustrated in the form of descriptive statistics which include graphs, frequencies, and cross-tabulations, tables and charts depicting percentages and counts of respondents. The qualitative data were analyzed using non-parametric tests (Pearson chi-square test) to test for statistical significance and association in order to establish relationships between the dependent and independent variables.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

This chapter explains the findings from the study by analyzing the findings and the discussion of the findings of the results. All these are explained below;

4.1. Demographic information

Demographic details for this study are summarized in Table 1 below, consisting of gender, age and year of study:

Table 1: **Demographic characteristics of respondents**

GENDER	FREQUENCY	PERCENTAGE
Male	46	76.7%
Female	14	23.3%
Total	60	100
AGE		**PERCENTAGE**
20-25	50	83.3%
26-30	8	13.3%
Above 34	2	4.4%
Total	60	100
YEAR OF STUDY		**PERCENTAGE**
1st Year	9	15%
2nd Year	29	48.3%
3rd Year	21	35%
4th Year	1	1.7%
Total	60	100

4.2. Students' awareness of information literacy programs and available internet resources.

4.2.1. Student's familiarity with the usage of computers.

This question intended to know whether students are aware of the usage of computer or not. This is due to the fact that computer literacy skills have great implication on information literacy and usage of internet or electronic resources. Chart 1 below summarizes the findings.

*Figure 1: **Student's familiarity with the usage of computers***

The chart 1 show student's awareness on the usage of computer by University of Dar es Salaam student where the maximum number of the respondent of about 58 (96.7%) indicated that they are aware of the usage of computer and only 2 (3.3%) indicated limited awareness of computer usage. This indicates that a large number of students at the University of Dar es Salaam are aware of computer usage.

4.2.2. How students learned about computer usage skills.
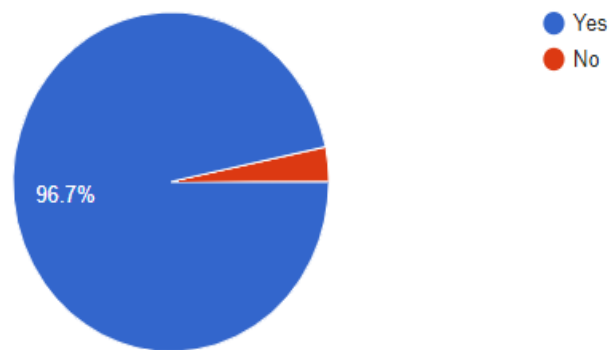
This question intended to know how do students learn computers usage skills as to whether they engage in self-learning, peer communication, formal computer course, a short course offered at the university, or/and computer courses before university admission. The findings are summarized in Figure 3.2 below.
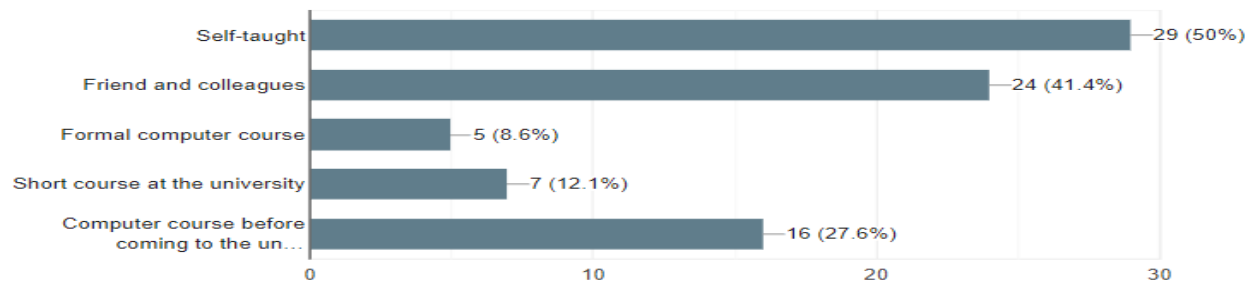
*Figure 2: **Ways used by students to learn about computer usage skills.***

Respondents' indication in chart 2 is as follows: 29 (50%) are self-taught, 24 (41.4%) learned from friends and/or colleagues, 16 (27.6%) attended a computer course before coming to the University, 7 (12.1%) attended short course at the University of Dar es Salaam and 5 (8.6%)

attended a formal computer course. This generally shows that a large number of students engage in self-learning and this is because of having information literacy skills

4.2.3. Information sources mostly used by students at the University of Dar es Salaam

This intended to know which source of information is mostly used by UDSM students so as to establish a relationship on the role of information literacy and information source they use the most and findings is summarized in the bellow data Table 2 below

*Table 2: **I**nformation sources mostly used by students at the University of Dar es Salaam*

Information source	Frequency	Percentage
Books	40	66.7%
Reference books	24	40%
Magazine & Journals	23	38%
Newspapers	10	16%
Internet	13	22.1%

Response from the field shows that majority of the students of about 40 (66.7%) use books, 24 (40%) reference books, 23 (38%) magazine, and journals but very few 13 (22.1%) use the internet and 16% uses newspapers.

This shows that most of the students use books and reference books because they know how to search them i.e. information literacy as studies confer that there is a significant relationship between information literacy skills and use of electronic information resources (Adeleke & Emeahara, 2016).

Another study on "Information Literacy Skills and Information Use by Students in Two South University Libraries in Nigeria" found that there is a significant relationship between information literacy skills and information used by students (Okon, Etuk, & Akpan, 2014). Therefore, it is concluded that the use of internet resources largely influenced by information literacy skills, thus Information Literacy has a great role in the utilization of internet resources.

4.2.4. How students find the required information to familiarize with various subjects.

The purpose of this question to know how they seek information for gaining insight understanding about subjects that they know very little about it. Moreover, the findings summarized in chart 3 below.
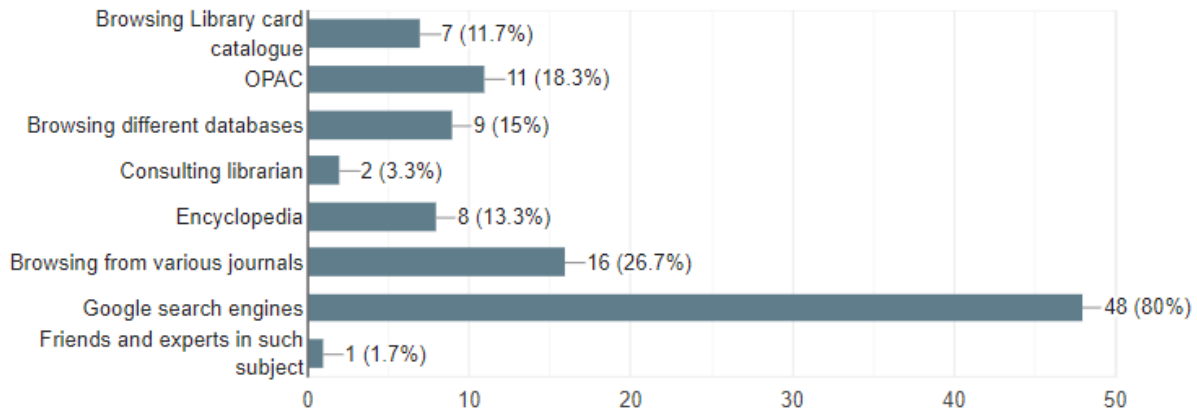
*Figure 3: **How students find the required information to familiarize with various subjects***

In this question majority of the respondents indicated that 48 (80%) respondents use google search engines, 9 (15%) browse different databases, 11 (18.3%) uses OPAC, and 16 (26.7%) browse from various journals.

This shows high usage of internet resources as indicated that majority of the respondents uses google search engines, OPAC, databases, and journals and may be due to information literacy skills. According to the study done on "A Study of Students' Information Searching Strategies" revealed students used search engines such as Google, the Library OPAC system, and databases and however they encountered challenges due to lack of required knowledge on how to use advanced search strategies (Baldwin, Gadd, & Balatsoukas, 2010). Thus, search strategies are highly influenced by the level of information literacy skills.

4.2.5. Techniques preferably used by students to find the most recent and relevant internet information

This question generally intended to explore techniques preferably used by students in seeking the most recent and relevant internet or electronic information. As respondents indicated, the findings summarized in table 3. Below

Technique	Frequency	Percentage
Searching on a search engine such as Google	52	86.7%
Browsing on web resources such as databases	20	33.3%
Searching on social media tools such as Academia Edu, Research Gate, etc.	18	30%
Asking colleagues	12	20%
Checking on catalogs	5	8.3%
Searching on bibliographies	6	10%

*Table 3: **Techniques preferably used by students to find the most recent and relevant internet information***

According to the data collected as summarized in table 2 52 (86.7%), respondents mostly used search engines web resources 20 (33.3%), and social media 18 (30%) to find the most recent and relevant internet information, though some of them ask their colleagues 12 (20%), check on catalogs 5 (8.3%) and search on bibliographies 6 (10%). Therefore, the majority of respondents used internet resources that means they mostly use electronic resources and this as well may be due to being information literate.

4.2.6. Students awareness of available electronic resources.

This question was asked to know students' awareness of available electronic resources since utilizing electronic resources depends much on one's awareness of its availability and accessibility. As students responded, the summary of the findings is as shown in chart 4.
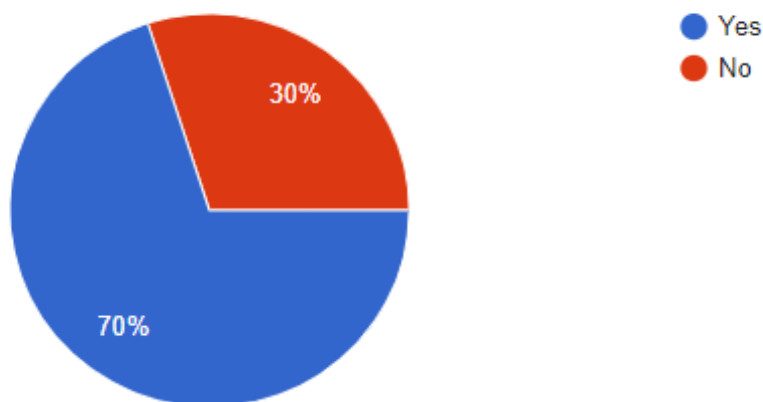
*Figure 4: **Students awareness of available electronic resources.***

As summarized in chart 4. Majority of respondents, such that, 42 (70%) indicated that they are aware of available electronic resources and 18 (30%) are not aware of available electronic resources.

As data shows that, the majority are aware of available electronic resources and this may be due to information literacy skills. An early study on "Information Literacy Skills and Awareness of Electronic Information Resources as Influencing Factors of their Use by Postgraduate Students in Two Universities in South-West Nigeria" found that there is a high proportion of information literacy skills and awareness of electronic information resources (Azubuike, 2016). Therefore, information literacy has a great role in making students aware of available electronic resources.

4.2.7. Electronic resources that students are aware of and are available at the University of Dar es Salaam website.

This was thought to be important as to know whether students were aware of resources available at their home library. Findings summarized in table 4 below.

Table 4: Electronic resources that students are aware of and are available at the University of Dar es Salaam website.

E-resources	Frequency	Percentage
University of Dar es Salaam Library Journal	40	78.4%
Journal of Education, Humanities, and Sciences	11	21.6%
EMERALD	10	19.6%
SAGE journals	9	17.6%
Research 4Life (Agora, Hinari,OARE, ADRI, GOALI	9	17.6%
Kioo cha Lugha	4	7.8%
JASA	2	3.9%
INFORMS	3	5.9%
DOAJ	3	5.9%
ORSEA JOURNAL	2	3.9%

Results from Table 3 above show that though university library has access to free and subscribed to electronic information resources, most of the respondents indicated that among available electronic resources most are aware of University of Dar es Salaam Library Journal which takes 40 (78.4%), 11 (21.6%) Journal of Education, Humanities and Sciences, and 10 (16.6%) are aware

of Emerald and the rest which is few are aware of other electronic information resources such as Research 4Life, Kioo cha Lugha, JASA, INFORMS, DOAJ, ORSEA Journals, etc. This generally shows that majority of the respondents are not aware of other free and subscribed electronic resources and this may be due to various factors such as techniques used to market and enhance the usage of electronic resources by University of Dar es Salaam Library, availability and access to University library's website or any other.

4.2.8. Information media mostly used by UDSM students to acquire information.

This intended to know whether they mostly use print media, electronic media or both as chart 5 summarize the findings.
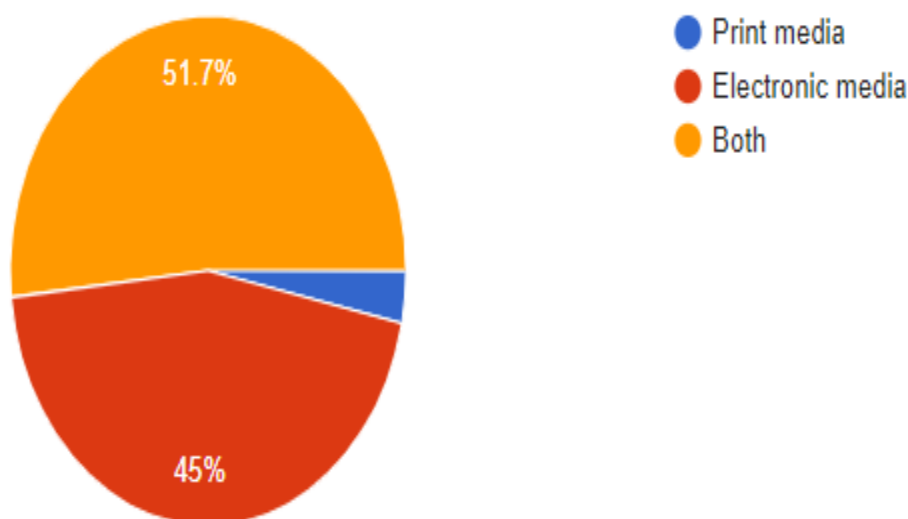
*Figure 5: **Information media mostly used by UDSM students to acquire information.***

As shown in chart 5. Respondents indicated that they mostly use both print and electronic media and this has been shown on the data collected as 31 (51.7%) use both printed and electronic media and 27 (45%) uses electronic media though few about 2 (3.3%) they use only print media. This continues to confirm that there is high usage of electronic resources among University of Dar es Salaam students and this may be due to information literacy skills.

4.2.9. Search engines mostly used by UDSM students for information searching

In this question, students were asked to indicate search engines they mostly use in searching for electronic or internet information resources. Findings summarized in chart 6.
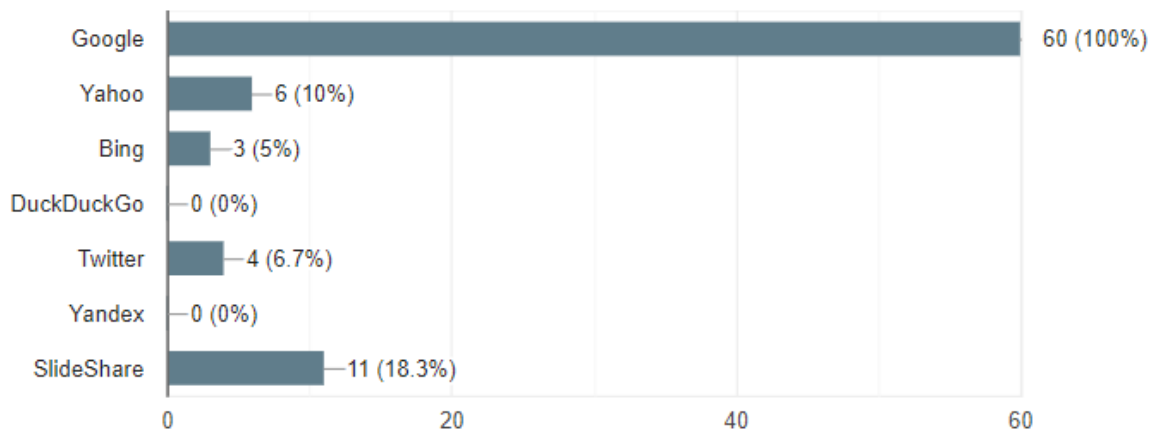
*Figure 6: **Search engines mostly used by UDSM students for information searching***

A summary in chart 6 indicates that all 60 (100%) respondents used google, 11 (18%) use Slideshare, 6 (10%) uses Yahoo, 3 (5%) uses Bing, 4 (6.7%) uses twitter and none of them uses Yandex and DuckDuckGo.

This data shows that Google is the most popular and most used search engine by University of Dar es Salaam student as it shows that all respondents indicated that they use the Google search engine. According to the study conducted by Ogbole (2017), findings have shown that the most famous search engines were Google and yahoo. Another study revealed that Google is the most widely used search engine by students (Cavus & Alpan, 2011). This concludes that Google is the most used search engines by students for information searching.

4.2.10. Information resources searched by University of Dar es Salaam students using selected search engines

This question was asked in order to ascertain what students used to search in search engines as indicated in different search engines. Findings from the field summarized in chart 7.
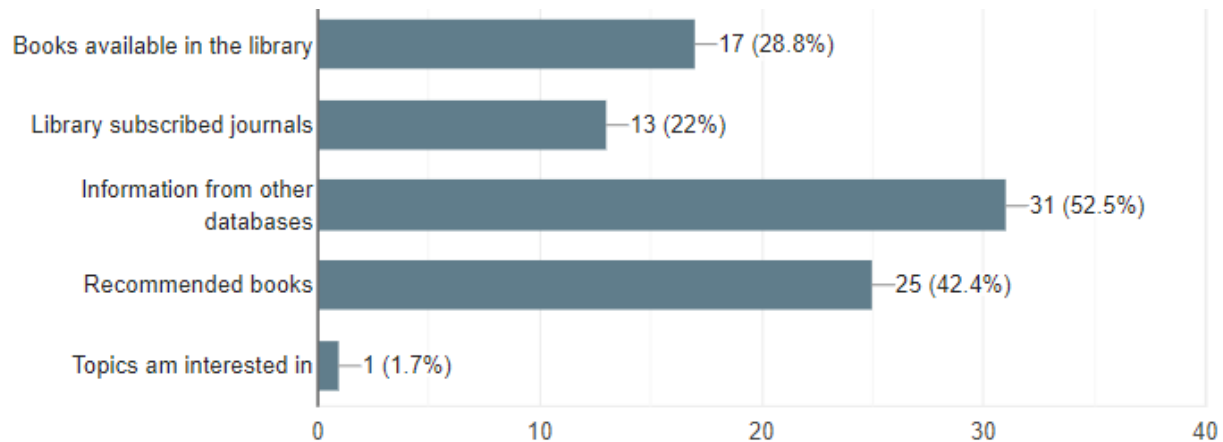
Figure 7: **Information resources searched by University of Dar es Salaam students using selected search engines**

Chart 7. Shows that majority of students who use search engines, which are 17 (28.8%) used to search for different kind of electronic information books available in the library, 13 (22%) library subscribed journal, 31 (52.5%) information from other databases, 25 (42.4%) recommended books and 1 (1.7%) search for interesting topic. This data shows that the majority of the student have skills required for searching electronic information that is why they mostly use search engines to search for different information as shown in chart 7.

4.2.11. Ways in which students were informed about electronic resources and search engines

This question intended to find out where and how students came to know about available electronic resources and search engines. Data collected summarized in chart 8 below.
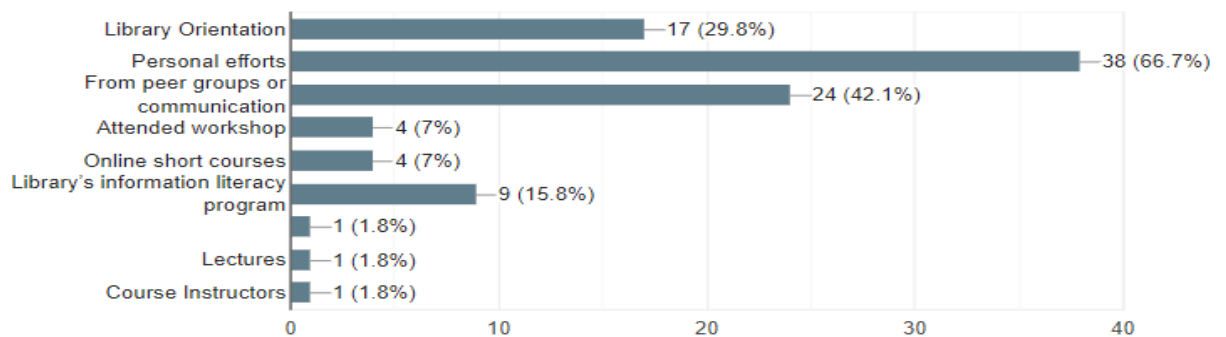
Figure 8: ***Ways in which students were informed about electronic resources and search engines***

The summary in chart 8 indicates that 17 (29.8%) respondents indicated library orientation, 38 (66.7%) personal efforts, 24 (42.1%) peer groups, 4 (7%) attended workshop, 4 (7%) online short course, 9 (15.8%) library's information literacy program, and 3 (5.3%) from the lectures.

This shows that majority of the respondents at the University of Dar es Salaam engaged in personal learning, attended library orientation, peer communication, and library's information literacy program. As data shows that, personal effort is the leading source of awareness-raising about electronic resources and search engines. As commented by Kumar (2010) that, most of the students learn about information literacy by the method of trial and error and/or peer-to-peer interaction. Moreover, other study found that Social networking or peer-to-peer communication via Facebook, Twitter, Blogs and online videos are the effective channels used by students to get informed about electronic resources and search engines (Jelagat, 2016).

4.3. Training programs in relation to information literacy at the university level and use of university's available internet resources for independent studies.

This study intended to find out different types of training programs in information literacy available at the university and the extent of use of electronic resources by students for independent studies. Results in this sub-section as further discussed in the successive sub-topics.

4.3.1. Available program in the different department whose content relates to information literacy and/or raising awareness on university's available internet resources

This question intended to find out whether the university if Dar es Salaam offered courses that entail content related to information literacy and the finding are summarized in chart 9 below.

*Figure 9: **Available program in the different department whose content relates to information literacy and/or raising awareness on university's available internet resources.***

Chart 9. Indicate that at the University of Dar es Salaam there are departments which offer courses whose content relate to information literacy and/or raise awareness on raising awareness on university's available internet resources for independent studies and this is as it is shown on chart 9 that 30 (50%) replied YES, 13 (21.7%) NO and 17 (28.3%) were not sure whether there were courses that related to information literacy or not.

This may confer that as large number of respondents indicated the availability of courses related to information literacy, this confers that a large number of students at the University of Dar es Salaam are, to some extent, information literate. This is due to the availability of 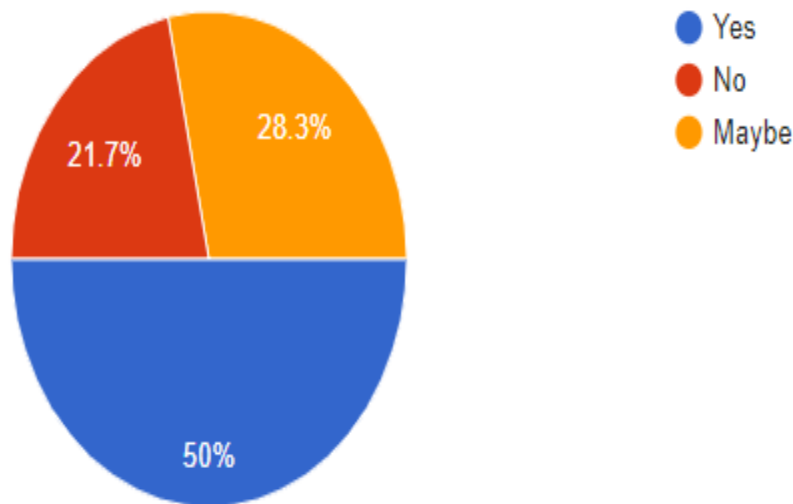programs in the different department whose content relates to information literacy and/or raising awareness on university's available internet resources and thus results to high usage of search engines and electronic information resources. The ACRL agreed that library user education functions do not efficiently enrich users with required skills and recommended that University's curriculum should

include information literacy course to equip students with the required skills to become self-sufficient information users (Van 't Hof, Sluijs, Asamoah-Hassan, & Agyen-Gyasi, 2010). Therefore, the availability of programs in the different department whose content relates to information literacy enrich effective information literacy skills and results in high usage of search engines and electronic information resources.

4.3.2. A course whose content relates to information literacy and raising awareness of available electronic resources.

Respondents were asked to list other courses whose content relates to information literacy that could raise awareness on available electronic resources. The purpose of this question was to find out content related to information literacy and rising awareness on available electronic resources that were covered during the mention courses. The collected data shows that some departments in the college offer course relating to information literacy and/or they help to raise awareness on university's available internet resources. These include:

- Business Research (IM205)
- Computer Literacy for Teachers
- Information technology (IM100)
- Computerized Accounting
- Research methodology
- Informatics
- Information Literacy and lifelong learning
- International Marketing
- Theory of publishing Information Literacy and lifelong learning

From the above, it can be noted that courses such as information literacy and lifelong learning were being offered at the department of information program and it covers issues related to information search skills and techniques, searches strategy, evaluating information sources and information, plagiarism as well as ethics in information use. Other departments that offer courses related to information literacy include

Foreign Languages, Education psychology and curriculums, Department of accounting, General management, Institute of Development Studies, Spatial Sciences, Botany, School of Education, literature department, and marketing. The above results assist to prove further that

various courses that build students' skills in applying acquired knowledge in classroom settings help in strengthening their lifelong learning skills (Solmaz, 2017). It is therefore important that students learn such skills to be able to apply the same in their lifelong experiences.

4.3.3.   Aspects covered in the courses.

This intended to know aspects that relate to information literacy that were covered during the course. Table 5 summarizes the results.

Table 5: Aspects covered in the courses.

Aspects covered during the course	Percentage and number of respondents
Information sources available for academic work	65.9% (27)
Search strategies	41.5% (17)
Evaluating information and sources	51.2% (21)
Citation styles	58.5% (24)
Plagiarism	51.2% (21)
Presentation skills	46.3% (19)

The above summary indicates aspects covered as Information sources available for academic work 27 (65.9%), Search strategies 17 (41.5%), Evaluating information and sources 21 (51.2%), Citation styles 24 (58.5%), Plagiarism 21 (51.2%), and Presentation skills 19 (46.3%). As the indication above this tells that the majority of students at the University of Dar es Salaam are information literate that is why the study indicated there is maximum usage of internet resources.

4.4.   Relationship between awareness, perception, and use of internet resources.

Respondents were asked to indicate whether they agreed or disagreed with a number of questions that determined the relationship between their awareness, perceptions, and use of internet resources. Table 6 summarizes their results.

*Table 6. **Relationship between awareness, perception, and use of internet resources.***

Question	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Information literacy skills assist me to accurately define information needs	3 (5%)	4 (6.7%)	7 (11.7%)	26 (43.3%)	20 (33.3)
Information literacy skills help me in identifying relevant information sources	4 (6.7%)	2 (3.3%)	5 (8.3%)	31(51.7%)	18 (30%)
Information literacy guides me in selecting appropriate citation styles	2 (3.3%)	2 (3.3%)	11 (18.3%)	28 (46.7)	17 (28.3%)
Information literacy skills assist me in determining and applying appropriate information search strategies	0	1 (1.7%)	12 (20.3%)	22 (37.4%)	24 (40.7%)
Information literacy skills assist me in determining and applying appropriate information search strategies	0	3 (5%)	9 (15%)	24 (40%)	24 (40%)
Information literacy skills assist me in understanding legal and ethical issues in information use	0	2 (3.3%)	10 (16.7%)	22 (36.7%)	26 (43.3%)

As summarized in the table 6, respondents indicated that there is significant relationship between awareness, perceptions and use of internet resources as it is indicated that; 3 (5%) strongly disagree, 4 (4%) disagree, 7 (11.7 %%) neutral, 26 (43.3%) agreed that Information literacy skills assist them to accurately define information needs, and 20 (33.3) strongly agreed that Information literacy skills assist them to accurately define information needs. Also, 31(51.7%) agreed and 18 (30%) strongly agree that Information literacy skills help them in identifying relevant information sources. Also, 28 (46.7) agreed and 17 (28.3%) strongly agreed that Information literacy guides them in selecting appropriate citation styles a 22 (37.4%) agreed and 24 (40.7%) strongly agreed that Information literacy skills assist them in determining and applying appropriate information search strategies. Also 24 (40%) agreed and 24 (40%) strongly agreed that Information literacy skills assist them in determining and applying appropriate information search strategies, and 22 (36.7%) agreed and 22 (36.7%) strongly agreed that Information literacy skills assist them in understanding legal and ethical issues in information use.

Other studies conducted on the same field realized that users' perception influences use of internet resources, whereas lack of awareness and difficulty of identifying relevant information to meet users' needs hinder the use of internet resources (Omeluzor, Asimi, & Akinwoye, 2016). Moreover, the study done by shows that, there is a significant relationship between awareness, perception, and seeking online information from academic databases (Wong, et al., 2017). Therefore, the use of internet resources is highly influenced by users awareness and perception on the internet resources.

4.4.1. Challenges encountered by the University of Dar es Salaam students when accessing and utilizing internet resources.

This question intended to know the challenges encountered by students when accessing and utilizing electronic resources. Table 7 summarizes the findings.

*Table 7: **Challenges encountered by the University of Dar es Salaam students when accessing and utilizing internet resources.***

Challenges	Frequency	Percentage
Lack of proficient information literacy skills	23	38.3%
Lack of proficient computer literacy skills	25	41.7%
Lack of awareness on available electronic resources	36	60%

As shown in Table 7 above, a large number of students pointed at challenges they encountered at the University of Dar es Salaam as follows; Lack of awareness on available electronic resources 36(60%), lack of proficient computer literacy skills 25 (41.7%), Lack of proficient information literacy skills 23 (38.3%) and Lack of enough computers and problems of Internet speed 4 (6.8%). This indicates that computer and information literacy skills have a very high implication on awareness of available electronic resources. Therefore, in order for one to be aware of available electronic resources, he or she must be computer and information literate. Therefore, information literacy prays the great role on access and utilization of electronic information resources.

4.4.2. Suggestions to impart information literacy skills for effective access and use of internet resources for academic and lifelong learning excellence

This question was meant to find out students view on what should be done so as to impart information literacy skills effectively to encourage lifelong learning skills among them. Table 8. shows a summary of the findings

4.4.3. Suggestions to impart information literacy skills for effective access and use of internet resources for academic and lifelong learning excellence

Techniques	Frequency	Percentage
IL to be offered as core course across all college, faculty, and schools during the first semester of the first year	24	40%
IL to be offered as free short course across all college, faculty, and schools during the first semester of the first year	20	33.3%
IL to be offered to all students at school before joining universities	15	25%
IL should be incorporated with other core courses such as Communication skills	1	1.7%

Table 8: ***Suggestions to impart information literacy skills for effective access and use of internet resources for academic and lifelong learning excellence***

According to data shown in table 8, majority of respondents, i.e. 24 (40%) indicated that IL should be offered as core course across all colleges, faculty, and schools during the first semester of the first year, 20 (33.3%) recommended that IL should be offered as free short course across all colleges, faculty, and schools during the first semester of the first year, 15 (25%) suggested that IL has to be offered to all students at school before joining universities and one respondent (1.7%) recommended that IL should be incorporated with another core course such as Communication skills. Therefore, data confer that information literacy should be offered as core course across all college, faculty, and schools during the first semester of the first year or as a free short course across all college, faculty, and schools during the first semester of the first year.

The above results have also been supported by a study according to ACRL (2019) recommended that "teaching faculty should design curricula and assignment that foster enhanced engagement with the core ideas about information literacy. Also, KNUST university recommended that there is a need for the university's curriculum to include Information Literacy course to equip students with the required Information Literacy skills to become self-sufficient learners (Van 't Hof, Sluijs, Asamoah-Hassan, & Agyen-Gyasi, 2010). As such the results suggest that information literacy should be taught as a core course just as any other courses offered at the university for credit purposes.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1. Introduction

This chapter presents a summary of the research findings conclusion and recommendations of the study. The chapter divided into five sections including an introduction, a summary of the study, the main findings, the conclusion of the study and the last section provides both policy-based recommendations and possible areas for further study.

5.2. Summary of the study

The main objective of this study was to assess the role of information literacy in enhancing the utilization of internet resources among university students at the University of Dar es Salaam. The study had four specific objectives.

1. To assess students' awareness of the computer and information literacy programs and available internet resources.
2. To find out the relationship between awareness, perception, and use of internet resources.
3. To identify training programs in relation to information literacy at the university level and use of university's available internet resources for independent studies.
4. To identify challenges encountered by students in accessing and utilizing internet resources at the University of Dar es Salaam.

In order to accomplish the study objectives, four questions were set to answer the four specific objectives of the study as follows:

1. What is the level of students' awareness of the computer and information literacy programs and available internet resources?
2. What is the relationship between awareness, perception, and use of internet resources?
3. Are there any training programs in relation to information literacy at the university level and use of university's available internet resources for independent studies?
4. What are the challenges encountered by students in accessing and utilizing internet resources at the University of Dar es Salaam?

The study was carried out at the University of Dar es Salaam located in Dar es Salaam. The study employed an exploratory research design for data collection, measurement, and analysis. There was a total of sixty (60) respondents who were students from various courses at the University of Dar es Salaam. Data was collected using Questionnaires that were electronically distributed to students to gain insight understanding about the study. These methods were useful and suitable for studying this research problem since, it saved researchers' time, yielded up high response and more standardized data that allowed a more effective statistical analysis. The data were analyzed using simple descriptive statistics such as percentages, tables, bar and pie charts employed.

The section below provides a summary of the main findings of the study:-

5.2.1. Students' awareness of information literacy programs and available internet resources.

Results show that that majority of the respondents demonstrated a high level of awareness on information literacy and available internet resources where findings show that Google is a most popular and most used search engine, also electronic resources are mostly used rather than print materials. In addition, students searched online information using google search engines, OPAC, databases, and journals and may be due to information literacy skills.

5.2.2. Training programs in relation to information literacy at the university level and use of university's available internet resources for independent studies.

Findings show that at the University of Dar es Salaam there is a training program in the various department including library user education that offers information literacy skills or covers content related to information literacy. Some of the aspect covered during the course are such as; Information sources available for academic work, search strategies, evaluating information and sources, plagiarism, citation styles, and presentation skills.

5.2.3. Relationship between awareness, perception, and use of internet resources.

The study findings show that there is a significant relationship between awareness, perception, and use of internet resources as the study shows that users' perception influences use of internet

resources, whereas lack of awareness and difficulty of identifying relevant information to meet users' needs hinder the use of internet resources. Therefore, the use of internet resources is highly influenced by users' awareness and perception on the internet resources.

5.2.4. Challenges encountered by students in accessing and utilizing internet resources at the University of Dar es Salaam.

Identified challenges that deter students in accessing and utilizing internet resources include lack of awareness on available electronic resources, lack of proficient computer literacy skills, and lack of proficient information literacy skills.

5.2.5. Suggestions to impart information literacy skills for effective access and use of internet resources for academic and lifelong learning excellence.

The suggestion made to impart or improve information literacy skills for effective access and use of internet resources includes the provision of Information Literacy as a core course across the University during the first semester of the first year, or it should be offered as free short course across the University during the first semester of the first year. Incorporating Information Literacy with other core courses or provided to all students at school before joining universities.

5.3. Conclusion

The purpose of this study was to assess the role of Information Literacy in enhancing the utilization of internet resources among students at the University of Dar es Salaam. From the analysis of this study, it can be argued that the research objectives have been successfully accomplished. Generally, research findings showed that there is a significant relationship between awareness, perception, and use of internet resources where students demonstrated high usage of internet resources due to positive perception towards resources as well as awareness on its availability and significant. In spite of the availability of vast internet resources and information literacy skills students have, their implication to general effectiveness and efficient use of internet resources have been facing a number of limitations that hamper the effectiveness and efficient use of internet resources to become independent and lifelong learners.

Lack of proficient information literacy skills amongst university students is mostly cited challenge. Also, the absence of sufficient information literacy programs has been found as the limiting factor

in imparting and improve the level of information literacy skills, as the students spend a lot of time for personal efforts to acquire skills for that can enable them access and use internets resources which are not even effective. Consequently, vast internet resource becomes unused and students become dependents learners.

The significance of this study is that little is explored on the role of information literacy in enhancing the utilization of internet resources among University of Dar es Salaam students. Thus, the study has explored the role played by information literacy but also found out the challenges impeding effective access and use of internet resources. In addition, the study contributes to informing University's academic management on what is supposed to be done so as to improve the level of Information Literacy skills to University students.

In addition, study findings help not only to become the basis of influencing research activities at the University of Dar es Salaam on promoting Information Literacy program, but also the fact that there is a need for promoting Information Literacy programs so as to leverage the usage of internet resources to develop independent and lifelong learners. In this way, efforts to deal with problems on the usage of internet resources can be undertaken in a more comprehensive way. The study employed a qualitative research approach and used questionnaires for data collection electronically that were distributed to the study sample taken from some of University's colleges, schools and departments at the University of Dar es Salaam. This method, being new to some extent, has proven to be very effective in facilitating data collection in a wider study population.

The study established that lack of proficient information literacy skills was one of the factors impeding the effective and efficient utilization of internet resources and lead to students being dependent learners.

However, respondents demonstrated a level of information literacy, this study argues that, the skills that students have and means of acquiring Information Literacy skills are marginal, thus more attention should be directed on imparting Information Literacy skills to students at the University of Dar es Salaam so as to heighten usage of internet resources and develop independent and lifelong learners.

5.4. Recommendations

The recommendation is put forward with regard to addressing marginally information literacy skills deficiencies among University of Dar es Salaam students including lack of awareness on available electronic resources, lack of proficient computer literacy skills, and lack of proficient information literacy skills.

- There should be a stand-alone Information Literacy core course across the universities colleges, schools, and department during the first semester of each first academic year contented with demonstrations as well as a frequent practical test at the University of Dar es Salaam. This should embed effective library orientation that will help students to be aware of the importance of information literacy, electronic information resources, and electronic resources available at the university as well as their relevance in their academic performance. This will encourage students to put more efforts into this course. It will also raise the level of information literacy awareness for the utilization of electronic resources among university students.

- There should be electronic resources and well-structured tools and media that will enhance easy access to information literacy training. This will enable a quick understanding of the subject since knowledge about any subject is what makes people understand the importance and influence.

- There should be frequently workshops on the provision of information literacy skills, awareness of electronic information resources embedded with computer literacy courses and Annual Information Literacy Week.

- Lecturers should be part and parcel on encouraging and emphasizing students on information literacy and the importance of using electronic resources for their better academic performance. However, computer literacy should be emphasized from the family basis.

5.4.1. Areas for Further Research

More studies are needed to scrutinize staff perceptions on the impact of the student use of electronic resources to the general academic excellence, understanding, and improving learning processes at the University of Dar es Salaam is needed. Furthermore, research studies need to be carried out on comparative analysis on effective usage of internet resources between students who pursue fields that offer Information Literacy as a core course with those who are not exposed to it.

This will help to gain empirical evidence on the role played by information literacy and encourage stakeholders to promote information literacy course across the university.

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APPENDIX I   QUESTIONNAIRE

Demographic characteristics

1. Gender
   Male (   )   Female (   )   Other (   )
2. Age
   20-25 (   )   26-30   (   )   31-34 (   )   Above 34   (   )
3. College
   CoSS   (   )   COHU (   )
4. Programme (eg. BaEd, BLIS, etc.)……………………..
5. Year of study
   1st year   (   )   2nd year   (   )   3rd year (   )   4th year   (   )

Students' awareness of information literacy programs and available internet resources.

2. Are you familiar with the usage of computers?
   a.   YES   (   )   b. NO   (   )

3. If question [#2] above is YES, how did you learn using computers?
   Self-taught
   Friend and colleagues
   Formal computer course
   Short course at the university
   Computer course before coming to university
   Others (please specify)…………………………………………………………

4. What are the information sources you use most?
   a.   Books   (   )
   b.   Reference book
   c.   Magazine & Journals
   d.   Newspapers
   e.   Other (specify)

5. How would you find the required information?
   a.   Library catalog
   b.   Consulting librarian
   c.   OPAC
   d.   Browsing from Library subscribed journals
   e.   Browsing different databases
   f.   Others (specify)

6. In order to become familiar with a subject, about which you know very little, what do you consult first?
   a.   Database
   b.   Encyclopedia
   c.   Journal
   d.   Google search engines

e.   Other (please specify)……………………………………………………………….

7. Which technique do you preferably use so as to find the most recent and relevant internet information?

   Asking colleagues
   Browsing on web resources such as databases
   Searching on a search engine such as Google
   Checking on catalogs
   Searching on bibliographies
   Searching on social media tools such as Academia Edu, Research Gate, etc.
   Others (please specify)…………………………………………………………

8. Are you aware of available and subscribed electronic resources and journals?

   a.   YES

   b.   NO

9. What are subscribed electronic resources that you are aware of and are available at your university?
   a.   Research 4Life (Agora, Hinari, OARE, ADRI, GOALI)
   b.   EMERALD
   c.   JASA
   d.   ASABE
   e.   INFORMS
   f.   Ebsco Host
   g.   Other (specify)…………………………………………………………………………

10. What are electronic journals that you are aware of and are available at your university?

   a.   Journal of Education, Humanities, and Sciences
   b.   ORSEA JOURNAL
   c.   Journal of Linguistics and Language in Education
   d.   Kioo cha Lugha
   e.   University of Dar es Salaam Library journal
   f.   The African Review
   g.   Other (specify)……………………………………………………………………...

11. What are Free Electronic Journals that you are aware of and are available at your university or elsewhere?
   a.   SAGE journals
   b.   AIP publishing
   c.   Cambridge Journals Online
   d.   Wiley Online Library
   e.   OAPEN
   f.   DOAJ
   g.   World Digital Library
   h.   Other (specify)

12. What sources do you mostly use to acquire information?
    a. Print media
    b. Electronic media
    c. Both
    d. Others (please specify)…………………………………………………….

13. Do you use search engines such as Google or Yahoo, for information searching?
    a. YES
    b. NO

14. If yes in Qn7. What kind of information did you use to search using search engines?
    a. Books available in the library
    b. Library subscribed journals
    c. Information from other databases
    d. Recommended books
    e. Other (specify)

15. How were you informed about all the above?
    a. Library Orientation
    b. Personal efforts
    c. From peer groups or communication
    d. Attended workshop
    e. Online short courses
    f. Library's information literacy program
    g. Others (specify)

16. How do you rate the satisfaction of electronic/internet resources to meet your information need?
    a. 1. Very satisfying (   ) 2. Satisfying (   )   3. Neutral (   )   4. Dissatisfying   (   )

Training programs in relation to information literacy at the university level and use of university's available internet resources for independent studies.

17. At your college or department, is there any program whose content relates to information literacy and/or raising awareness on university's available internet resources for independent studies?
    a. YES
    b. NO

18. If question number 17 above is YES

19. what is the course name?

20 To which department does the course belong?

21. How long is course delivery time?

> One week
>
> Two weeks
>
> One month
>
> Longer than one month
>
> Other (please specify)

22. Which aspects were covered during the course?

> Information sources available for academic work
>
> Search strategies
>
> Evaluating information and sources
>
> Citation styles
>
> Plagiarism
>
> Presentation skills
>
> Other (Please specify)…………………………………………………….

Relationship between awareness, perception, and use of internet resources.

Indicate in the scale of 5 = strongly agree to 1 = strongly disagree with your view on the role of information literacy in relation to the use of internet resources

Q.No.	View on information literacy skills	5	4	3	2	1
23	Information literacy skills assist you to accurately define information needs					
24	Information literacy skills help you in identifying relevant information sources					
25	Information literacy is responsible to guide you in selecting appropriate citation styles					
26	Information literacy skills assist you in determining appropriate information search strategies					
27	Information literacy skills help you in applying appropriate information search techniques					
28	Information literacy assist you to critically evaluate information					
29	Information literacy skills assist you in understanding legal and ethical issues in information use					

20. What should be done so as to impart information literacy skills for effective access and use of internet resources for academic and lifelong learning excellence?
    a. IL to be offered as core course across all college, faculty, and schools
    b. IL to be offered as core course across all college, faculty, and schools
    c. IL to be offered as free short course across all college, faculty, and schools
    d. Other (specify)

21. If you agree with one amongst actions listed in Questions 23 – 29 above will you be willing and committed to pursuing the information literacy course?
    a. YES
    b. NO
    c. Why Yes? Explain……………………………….
    d. Why Not? Explain……………………...

Challenges encountered by students in accessing and utilizing internet resources at the University of Dar es Salaam.

22. What challenges do you encounter in accessing and utilizing internet resources at the University of Dar es Salaam?
    a. Lack of proficient information literacy skills
    b. Lack of proficient computer literacy skills
    c. Others (please specify)………………………………

23. What is your suggestion or recommendation in relation to encountered challenges?

24. What do you recommend to raise awareness and improve the use of electronic resources?

Thank you very much for your cooperation