UNIVERSITY OF GHANA
COLLEGE OF EDUCATION
SCHOOL OF COMMUNICATION AND INFORMATION STUDIES
DEPARTMENT OF INFORMATION STUDIES

AN ASSESSMENT OF STUDENTS ATTITUDE TO INFORMATION LITERACY PROGRAMMES IN UNIVERSITY FOR DEVELOPMENT STUDIES, TAMALE

BY:

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THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MPHIL DEGREE IN INFORMATION STUDIES

JULY, 2019
DECLARATION

I do hereby declare that, except for references I made to other people’s work which are duly acknowledged and cited, this thesis is the result of my own research work under the supervision of Prof. A. A. Alemna and Dr. Musah Adams and has not been submitted elsewhere for another degree.

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(CO-SUPERVISOR)
DEDICATION

I dedicated this work to my dearest daughter Lydia Baaba Bentuma Asaam and my mum, Lydia Manu.
ACKNOWLEDGEMENT

To the almighty God who has given me life, protected and strengthened me throughout this programme, I say a big thank you and will forever remain grateful. I express my sincerest thanks to my supervisors Prof. A.A. Alemna and Dr Musah Adams for their amazing encouragement, suggestions, advice and numerous corrections to shape this work to this point. I say thank you for the patience, suggestions and most of all your constant monitoring of the progress of this work. May God richly bless you abundantly.

A deep appreciation goes to Alhaji I.K Antwi, former University Librarian of UDS for taking time out of your busy schedule to edit my work.

To my colleague Frank Osei Ababio, for assisting in my data collection, searching and retrieving information for my work as well as helping in typing my work, I say a big thank you.

To Deborah Bumbie-chi of Nyankpalla campus, I say a big thank you for following up on the students to retrieve the answered questionnaire.

Finally, to my dear mother who is always willing to support and was constantly there to take care of my little baby in my absence at the expense of her business God richly bless you and sustain your life. To my lovely baby girl, Lydia Baaba Bentuma Asaam thank you for understanding and comporting yourself when I was always away from you.
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<th>Description</th>
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<tr>
<td>ACRL-</td>
<td>Association of Academic and Research Libraries</td>
</tr>
<tr>
<td>FAS -</td>
<td>Faculty of Applied Sciences</td>
</tr>
<tr>
<td>FMS -</td>
<td>Faculty of Mathematical Sciences</td>
</tr>
<tr>
<td>FIDS-</td>
<td>Faculty of Integrated Development Studies</td>
</tr>
<tr>
<td>FPLM -</td>
<td>Faculty of Planning and Land Management</td>
</tr>
<tr>
<td>FoE-</td>
<td>Faculty of Education</td>
</tr>
<tr>
<td>FRNR-</td>
<td>Faculty of Renewable Natural Resources</td>
</tr>
<tr>
<td>FACS -</td>
<td>Faculty of Agribusiness and Communication Sciences</td>
</tr>
<tr>
<td>FGPA -</td>
<td>Final grade point average</td>
</tr>
<tr>
<td>FoA -</td>
<td>Faculty of Agriculture</td>
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<td>IL -</td>
<td>Information literacy</td>
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<td>ILG-</td>
<td>Information literacy guidelines</td>
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<tr>
<td>IFLA-</td>
<td>International Federation of library Associations and Institutions</td>
</tr>
<tr>
<td>ICTs-</td>
<td>Information and Communication Technologies</td>
</tr>
<tr>
<td>KNUST-</td>
<td>Kwame Nkrumah University of Science and Technology</td>
</tr>
<tr>
<td>LUEPs-</td>
<td>Libraries User Education Programmes</td>
</tr>
<tr>
<td>NIE-</td>
<td>National institute of Education</td>
</tr>
<tr>
<td>SCONUL-</td>
<td>Society of College, National and University Libraries</td>
</tr>
<tr>
<td>SMHS-</td>
<td>School of Medicine and Health Sciences</td>
</tr>
<tr>
<td>SPSS-</td>
<td>Statistical Package for Social Sciences</td>
</tr>
<tr>
<td>TTFPP-</td>
<td>Third Trimester Field Practical Programme</td>
</tr>
<tr>
<td>UDS -</td>
<td>University for Development Studies</td>
</tr>
<tr>
<td>UDSM-</td>
<td>University of Dar-es-Salaam</td>
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UGCS- University of Ghana Computing System
UGLS- University of Ghana Library System
Information literacy (IL) in recent times has received attention by empirical studies because of its key role in facilitating information access and use and lifelong learning. It is also one of the major solutions to the information explosion and a key determinant for students’ academic success. The study assessed the attitude of students on the IL programmes of the University for Development Studies (UDS). It adopted both qualitative and quantitative research approaches. A total of 267 undergraduate students were selected using a simple random sampling procedure. This was done based on the student population who offer information literacy in the three campuses of UDS at Wa, Tamale, Nyankpala. Data were collected using copies of self-administered questionnaire and semi-structured interview guide. Quantitative data were analyzed with the Statistical Package for Social Sciences (SPSS) whiles qualitative data were sorted and organised into thematic areas. The results on the students’ access and use of information, revealed that almost half (48%) of the respondents had not received any support in the form of instruction regarding using the University library. The results indicated that majority (50.2%) of the respondents are not aware and do not have access to electronic resources of the library hence, they have not been using them. The results also indicate that among the various forms of academic information sources, the internet is widely used as the primary source of information among the students. More than 70% of users of all sources of information check for their authenticity before using them. The study revealed that, 69% and 50.2% of the students are aware of the plagiarism and copyright laws respectively and their consequences in information use. Challenges students encounter in using and accessing information at the
library include: Inadequate books in the library, library staff not helpful; loss of library
card; inability to borrow from the library; password restriction on databases; and poor
internet connectivity. The study therefore recommends among others, the coordination
between Principals and Deans to enforce IL Programmes to cover all eligible students,
more staff involvement in the teaching of the IL Programme; enforcement of Academic
Board Decision on IL Programme; staff readiness to assist students in the library;
encouraging students to undertake IL course; enhancing the provision of internet facility
in the library and marketing of the library’s electronic resources to promote their optimal
access and use
CHAPTER ONE
INTRODUCTION

1.1 Background

Information literacy (IL) in recent times has received attention by empirical studies because of its key role in guiding the conduct of research. Information literacy broadly deals with the ability to find, retrieve, analyse and use information (Bothma et al., 2014). This includes the ability to know when information is needed, where to find information, and how to use the information (Dorvlo, 2016). IL is one of the major solutions to the information explosion, as it allows individuals to cope with this situation by providing them with skills to know when information is needed, where it can be located, how to evaluate and use it effectively and efficiently (Yeboah et al., 2017). Other core features of information literacy include the ability to recognize a needed information and awareness of the law governing its use (Bothma et al., 2014). Porter (2010) has therefore, noted that students need key skills to carry out successful information search; the standard of which is defined by the level of information literacy. Many empirical studies by (Brage & Svensson, 2011; Anafo & Filson, 2014; Okon et al. 2014; Keshulu & Srinivasulu, 2016; Dorvlo, 2016) consider information literacy as a key determinant for students’ academic success.

Brage and Svensson (2011) maintained that information literacy is regarded as an umbrella term that incorporates the following components: information seeking and gathering, evaluation of information resources, accurate and appropriate citing and referencing, and critical thinking. Hence, information literacy contributes to the empowerment of students as lifelong learners and productive, informed employees. With the introduction of digital technology, most information is
displayed on the Web; but are sometimes not peer-reviewed and this poses a lot of quality challenges for students (Bothma et al., 2014). It is argued by Anafo and Filson (2014) that a deficiency in information literacy skills has a negative impact on academic achievement as well as personal and professional development. This shows that information literacy skills are appropriate and adjustable to everyday situation in life and the quality is determined if an individual makes its learning useful an in academic environment and society (Okon et al. 2014). So much importance has been attached to Information literacy as a result of so much information in the system and these information is found in various forms which can be accessed by varied means. Users need to choose the right and appropriate information to make right decisions, this has therefore brought to the fore the necessity for information literacy among students.

In higher educational institutions, Information literacy programmes equip students to be able to identify their information needs, locate the information needed, evaluate the information they have found, and know the ethical and legal issues relating to the use of the information (Dorvlo, 2016). Notwithstanding the importance of IL, many undergraduate students are not aware of what Information Literacy entails and has therefore rendered them not being information literates (Keshalu & Srinivasulu, 2016). Sentleng and King (2012) also stated that, students who have limited knowledge in intellectual property right are involved in plagiarism without knowing that wrong use of information, decision to deceive, misunderstanding of text, or inability to process complicated publications have serious consequences. These are reasons why information literacy needs serious attention and should therefore be taught in various higher learning institutions because it is the only way to avoid being overwhelmed with too much information and the consequences of wrong use of information.
Evidently, information available throughout libraries, community resources, special interest organization, media and the internet come to the individuals in unfiltered format, raising questions about its authenticity, validity and reliability (Anafo & Filson, 2014). The ability to bring out all the related words or phrases that will help in searching so that the information needed will be retrieved is very important to any information literate person (Dorvlo, 2016). Information literate person determines the nature and extent of the information needed. Most suitably, information literacy skills are used to search for appropriate information for academic purposes, for research papers and group presentation in the university, this helps to improve a student’s ability to find, evaluate, identify, use and share information. This is a vital skill that enhance students to effectively and efficiently use informational resources especially at the library (Okon et al. 2014).

Information literacy is believably the basis for learning in our modern-day environment of continuous technological change. As Information and Communication Technologies (ICTs) rapidly develop and the information environment becomes increasingly complex, educators are attaching importance to learners needs to enable them to be engaged with the information environment as part of their formal learning process. Lwehabura (2008) argues that information is constantly changing in the world today, in terms of its volume, technical aspects of its storage as well as retrieval and in the way, it is communicated. Such situation has not only increased the amount of information available to users but has also created an environment that is complex for them in terms of finding, accessing, selecting, evaluating and handling information. Secker (2004) comments that with the rise of the internet and web technology there can be no doubt that access to information has improved. However, to assume that because information is available on the web, people will have skills and knowledge to find, access and use it effectively will be naïve.
Students and other information users’ abilities to access as well as use information effectively and efficiently depend on different factors which include among others, their information literacy level. To meet demands of information in this information age, various efforts have been made by different libraries and higher learning institutions in Ghana to introduce information literacy training to users.

1.2 Statement of the Problem

In recent years, many academic libraries and institutions of higher learning have introduced IL training programmes for their information users, to enable them to make effective utilization of information resources which include both print and electronic materials available in their libraries. It is therefore, important to investigate the IL programmes so that they can be evaluated to find out if students have acquired the needed skills as per the objectives of IL training programmes. According to Wema (2006), most institutions have IL training programmes which do not suit the entire community. Such training focuses only on groups and theoretical training than practical or hands on. In addition, they lack the appropriate IL training programmes that equip students with appropriate information seeking skills responsible for enabling them to articulate an information problem and determine information needs as well as identify potential sources of information use, and search tools to find relevant sources, analyse, evaluate and use information ethically and professionally.

Even though UDS has introduced IL training for undergraduate students, no study has been done to investigate the effectiveness of IL programmes in UDS. This may therefore pose a challenge to
determine whether students acquire appropriate IL Skills. Information Literacy initiatives in developing countries are faced with various challenges which hinder their effectiveness. Sife (2005), Busagla and others (2005), Lwehabura and Stilwell (2008) Angello (2008) revealed various challenges that hinder IL training programmes which include students’ attitude on information literacy training programmes. Positive attitudes to an object or activity (e.g. IL programme) is crucial because they tend to influence intentions and actual actions in regard to the object, as proposed by various behavioural models such as the Theory of Planned Behaviour (TPB), Theory of Reasoned Action (TRA), and the Technology Acceptance Model (TAM). This study, therefore, seeks to investigate students’ attitude on information literacy training programmes at the University for Development Studies. Specifically, the study seeks to examine IL skills of students and their attitude on IL training programmes, challenges and strategies for effective implementation of IL training programmes at UDS.

1.3 Purpose of the study

The purpose of the study is to access the attitude of students on the IL programme of the University for Development Studies, Tamale.

1.4 Objectives of the study

1.4.1 The main objectives

The main objective of the study is to investigate the status of existing information literacy programmes provided to students for effective utilization at UDS.
1.4.2 Specific objectives

1. To analyse students’ access and use of information.
2. To examine students’ evaluation of Information Sources.
3. To ascertain the students’ awareness of the legal and ethical implication of information use.
4. To identify challenges that hinder IL programmes for undergraduate students at UDS
5. To recommend strategies for effective IL implementation at UDS

1.5 Description of the Study Area (UDS)

The University for Development Studies (UDS) was established in May 1992 by the Government of Ghana to “blend the academic world with that of the community in order to provide constructive interaction between the two for the total development of Northern Ghana, in particular, and the country as a whole” (PNDC Law 279, Section 279). UDS was borne out of the new thinking in higher education which emphasizes the need for universities to play a more active role in addressing problems of the society, particularly in the rural areas” (UDS Basic statistics).

The University by its mandate and constituency has a pro-poor focus. This is replicated in its methodology of teaching, research and outreach services. The specific emphasis is on practically oriented, research and field-based training and is aimed at contributing towards poverty reduction in order to accelerate national development: It began academic work in September 1993 with the admission of forty (40) students into the Faculty of Agriculture, (FoA), Nyankpala. The Faculty of Integrated Development Studies, (FIDS), Faculty of Planning and Land Management (FPLM), School of Business and Law, Wa, Faculty of Education (FoE), and School of Medicine and Health
Sciences (SMHS), Tamale, Faculty of Renewable Natural Resources (FRNR), Faculty of Agriculture (FoA) and the Faculty of Agribusiness and Communication Sciences (FACS), Nyankpala, Faculty of Applied Sciences (FAS), Faculty of Mathematical Sciences (FMS), Navrongo and the Graduate School now in Tamale were phased in from 1994 to date.

UDS is unique compared to other public universities in the following ways: Its location and multi campuses are spread out in rural northern Ghana where the incidence and depth of poverty is high. Its vision is pro-poor aimed at addressing the conditions and structural causes of poverty. UDS has four (4) campuses, Thirteen (13) Faculties, a Business School, one Medical School, one Graduate School, one Institute and three (3) centres. UDS also runs a community-technical interface programme. This is a combination of the academic and community-based field practical work known as the Third Trimester Field Practical Programme (TTFPP).”

1.5.1 Scope of the Study

The study will be limited to the three campuses of UDS: Namely, Tamale and Nyanpalla Campuses in the Northern Region and Wa Campus in the Upper West Region. The choice of this study area is due to the fact that UDS library has been automated, has an institutional repository and subscribes to electronic resources and databases. It also conducts IL training for students in the faculties of Education, Agricultural and Department of Chemistry.

1.6 Conceptual Framework

The study will adopt the Seven Pillars of Information Literacy Skills developed by the Society of Collage National and University Libraries (SCONUL 2011) as the most suitable model. The model
was accepted worldwide. This Higher Education Core Model serves to examine competencies in information literacy and a series of attitudes of UDS students. This model is selected based on its relationship and strengths with the study in the topic information literacy. Each pillar will be described by a series of statements relating to a set of skills/competencies and a set of attitudes/understandings. It will be expected that as persons become more information literate, they might demonstrate more attributes in each pillar. The model is conceived as a three-dimensional circular building based on an Information Landscape that encompasses the world of information, as it would appear at that point to a researcher. The picture is also colored in the information literacy landscape of a researcher, in other words his ability, background and experience, which affect how he responds to the development of information literacy.

The SCONUL model being in a circular nature/form reveals that, to become an information literate person is not a linear process; a researcher can be developing simultaneously and independently within several pillars at the same time, although in practice they are often closely linked. Each pillar further describes a series of statements relating to a set of skills/competencies and a set of attitudes/understandings. It is expected that as a researcher becomes more information literate they will demonstrate more of the attributes in each pillar and so move to the top of the pillar. (SCONUL2011). Below is a diagram of the seven pillars of SCONUL adapted from (SCONUL 2011).
Figure 11: Seven pillars of information Literacy

Source: Adapted from (SCONUL 2011).

The pillars are explained as follows:

**Identify Personal Needs for Information**

SCONUL (2011) shows that information literate person should identify personal information needs and that there is a lot to be learnt because new information is always generated for consumption. To be an information expert requires the development of a learning and research practice to constantly seek new information where ideas can be created through research. The quantum of published and unpublished information in different fields focus on different type information. The need of an information professional on information is subject to the task involved, the subject matter and the phases of research. An information literate must be able to identify the knowledge gap in a particular subject field and define it with a simple terms that enables him/her identify a knowledge gap in a subject area, identify a search topic using simple
terms articulate up-to-date knowledge in an issue, identify the need for data and information to achieve a particular purpose, and define limits on the information needs.

**Understand the Scope of Information**

SCONUL (2011) describes an information literate person as one who can assess current knowledge and identify gaps, know the types of information that are available, the characteristics of the different types of information source available and how they may be affected by the format (digital, print). Issue of accessibility (e.g. free/subscribed; license restrictions, electronic/print), the services available to help and how to access them (different libraries, people organisations, structures). Additionally, an individual who knows about information is able to identify information gaps and identify which types of information will best meet your needs, identify the search tools available, such as the general and the specific resources available at various levels, identify various data collection methods, identify different formats of information (e.g. print, digital, multimedia), and show how new instruments can be used when they are available.

**Plan**

To be an Information literate person, a student/Researcher should be able to construct strategies that will help him/her locate information and data, that means the researcher can understand the range of searching techniques that is available for finding information, differentiate between search tools, and recognising the advantages and limitations. Complex search strategies can make a difference to the breadth and depth of information found, the need to develop approaches to searching in a way that new tools are sought for each new questions (That is not always relying on most familiar sources). This is important in that it helps to recognize the need to revise keywords
and adapt search strategies to available resources and/or results found, as well as the value of controlled vocabularies and taxonomies in searching information.”

**Gather**

An Information literate person is able to locate and access the information and data they need that is to understand how information and data is organised, digitally, how resources are being provided by libraries for students/researchers to have access, provision of digital technologies collaborative tools to create and share information, collecting new data and different elements of citations and how this describes an information resources. The use of abstracts, the need to keep up to date with new information, the difference between free and paid for resources, the risks involved in operating in a virtual world and the importance of appraising and evaluating search results (SCONUL, 2011).

**Evaluate**

“Information literate person is able to review a research process, compare and evaluate information and data, this person has the knowledge of information and data landscapes of their learning/research context, issues of quality, accuracy, relevance, bias, reputation and credibility that relates to information and data sources, and how information is evaluated and published, to help inform personal evaluation process. The importance of consistency in data collection, the importance of citation in their learning/research context SCONUL (2011).

“SCONUL (2011) also states that an information literate person is able to: distinguish between different resources of information and the information being provided, they are also able to choose suitable and appropriate material for their search/research topic, using appropriate criteria to
assess the quality, accuracy, relevance, bias, reputation and credibility of the information resources found. Further, they assess the credibility of the data gathered, read critically, identify key points/words and arguments, relate the information found to the original search strategy, critically appraise and evaluate their own findings and those of others, and know when to stop.”

**Manage**

According to SCONUL (2011), an information literate person can organise information personally and ethically. This person understands their responsibility to be honest in all aspects of information handling and dissemination (e.g. copyright, plagiarism and intellectual property issues). It is important to adopt appropriate data handling methods because they play a significant role in helping others in information seeking and management. There is also the need to keep systematic records, for the storing and sharing information and data ethically, the role of professionals, such as data managers and librarians, who can advise, assist and support with all aspects of information management.

Information literate persons should be able to use bibliographical software if appropriate to manage information, cite printed and electronic sources using suitable referencing styles, create appropriate formatted bibliographies, demonstrate awareness of issues relating to the rights of others including ethics, data protection, copyright, plagiarism, intellectual property issues, meet standards of conduct for academic integrity, and use appropriate data management software and techniques to manage data.”
Present

Information literate person should be able to apply the knowledge acquired by presenting the results of their research by synthesising new and old information and data to create new knowledge, disseminating the acquired knowledge in a variety of ways to the benefit of others. This information literate person should understand the difference between summarising and synthesising , that different forms of writing/presentation style that can be used to present information to different communities to their benefit, present data in different ways, also they should have a personal responsibility to store and share information and data, further cultivate personal responsibility to disseminate information and knowledge on how their work will be evaluated. This will involve the process of publication, the concept of attribution and the individuals ability to take an active part in the creation” of information through traditional publishing and digital technologies SCONUL (2011). Wema (2006) also added that, the SCONUL models recognizes that an information literate person should possess both lower and higher thinking skills: lower thinking skills include understand how to use the library, its resources, and possession of IT skills; higher order thinking skills include the exploitation of information resources, using evaluation criteria on information, using manipulating techniques and present materials to others.

1.7 Significance of the study

The results from the study will contribute to development of IL training activities in Ghana and UDS. That will lead to effective utilisation of library resources. Also, findings from the study will provide, insight to access, use, locating and management of library resources by undergraduate students and show priority areas and measures that librarians might work on to plan for their daily
activities. Also, results from the study will help librarians, administrators, curriculum developers and policy makers to develop good strategies for effective implementation of IL training at UDS and other librarians in and outside Ghana. Lastly, the study will contribute to the existing body of knowledge.

1.8 Description of Chapters

Chapter One (1) will consist of Introduction
Chapter Two (2) will consist of Literature Review
Chapter Three (3) will consist of Methodology
Chapter Four (4) will consist of Data Analysis
Chapter five (5) Will consist of Discussion of Findings
Chapter Six (6) will consist of summary, conclusion and recommendation
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

According to Creswell (2009) a literature review accomplishes several purposes which shares with a reader the results of other studies that are closely related to the one being undertaken. It also provides a framework for establishing the importance of the study as well as a benchmark for comparing the results with other findings. A literature review helps scholars to limit their scope of inquiry and convey the importance of studying a topic to readers. The aim of a literature review is to analyse the critical points of existing knowledge on a topic (Hassan 2010). This chapter presents a review of concepts and empirical studies on information literacy programmes in higher academic institutions and information literacy skills of students. The chapter presents a review of relevant literature related to information literacy on the concept and development of information literacy starting with the World view, the African view and narrow it down to the Ghanaian view.

The major topics covered in this chapter are as follows:

Concept of Information Literacy
History and development of Information Literacy
Information Literacy programmes in Developed Countries
Information Literacy Programmes in Africa
Information Literacy programmes in Ghana
Information Literacy programmes in UDS.
Undergraduate students’ attitude towards IL Programme
Level of information literacy skills of undergraduate students
2.2 The concept of information literacy

Many attempts have been made by renowned scholars (Brage and Svensson, 2011; Anafo and Filson, 2014; Okon et al. 2014; Keshalu and Srinivasulu, 2016; Dorvlo, 2016) to explain the meaning of information literacy. Brage and Svensson (2011) stated that literacy is considered an overarching term that includes the following components: the search and collection of information, assessment of the information resources, accurate and appropriate citation, reference and critical thinking. In contrast, information literacy helps empower students as long-term learners and productive, informed staff. Anafo and Filson (2014) argue that a lack of information literacy has a negative effect on both academic success and personal and professional development. The reason is that information literacy skills are relevant and adaptable to everyday life conditions and determine the quality of individual life as well as its value in academia and society. (Okon et al. 2014). Information literacy has become important because the system contains so much information and the information are available in various forms and by various means. Therefore, people must choose the right information in making decision and can select the right information. Despite the relevance of IL, many people are unaware of what it entails. For instance, a study by Keshalu and Srinivasulu (2016) describes IL as searching free web for information while others see it as locating, evaluating and using information or reading complex documents and summarising information, majority of the population cannot describe what IL is. That is why information literacy needs to be taught in different institutions, since this is the only way of avoiding the excess of information. Information literacy provides students in higher institutions
with the ability to identify information needs, locate the necessary information, assess information they have discovered, and understand ethical and legal issues related to information use. (Dorvlo, 2016).

2.3 History and Development of Information Literacy

Equipping one with IL competencies in our modern era is seen as an exchange beyond a skills-based approach, especially in response to technological innovations such as web 2.0 tools, mobile technologies, with others (Alexandersson and Limberg, 2003; Lundh and Limberg, 2008; Pawley, 2003; Sundin, 2008; Tuominen et al., 2005).

IL is essential for redefining, since information is generated and communicated online in many different forms, through different methods, formats and platforms. A lot of effort has been dedicated to defining the term information literacy according to the needs of society, emergence of new information and communication technologies and increasing volume of information. IL is without a doubt central to this redefinition, as information is generated and transmitted in many online formats, via multiple modes, formats and platforms. Information literacy is also important in the contemporary environment of rapid technological change and proliferating information resources. Goad (2002), in a brief definition of IL says “the ability to search for, find, evaluate and use information from a variety of sources”

The most current definition of IL is by the National Forum of Information Literacy (2005). It defines it as “a constellation of competencies revolving around information research, use and practice across all occupations and professions. It is the foundation for effective, lifelong learning practice and professional empowerment.” Pennel (1999) specified that “information literate
students are competent and independent learners.” The reason being that they are able to display confidence in their ability to know what relevant information can be able to solve an information need. The term information literacy was coined by Zurkowski in the 1970s in order to address the needs of those working in new technological contexts (Kapitzke 2003). Zurkowski was the then president of the U.S. Information Industry Association, used the phrase “information literate” in 1974 to indicate people who have been trained in the application of information resources to their work (Carbo 1997).

Boekhorst, (2004) stated that Zurkowski used the term IL in 1974 to refer to people’s capabilities of solving their information problem whereby application of relevant technology is used for relevant information. The concept has since been primarily employed by information professionals and librarians and was promulgated around the world by the work of the American library Association and the National Forum for Information Literacy (Feather and Sturges, 2003).

Bawden (2001) presents a complete review of the topic and concept discussion and its relationship to partially overlapping concepts like digital literature, library literature and computer literacy. Some researchers describe IL as requisites to lifelong learning (Hancook, 1993; Moore, 2002). People acquired IL with IT (Mitchell, 1996), whereas others used this word interchangeably with their library skills (Kuhlthau, 1990). This concept evolved in the western world with terms such as library instructions, library orientation, bibliographical instructions and user education among others.

Information Professionals and for that matter librarians have championed the development of IL at educational, individual, national and international levels. This interest has been there and can be
traced back several years with names such as library instructions or bibliographic and user education (Lester. 1979), Association of Colleges and Research Libraries 2002, Virkus 2003). International Organizations within and beyond the information profession are also involved in IL concept. A body such as the International Federation of Library Associations and Institutions (IFLA) has produced guidelines for assignment of information literacy and its role as lifelong learning, which complement national initiative (IFLA, 2001).

Looking at information literacy from different angles that is from associations, organisations and individuals, IL is now seen as a global issue that must be critically looked at for its smooth implementation in all academic institutions, right from the basic education through secondary schools to the university levels.

From the discussion above, it is therefore seen that information literacy has assumed a prominent seat in the various levels of education in all spheres of human life as it permeates through all endeavors and researches have put in efforts to bring to the light the definition of Information Literacy and when it evolved.

2.4 Information Literacy programme in Developed Countries

Information literacy campaigns have been in full swing all over the world. It is a worldwide phenomenon which has been accepted and practiced very well in most developed countries. This means that, developed countries around the globe have been at the forefront of information literacy campaign.
Information literacy as a field of study has been more actively pursued well in North America, Australia and United Kingdom. In the United States of America, there has been a lot of initiatives and the two major ones are from the library sector. The initial one was by the Institute for Information Literacy and the second was the National Forum on Information Literacy. The two initiatives encourage the teaching of information literacy both in secondary schools and in higher education. The forum supports, initiates, and monitors the projects of information literacy both in the US and abroad (Webber & Johnson 2003). Curzon (2000), emphasised the detail processes where competence of information use became a primary focus for the California State University system and how the libraries encouraged and fostered it using fellowships and grants to professors.”

However, information literacy in Spain as written by Hernandez and Urene (2003) has been comparatively on a low side due to setbacks in cultural activities during the twentieth century. As a result of this setback, it led to poor developments in the collection of libraries and their services at all levels of libraries including schools, public, and academic libraries. Presently, a lot of pilot projects are underway to support various libraries in schools in a form of distribution of materials and sharing of experiences to advocate for information literacy and make staffing policies to be able to advance lifelong learning and compensate for the inequalities in the information accessibility to prevent academic failures among other things. Hernandez and Urene (2003) continue that, these supports, and reforms have led to a brighter picture, as all academic and public libraries in the country engaged in IL activities for all types of users, though school libraries are still behind.
Also, in the United Kingdom (UK), the Quality Assurance Agency for Higher Education (2001) stated that students should achieve a range of "transferable skills", including the ability to "gather and analyze relevant information from a wide variety of sources using appropriate manual and electronic systems ". Awareness of social issues and equal opportunities are also seen as important transferable skills but are not explicitly linked to information handling skill. Parker (2003) opines that, the ability to use libraries and information as a sign and of one being information literate is becoming increasingly recognized as an integral part of undergraduate study in the United Kingdom.

A research conducted by Foo, et.al., (2014) looked at, assessing information literacy levels of secondary school students in Singapore. The study brought it out that the “School Libraries Unit of the Ministry of Education published a set of information literacy guidelines (ILG) and an information literacy supplementary material to be used by Singapore schools right from primary school through to secondary school level.” The guideline provided a framework that was to help teach students on how to manage their learning, handle information overload, especially in recent years where there is the availability of the internet to help these students make creative use of the information obtained from these sources. It included recommendations on how the IL programme could be implemented within the school’s curriculum in specific subject disciplines for the standards of performance in IL.”

A report published by the National institute of Education (NIE) identified among other things, that, the twenty-first learning innovation skills were set for students to improve on their information literacy skills and these include; critical thinking, problem solving and innovation;
knowledge, information, media and technology literacy skills. It however listed information literacy and Information and Communication Technology (ICT) literacy separately. This makes it clear that IL is recognised as a separate but still a necessary component from ICT literacy. IL has subsequently become a required basic skill that is set for both teachers and students of the twenty-first century to become lifelong learners.

Mokhtar et al. (2007) in his study identified a group of researchers from Nanyang Technological University who proposed to develop a model to help improve IL standards for secondary schools in Singapore. He stated that, the proposed model was constructed using the already existing international IL standards. According to him, “The then Minister of Education mentioned in his presentation and stressed that information literacy should be considered one of the higher intellectual domains for implementing education system” which is a value driven. Heng (2011) further emphasised the need to fully integrate information literacy skills into the curriculum to help students understand the application of such skills.

2.5 Information Literacy in Africa

Some schools of thought have advocated that the digital divide between the developed and developing world has widened because of the lack of information literacy skills in developing countries (Dewan, Ganley and Kraemer 2005). Pejova, (2002) emphasized that, one barrier to the efficient use of information and communication technology (ICT) in developing countries is the relatively low level of information literacy among people. He further stressed that without the ability of the people to manipulate and use information effectively; investments in ICT for development projects may be wasted if not unsuccessful. Without literacy, developing nation may
continue to underutilize the technology that is provided to them, resulting in a waste of resources with potentially serious repercussions for their development. He further stressed that, urgent and energetic efforts at addressing the information literacy issue in less developed countries are needed to prevent further widening the gap between developed and developing countries.

Dorner and Gorman (2006) in trying to define information literacy for a developing country, defines IL as the ability of individuals or group of people in their unique context: to understand when information can help, to know how to find and evaluate it, to understand to integrate the relevant information to create new knowledge or add to existing knowledge, to use this knowledge as needed to resolve their problems, and to evaluate and learn from experience.

According to Tilvawala, Myers and Andrade (2009) there are a growing number of information and communication technology (ICT) initiatives in developing countries. These initiatives are usually undertaken on the basis that they are important for social and economic development. ICT has become the major driving force behind this shift. The challenge of keeping up with the information economy particularly affects developing countries.

Joroso and Isaac (2008) stipulate that although, IL as a subject has generated a vast body of literature, it remains an undeveloped area in developing countries especially in the sub-Saharan African countries. Just a few scholars have demonstrated interest in the subject and this phenomenon has limited a fuller understanding of how information is delivered and conceptualized in the developing countries.
In order to achieve full benefit of IL in developing nations, a collaborative effort between librarians and teaching staff must be established as a process to facilitate planning and discussing goals of information literacy. Dorner (2009) affirms that IL education is a cooperative process. Additionally, the Association of Academic and Research Libraries (ACRL) emphasize the need for this collaboration in an official publication. An example is guidance for Instructions Programs in Academic Libraries’ (ACRL, 2000).

Developing nations as well as less developed countries must strive in their effort to find pragmatic strategies to address the issue of IL programmes across all educational circles including senior high schools. Libraries must be well resourced with the necessary facilities so as to enhance the teaching of IL to help individual students to become lifelong learners. By this way, the well-developed countries that have the ease of developing IL programmes should have collaborations with the less developed nations to help them bridge the gap that exists between the two categories of nations. To this effect, Dadzie (2007) stipulated that a joint project should be put together to help individual countries to broaden and intensify their existing activities on IL implementation as well as promotion.

These limitations notwithstanding, there are African countries which are not relenting on their effort but had also taken some sort of initiatives and approaches of emphasizing and initiating information Literacy programs exist in many countries. For instance, in 2004, Uganda hosted the Standing Conference of African National and University Libraries in Eastern, Central and Southern Africa (SCANULUCS) and undertook as its main theme, “User Information Literacy: a challenge for National and University Libraries”. It focused on how best information literacy could be well grounded in that country’s universities.
In Nigeria there are important parallels in IL theory and practice between Nigeria and other countries with well-established IL traditions, however, Idiodi (2005) opines that factors such as economic instability, under-resourcing and computer (ICT) illiteracy inhibit the full development of IL programmes in the country.

Aiyepeku, Atinmo, and Aderinoye (2002) advocating for the development of information literacy in developing countries stated that IL programme should be developed to suit the specific needs and local environment. He also proposed that the goal of information literacy programmes in Africa should help “inculcate a lifelong habit of identifying an information need and efficiency in searching for, and using indigenous oral, print, electronic and other sources of information to satisfy that need thereby enhance personal, community, and socio-economic interest”.

2.6 Information Literacy in Ghana

In Ghanaian universities, the role of information literacy has been recognised. This has taken place through the establishment of academic programmes to equip students with the basic information literacy skills that can be applied at the workplace. Scholarly works on the role of higher academic institutions in promoting information literacy has been evidenced. Few studies such as Afful-Arthur and Filson, (2015), Bello and Ibrahim (2003), and Van ’t Hof et al. (2010) has justified that the Kwame Nkrumah University of Science and Technology (KNUST), the University of Cape Coast, the University of Ghana, and the University for Development Studies have made significant efforts over the years to implement IL programmes in their curricular.
In the University of Cape Coast, the teaching of information literacy skills; formerly known as information retrieval started in the late 1980’s as a compulsory subject (Afful-Arthur & Filson, 2015). In the 2002/2003 academic year, the Information Retrieval Course (IRC) was introduced for all level 100 students of the University (Dadzie, 2007). Since that time efforts have been made to put in place the needed educational infrastructure to support the teaching of the course. Prominent among them include library and computer facilities. The purpose of this is to ensure that products of such higher institutions have the necessary information literacy skills at their workplaces.

The submission of Dadzie (2009) also indicates that the University of Ghana has made effort towards promoting the teaching and learning of IL. According to this study, the University of Ghana has established a Language Centre, an effective library system at University of Ghana library school (UGLS), with information retrieval being offered as an elective course at the department of Information Studies. Besides, computer literacy training programmes are offered to students by the University of Ghana Computing Systems (UGCS) to supplement teaching and learning. There is also academic writing course for all Level 100 students and those joining at Level 200. This means that all first-year students in the University have access to some aspects of information literacy training.

Following a workshop organised for selected librarians, and faculty members from all state universities and polytechnics to sensitise them on information literacy, KNUST has drawn a syllabus for the integration of “Information Literacy Skills (ILS)” course into their academic programme in the 2011/12 academic year. The university started teaching IL at departmental levels
and every department had a responsibility to add IL to their course outline. However, due to course overload, most of the departments except departments of Industrial and rural arts and publishing has halted teaching of IL pending review from a committee on IL. This means that management of the university has had intentions of promoting IL programme.

2.6.1 Information Literacy Programme in UDS

Like all other libraries, the University for Development Studies (UDS) library provides orientation to her fresh students but this was insufficient for effective use of the library. Among reasons advanced by Antwi (1998) were: “the student numbers were large, so they were grouped, thus reducing the opportunity of effective demonstration and forum to ask questions. Similarly, the instructor hardly gets any feedback from students, which could bring about an improvement of the service”. The timing of the orientation programme was considered inappropriate as the new students were still pre-occupied with making general adjustments to university life during this early part of their stay on campus. There was therefore the need for better library education. It is in realisation of this that the UDS introduced a user education course (GEN 101), which is an integral part of the English Language and Communication Skills Course.

The user education course involved a formal instruction in the use of libraries given to the University students. It was a prescribed syllabus approved by the University’s Academic Board. The course was taught and examined by the university library. The purpose of the course was to stimulate and aid users to explore and make effective use of library resources, assist students become better users of the university library and other libraries as well as acquire information searching skills. The course was compulsory for all students admitted into the university and it
was taken during the first trimester of the year. It is credit earning and thus contributes to final grade point average (FGPA). The course was introduced in 1993 when the university started admitting her first batch of students. However, due to increase student’s population and limited staff strength, the course was discontinued in 2004, until it was reintroduced by the university library as Information Literacy in 2016, which is offered by the faculties of Education, Agriculture, Renewable Natural Resources, School of Engineering and Department of Chemistry but not compulsory this time. Since its commencement as user studies in 1993 and reintroduction as information literacy in 2016, it has neither been evaluated for improvements nor assessed to find out if it meets the desired objectives.

A related academic course on Bibliographic Instruction in library Use was introduced in some faculties of the University for Development Studies with its content covering: library information and society, collection development, information organisation, and reference sources among others (Bello & Ibrahim, 2003). Bello and Ibrahim added that a new course on Language and Communication Skills was later developed that covers some elements of information literacy.

2.7 Undergraduate students’ attitude towards IL training programmes
Academic and Research institutions and libraries across the world including UDS have initiated the teaching of IL to help students become information literates and lifelong learners. For this IL programme to be effective, it is important to assess the library users’ attitude on IL training process and achievements. This includes students’ attitude on the use of the library, students’ access and use of information, their frequency of visiting the library, purpose of visiting the library, library
assistance, use of electronic resources in the library, students’ participation in information literacy programme, their knowledge of information sources, access and use of internet among the students

Students’ attitude should be assessed and understood in order to ascertain if they are indeed learning or acquiring new information literacy skills. According to Hartmann (2001), students’ perception or attitude towards information literacy changes and their needs differ from the academic environment they enroll in.

Scale and Lindsay (2005) on a qualitative assessment of the students of Washington State University attitude towards IL. In the study, the students were exposed to IL training. ATLAS/ti was used to study their attitude towards information literacy. Majority of the students expressed that, their knowledge in IL will continuously develop for the rest of their lives. It was also found that the students had distinct attitude towards information literacy. Scale and Lindsay (2005) opined that students’ attitudes toward information literacy were found to vary, but nevertheless could still be used to further develop information literacy. Julien et al. (2009) adopted Lindauer’s theoretical framework to study the status of information literacy skills training for undergraduate in three Canadian business school. The outcome was that students claimed that they are more knowledgeable about available resources, high quality and authoritative information in the databases. Al Awadhi and Rehman (2012) also conducted a study to ascertain Students’ and faculty members’ perception on the content of an information literacy course and the benefits and skills gained from the course. The finding revealed that students were generally happy about the benefits they obtained from the course. The attitudes of students towards information literacy can be influence by various factors. It includes confidence, supportive resources, students’ lack of
willingness and interest in the training, insufficient training and students preferred style of
training.

A quantitative study conducted by Ogunlana et al (2013) on students’ perception, attitude and
experience as factors influencing learning information literacy skills in public universities in Ogun
state concluded that students regard information literacy as a valuable skill and believe that a
certain level of information literacy should be attained in one’s academic pursuit. In the same
study, students’ attitude towards information skills had a greatest relative contribution.

2.7.1 Level of information literacy skills of undergraduate students

2.7.1.1 Identifying Information needs (Concept Identification)

Evidently, information is available throughout libraries, community resources, special interest
organization, media and the internet. Increasingly, information comes to individuals in unfiltered
format, raising questions about its authenticity, validity and reliability (Anafo & Filson, 2014).
Bringing out all associated words or phrases will make it easy for individuals to search for the
needed information. This is very important to any information literate person (Dorvlo 2016).
Information literate person determines the nature and extent of the information needed. Most
appropriately, information literacy skills are used for academic purposes, such as research papers
and group presentation in the university, as a result the student’s ability to find, evaluate, identify,
use and share information is a vital skill that enhance students to effectively and efficiently use
informationa resources especially the library (Okon et al. 2014). Al-Auffi et al. (2017) identified
that undergraduate students at Sultan Qaboos University use social media for academic purposes
such as completion of course assessments and self-development in the academic specialty. Medical
students in the college of health science in Niger Delta University of Nigeria mostly rely on textbooks, journals, the internet, colleagues and the national university commission libraries to identify their needed information, (Baro & Endouware, 2011). With regards to search techniques, Milliari et al. (2014) found that students in Greek senior high school were not familiar with advance techniques. A possible explanation for the relatively low level of search competence is that most of the students acquired searching skills on their own without any formal training and as a result they used simple and most common techniques for retrieving information. Al-Issa (2013) indicated by way of identifying needed information, students examine and compares information from resources for reliability, validity, accuracy, authority timeliness, and opinion to draw conclusions. He however explained that unlike public university students, private students were given instruction on using the library and its resources through the English Language program. They also had the assistance from the Writing Center staff making them comfortable in searching the Internet and online databases for information at the University. This brings to the fore the enormous role of academic institutions in promoting information literacy.

Several studies (e.g. Oware, 2010; Sasikala & Dhanraju, 2011) maintain that students relied mostly on the internet as their preferred source of information for academic work and research. It is revealed that the internet is mostly used because of its ease of access and use from everywhere, and also the fact it is convenient and it gives you much information within a few times. With the advent of globalization in the realm of education, there has been information explosion. The library and information landscape have transformed with the onset of the digital era. Knowledge and skills in using traditional compute and practical abilities in using digital devices such as laptops and smart phones have help improve information literacy among students. Researchers (Malliari et al, 2014) explain that high school students in Greece are quite familiar with information technology.
What is quite unfortunate is that only one third of the students are searching the internet for both personal and educational reasons while more than half of their sample were using the internet for personal reasons. Al-Aufi et al. (2017) also conducted a study around Information literacy and information behavior. They result indicated that the respondents use social media more for general than academic purposes. This means that the use of social media among some students do not promote the expected benefits in information literacy for academic purpose.”

However, the research also established that besides the internet which students used most, some of them still used the library resources to equally get information for their academic work or research. Even computer and internets are found in some libraries, just like the case of Kuwait State where all senior high school libraries had available computer with access to the intern. In the case of Linköping University library, Brage and Svensson (2011) are lobbying for the inclusion of information literacy concept into different curriculum since they strongly believed that information literacy enables individuals to engage in all kinds of learning situations using information sources critically in optimal ways. However, in places such as Penukonda; where maximum number of people are not aware of the internet and it’s used and facilities, they will authentically really on other sources especially the traditional library for information (Keshalu and Srinivasulu, 2016).

Even though, Al-Issa (2013) discovered that students in private school in the State of Kuwait relied on the Internet, they equally really on public library to gather information for the assignments. Aside the library providing information to students for assignment, it also helps them in research and provide recreational information materials (Kimani, 2014). In Greek, Malliari et al. (2014) established that school libraries have not thrived for several reasons. Some of the reasons they established are that libraries have not been treated as an integral part of the educational system and
that they have not been connected to the teaching process; they have been regarded as redundant in the a centralized as well as teacher centered system, where teaching is limited to a single textbook. In some areas. In a similar study at the State of Kuwait, Al-Issa (2013) posed that private students viewed their libraries as "big" and "overwhelming," which created a level of anxiety for the students as they started searching for information for their projects. On the part of public schools, he indicated that the lack of instruction in research skills hindered their ability to conduct research at their university libraries and to write well-developed, coherent paper.

Information literacy is an important component of any university library system because of its role in academic achievement and lifelong learning (Anafo & Filson, 2014) as a result, Orientation in the library is one way to inform students. It involves taking the freshmen or new students round the library and showing them the various sections of the library, where the catalogue is located, showing them the reference staff who would assist them when they need help and other basic things about the library. It consists of taking the students around the library, showing them the various sections, and the library staff who would help them in case they need assistance and other basic things in the library (Dorvlo, 2016). Several authors have expressed no doubts about the benefits of library instruction to information literacy. Even though library instruction offered to first year students of catholic university of eastern Africa was inadequate, they had received training on how to do referencing in academic work, how to use the library catalogues, how to search library databases, how to access information materials in the library, use of search strategies and plagiarism (Kimani, 2014). This means that while some libraries have not been able to adequately improve the information literacy levels of student’s others have transformed the
student’s capacity to search and use relevant academic information. This has several implications on the students’ level of information literacy.

2.7.1.2 Locating information needs

After a student can identify his or her needed information, one question that need to be ask is how did he or she retrieve such an information. This is to establish how students identify what constitute the needed information. This is one of the key factors in testing students’ level in information literacy. Dorvlo (2016) states that the location of necessary information is a process by which relevant information is collected using several means. Moreover, search and location core areas for many librarians as they help patrons find resources and facilitate the development of their own search skills. Credibility is considered as an important factor in locating needed information. In analyzing the perceptions of information literacy skills among undergraduate students of Sultan Qaboos University, they first perceive that information should be credible while accuracy and currency of information used is perceive as other factors considered in retreating information needed (Al-Aufi et al., 2017). Talking about credibility, accuracy and currency, the use of search strategies, search tools and document types is very important. After determining key terms in each study, search strategies for the relevant documents must be adopted (Dorvlo, 2016). To archive this, American students in the study Saunders et al. (2015) express that instruction in evaluating Web sites is often begun in elementary school, which might reflect the relative confidence in their abilities.

Many scholars have tried to finding ways by which students locate their needed information. For instance, Malliari, Togia, Korobili and Nitsos in (2014) conducted a study to explore how students evaluate themselves in certain information literacy skills. They found that majority of the students
in Greek High School felt very capable of retrieving information from the internet, selects and
gathers information from a variety of reliable sources (print and electronic). An increase in the
understanding of student’s information needs was also notice by Hemmati (2017) when he tries to
determine the relationship between information literacy and knowledge management among
students and faculty members of Shiraz University. Hemmati found a satisfactory result in terms
of searching and combining new information with prior knowledge evaluation skills. Equally
important, Saunders et al. (2015) stated that library and information science (LIS) students seem
to be comfortable with developing search strategies, choosing search terms, and finding resources
in libraries and on the Web. They rely heavily on search engines and express some concern about
their ability to evaluate Web sources. But they have a hard time in getting started on research
assignment including defining and narrowing down topics.

Additionally, Sriborisutsakul et al. (2012) indicate that the most frequent source of information
most of the undergraduates used for their course-related assignments and everyday life research is
search engines. This may be due to the fact this search engines have ease of use, convenience of
access and fast retrieval of information on the internet by browsing through web dictionaries. Pinto
and Fernandez-Pascual (2017) also found that students that are enroll in information
documentation shows greater knowledge of searching for and processing information than the
participating students in other disciplines. In contrast to the fact that most students are well skilled
in concept identification, studies still show that most students did not know how to locate their
information needs. For instance, in the skills of searching information strategies (determining
available information resource) and how to gather information (extract useful information)
students in Shiraz University have shown poor performance (Hemmati, 2017).
From an international perspective, Saunders et al. (2015), several important areas where students from certain countries expressed greater levels of difficulty. Specifically, more than one-third of students in Turkey, Bulgaria, Croatia, Lithuania, Singapore, France, and Portugal express difficulty in evaluating Web sources. As a matter of fact, these difficulties are equally faced by student in several African countries especially Ghana. Undoubtedly, African students are faced with challenges such as lack of time, challenges of locating good citable stuff, inability to use effectively library and poor skills in information searching (Baro and Endouware, 2011; Anafo and Filson, 2014; Dorvlo, 2016). A study conducted among undergraduate students of Ashesi University College revealed that majority of the students are not able to access relevant information because of lack of search strategies, information sources, proper use of library catalogue (Anafo and Filson, 2014). Similar study by Dorvlo (2016) at the University of Ghana among post graduate indicated students were unskillful in the use of search strategies search tools and the evaluation of information. Only a few numbers of graduate students knew how to locate scholar journal. Kimani (2014) did a study at the catholic University of Estern Africa in Kenya and stipulated that incoming first year students have limited knowledge of strategies for information. Majority of the incoming undergraduate’s university students are not familiar with the various retrieval tools and their application. Auguring along similar lines, Al-Issa (2013) indicated in his study that public university could not perform basic searches such as citations and citation styles while that of private university students were aware of performing basic searches, citations and citation styles. His study also results reflected the students uses the online databases effectively, use surveys, letters, interviews and other forms of inquiry to retrieve primary information. That is to say that in locating information, the use sources that are both relevant and balance. This finding is different in the case of Niger Delta University Students, Baro and
Endouware (2011) discovered that they rarely use electronic resources such as Medline, Hinari, the Cochrane library and EbscoHost, possibly because the lack awareness and skills necessary to search databases.

2.8 Challenges that hinder IL programmes for undergraduate students

Kavulya (2003) reported that the main barriers which university libraries face in providing IL programmes are the lack of both financial and human resources together with inadequate support from parent organizations in terms of policy and materials. There is also failure on the part of librarians to push to the fore IL as being a function of a university library. In addition, there was still computer illiteracy among Kenyan librarians. Wema (2006) established challenges of implementing the teaching of IL such as the approach to teach IL training in linear nature, whereas information seeking process was highly interactive. Also, there was a challenge in adapting various teaching methods of knowledge transfer, enhancing skills and assessing students understanding. There were challenges of organization of IL training, which included the difficult in running the courses within the curriculum’s time schedule, organizing IL classes, enrolling students and learners’ lack of prior IL skills such as ICT skills (Wema, 2006). There are several challenges of IL training that need to be tackled. Such IL challenges include the lack of IL policy, lack of proactive librarians, lack of partnership between librarians and teaching staff to mainstream IL, the unavailability of resources; inadequate library staffing, and lack of students to learnt (Lwehabura and Stilwell, 2008).

Emmanuel and Sife (2011) found out that, low awareness of the importance of ICTs among University top management was a great obstacle to ICT development at SNAL. It is difficult for
University top officials to support initiatives that aim at increasing availability, accessing and utilization of information resources at the University.

Low bandwidth is a problem common to many Universities in Africa, for more than five years the bandwidth at SUA has remained 256/128 kps, making Internet connectivity at the University extremely slow. Effects of low bandwidth are felt more in the library than other sections of the University because of the need to download information resources (Emmanuel and Sife, 2011).

Maro (2008) revealed that uneven distribution of ICT facilities, lack of Internet connectivity, poor as well as low IL skills to access electronic resources, lack of computer skills, low sensitization of IL training programmes by the library, and few IT professionals to train distance learners were challenges to IL training. Information literacy training flourishes better when there are adequate essential learning resources; specifically, ICT resources as CD-ROMs, computers and good internet connectivity as well as other non-electronic resources such as books and journals (Hepworth, 2000).

Angello (2008) showed that to a great extent, livestock researchers in Tanzania lacked the necessary information literacy skill to enable them search and use the e-resources effectively. Due to lack of opportunity to attend information literacy training more so, their institutes do not offer training to staff. Kayungi (2009) also revealed common challenges that hinder effective conduction of Libraries User Education Programmes (LUEPs) at the University of Dar-es-Salaam (UDSM) and Ardhi (ARU) libraries. It was found out that funds allocated for running LUEPs at the surveyed university libraries especially at the UDSM library were not disbursed on time and were inadequate; timetable overlapping were also challenging that hinder most library users to attend
the programmes. Ndekao (2011) found various challenges, which hindered effective IL implementation at Institute of Finance Management such as limited Internet connectivity, shortage of computers and shortage of staff.

2.9 Students’ awareness of the legal and ethical implication of information use

Dorvlo (2016) explained that the legal and ethical use of information is one of the major factors to be considered in information literacy. In the study of Kimani (2014) several definitions were given to legal and ethical terms especially plagiarism. Some felt that it is the using of an author’s exact word without giving credit which amounted to plagiarism. Also, others considered it as an act of paraphrasing an author’s idea without mentioning it. Recognizing legal issues pertaining to using information (copyright, fair use, laws, and cybercrimes) is part of information literacy. Plagiarism and source citation are another area of concern for the understanding of information literacy. Understanding what constitutes plagiarism and when and how to properly cite sources is crucial for students. An information person must therefore use an appropriate style of documentation to cite the sources; must be aware of plagiarism and copyright, intellectual property and fair use laws (Campbell 2004).

University students are expected to possess some level of literacy about legal and ethical issues. The legal and ethical use of information is of great importance, since most of the information they have accessed both for academic and personal activities comes from people who have worked very hard to produce it. They are responsible for the results of their works and must thus recognize them with citation, reference and copyright. Sasikala and Dhanraju (2011) assessed information literacy skill among science students of Andhra University and found that most students were aware of the
rights and implications of copyright. The difference between fair use and plagiarism is also noted for most people. However, half of the surveyed students did not know the citation styles. Al-Aufi et al. (2017) assessed information literacy perceptions of undergraduate students at Sultan Qaboos University in their use of social media. Their results demonstrated overall moderate levels of perceptions toward the evaluation of information, information ethics, legal issues, and privacy issues. From their analysis, it indicated that information ethics received higher levels of information literacy among the respondents. They also explained that the level of information literacy in legal issues associated with the use of information was modest among students but within which the respondents had less recognition of the laws related to cybercrimes. Proving recognition that information ethics contributes to strengthening the capacity of information societies. In terms of legal issues Al-Issa (2013) found that plagiarism was evident among government school students project in the State of Kuwait because they were not aware of citations and citation styles. This attests that they were not aware of the legal implications about plagiarism. In Ghana, Anafo and Filson (2014) identified the lack of ethical and legal use of information on the part of Ashesi University undergraduates and this suggests low levels of information literacy among some undergraduate students in Ghana.

Information literacy skills seem to have varied across different characteristic of students. As for gender, Al-Aufi et al. (2017) the results showed significant statistical differences in favor of female respondents toward the level of perceptions in information ethics, but male respondents showed higher levels than females in skills pertaining to legal issues and information privacy. However, the statistics of Pinto and Fernandez-Pascual (2017) revealed no significant differences between female and male students in their levels of knowledge regarding searching and evaluation of legal
and ethical issues. This means that literature is inconclusive on the influence of demographic variables on information literacy levels.

Al-Issa (2013) studied how undergraduate students who attended public and private universities in the State of Kuwait formed their concept when it comes to knowledge of information literacy and their research process. He found that government school students project works had no citations because they had no knowledge of citations, citation styles and referencing, they applied the copy and paste approach. This was evident and clear that plagiarism among the government school students was high. On the other hand, the private university students had knowledge of performing basic searches, citations and citation styles and referencing. This suggest that there is an urgent need to address the issue of legal and ethical use of information especially plagiarism in the public universities. The academic level and disciplines of the respondents showed that students in senior levels possessed significantly higher perceptions than those in lower academic levels, especially in skills related to legal issues and privacy of information (Al-Aufi et al., 2017). In Brage and Svensson (2011) collaborative assessment of information literacy education in Linköping University library it was discovered that there was less plagiarism among the students. In the case of Ghana, Dorlvo (2016) studied information illiteracy among post graduates of the university of Ghana and the results showed low levels of ethical concerns even though some of the students were aware of copyright issues and the implications., incoming first year undergraduate students of the Catholic University of Eastern Africa in Kenya showed little knowledge of issues relating to intellectual property rights and copyright (Kimani, 2014). Additionally, those who had the opportunity to have previously completed or attended a
programme on information literacy showed significantly higher levels of perceptions, except in privacy of information skills, which showed no statistical significance in this regard.”

A diagnosis of information literacy level among social science undergraduates revealed that Students enrolled in information documentation show greater knowledge in the categories of searching for and processing information than the participating students in other disciplines (Pinto and Fernandez-Pascual, 2017). About disciplines, those who were found to be affiliated to with science disciplines where found to have higher level of participation than their counterparts in humanities and social science. Confirming the argument of Brage and Svensson (2011), all leaners irrespective of the educational level at the university need to be thought information literacy skills, both for their current academic programme and for their future work
CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology for the study. It includes the research design, population, sampling and sample size, sampling technique, data collection instruments, data collection procedure; data collection methods validity and reliability, data analysis plan and ethical issues.

3.2 Research Design

Researchers such as Kothari (2004), Creswell (2009) and Kumar (2011) explain that a research design is the determination of general research strategy adopted for a project. The design, therefore, represents plans and procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis (Creswell, 2014). It is also explained as arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure (Kothari, 2004). Various designs have been identified in social research. They include: survey, exploratory, explanatory, descriptive, and experimental designs (Kothari, 2004, Cohen et al., 2007; Kumar, 211; Bhattacherjee, 2012).

This study used the descriptive research design in analysing students’ attitude on information literacy programmes in the University for Development Studies. According to literature such as Best and Khan (1998) and Kumar (2011), a descriptive design is concerned with the conditions and relationships that exist, such as determining the nature of prevailing conditions, practices and
ongoing processes or trends that were developed. For example, it may attempt to describe the types of service provided by an organisation (Kumar, 2011). The descriptive approach was used to describe students’ information literacy skills, their attitudes in participating in information literacy programmes, and outcomes of information literacy programmes in the University for Development Studies. Besides, the descriptive design gave an insight into the challenges that hinder information literacy programmes for undergraduate students and ascertain students’ awareness of the legal and ethical implication of information use.

The approach to the study was mixed methods. Three main research approaches have been identified in social science. They include qualitative, quantitative and mixed methods (Kumar, 2011; Creswell, 2014). The distinction between qualitative and quantitative research was framed in terms of using words (qualitative) rather than numbers (quantitative) or closed ended questions rather than open ended questions. A mixed method strategy resides in the middle of this continuum because it incorporates elements of both qualitative and quantitative approaches. (Creswell, 2014) explains that mixed methods research in social science known as triangulation is an approach to enquiry that combines both the qualitative and quantitative forms. Baker (1999) notes that, triangulation enables a researcher to gather evidence from multiple sources to address the questions at hand from different points of view.

The use of mixed methods enabled the researcher to analyse the problem under investigation using both qualitative and quantitative methods. Responses from students generated the quantitative data and this was analysed using quantitative methods while data collected from academic members of staff who teach IL at the University for Development Studies using interview was analysed using
qualitative methods. The main approach was the use of quantitative with the qualitative being supportive.

3.3 Selection of Subjects

3.3.1 Population

The study was conducted at the University for Development Studies which is in the northern part of Ghana. The main reason for selecting this study area was because UDS library had recently been automated and it has an institutional repository as well as subscribes to electronic resources and databases (University for Development Studies, 2017). The university conducts IL training for students in the Faculty of Agribusiness and Communication Science, Faculty of Education, Faculty of Agriculture, and the Faculty of Renewable Natural Resources. The Faculty of Education spread across all the four (4) campuses of the University and has majority of the students. The researcher will use three of the departments of the faculty of Education for the study. These are: Business Studies education, Social Science education, development education and early childhood and basic education. The 2016/2017 academic year enrolment of undergraduate students that offered IL Programme was used for the study. This was because they had offered the programme already and will be able to answer questions based on what they had studied. The number of these IL students was 799 as shown in Table 3.1 (University for Development studies 2018).

Table 3.1: Student Enrolment in Information Literacy Programme in 2016/2017 Academic Year
<table>
<thead>
<tr>
<th>Faculty/Department</th>
<th>Student Enrolment in Information Literacy Programme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty of Agribusiness and Communication Sciences</td>
<td>128</td>
</tr>
<tr>
<td>Faculty of Agriculture</td>
<td>32</td>
</tr>
<tr>
<td>Faculty of Natural Resources and Environment</td>
<td>48</td>
</tr>
<tr>
<td>Faculty of Education</td>
<td>591</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>799</strong></td>
</tr>
</tbody>
</table>

Source: University for Development Studies (2017)

The study population also comprised academic members of staff who teach information literacy within the institution with varying social and educational backgrounds, age and gender. The University for Development Studies library has 15 senior members of staff consisting: of 1 Librarian, 2 Senior Assistant Librarians, 5 Assistant Librarians, and 7 Junior Assistant Librarians (University for Development Studies, 2017).

### 3.3.2 Selection of sample

The sample size was selected based on the student population who offered information literacy in three of the UDS campuses, that is, the Wa, Tamale and Nyankpalla Campuses. The sample size determination was done using the Yamane (1970) formula stated as:

\[
    n = \frac{N}{1 + N(e)^2}
\]

“Where \( n \) = sample size; \( N \) = sample frame and \( e \) = error or significance level. According to Ahuja (2001), an acceptable error level traditionally is up to ± 0.05 or ± 0.10 (i.e., 5 or 10 percentage point). In this study, \( N = 799 \) and \( e = 5\% = 0.05 \). Therefore:
The required sample size of undergraduate students included in the study was 267. The sample distribution of the respondents is shown in Table 3.2.

**Table 3.2: Sample Distribution of Respondents**

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Student Enrolment in Information Literacy Programme</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty of Agribusiness and Communication Sciences</td>
<td>128</td>
<td>43</td>
</tr>
<tr>
<td>Faculty of Agriculture</td>
<td>32</td>
<td>11</td>
</tr>
<tr>
<td>Faculty of Natural Resources and Environment</td>
<td>48</td>
<td>16</td>
</tr>
<tr>
<td>Faculty of Education</td>
<td>591</td>
<td>197</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>799</strong></td>
<td><strong>267</strong></td>
</tr>
</tbody>
</table>

Probability and non-probability sampling techniques was used to select the required sample of the study. The researcher employed stratified sampling technique to select the undergraduate students pursuing IL courses at different campuses of the University for Development Studies. Adam and Kamuzora (2008) explained that stratified sampling is a probability sampling procedure whereby all members in the population have an equal chance of being selected to form the sample. The researcher also used cluster probability sampling to obtain academic members of staff. Lastly, the researcher used purposive non-probability sampling technique to obtain the sample from academic librarians. A purposive sampling technique is a type of non-probability sampling in which the researcher purposely chooses subjects who in his or her opinion was thought to be relevant to the
research topic (Sarandakos, 1998). These were, Senior Assistant Librarians and Assistant Librarians who teach undergraduate students.

3.4 Data collection procedure

Data collection methods can be defined as research techniques employed in the data collection (Kothari, 2004). The study used a combination of data collection methods to collect primary and secondary data. This was because the combination of methods in data collection ensure reliability and validity of data collection. The study used various sources to collect secondary data which included published and unpublished sources such as books, journal articles, research reports, dissertations, seminars, conference proceedings and websites.

Primary data was collected using self-administered questionnaires with closed and open-ended questions. The self-administered questionnaires were used as the main data collection method to draw information from undergraduate students. This technique included the use of written down items/questions to which respondents individually responded to in writing. The questions were in the form of statements or questions. A total of 267 questionnaires were distributed based on the students’ sample size. The interview was carefully structured to fulfil the study needs. The selected respondents were interviewed based on specific objectives of the study.

3.4.1 Pre-test

Oppenheim, Katona md Moser, and Sproul (as cited in Sarantakos, 1997), pre-test seeks to fix the following:
1. To approximate the cost and period of the main study and also test the effectiveness of its organisation.

2. To experiment the research methods and research instruments for their reliability, validity and suitability

3. To verify whether the sample frame is adequate

4. To estimate the level of responses and form of drop-out

5. To gain insight about how diverse or homogenous the survey population is.

6. To enable the researcher to familiarise with the research that is to take place

7. It offers the researcher and their assistance the chance to practice research in real situations prior to the main study

8. To test the response of the subjects to the method of data collection and through the adequacy of its structure.

A pilot test was conducted to check for validity, clarity and consistence of instruments for the study. The researcher conducted a pre-test at the Wa Polytechnic. The pilot study included ten undergraduate students, four (4) academic library staff members who were randomly selected.

A combination of methods was used to investigate the same phenomena. The aim was to ensure mutual confirmation of the measures and validity of the findings. Data was collected using a questionnaire, semi structured interviews and observation guides. This was to make sure that the instruments for data collection was appropriate.
3.5 Data Analysis

Data analysis is the process that involves editing, coding, classifying and tabulating the collected data (Kothari, 2004). Data of this study was organised, sorted coded, edited and analysed. The researcher employed Statistical package for Social sciences (SPSS) version 20 for quantitative data. Qualitative was sorted and organised into thematic areas with a matrix. Then they were subjected to content analysis.

The questionnaire data collected was coded using numerical values and analysed using Statistical Package for Social Sciences (SPSS) version 20. This made it easier for the researcher to bring out frequency distribution of the responses. Each copy of the questionnaire was numbered serially according to the order in which they were received. Descriptive statistics was employed to summerise the basic features of the data in the study. To illustrate the figures, percentages and frequencies were calculated. Tables and charts were used to present the percentages and frequencies.

3.6 Ethical consideration

This study was conducted mainly to contribute to knowledge in the area of assessing undergraduate students’ attitude on information literacy programme of the University for Development Studies, Tamale. Respondents were informed of the study and asked for their consent before they participated. In conformity with the University of Ghana standards for research, respondents’ confidentiality and non-disclosure of information provided for the study was assured. Respondents therefore were not required to write their names on the questionnaire or mention their names in an interview. The researcher sought permission from the Registrar to collect data from the institution.
CHAPTER FOUR
DATA ANALYSIS

4.1 Introduction

This chapter presents analysis of the results of the study. Results on several concepts and variables had been presented with much focus on the objectives of the study. First, presentation of the findings was done under the background information of the respondents. Other sections of the chapter present the results and analysis of students’ access and use of information, students’ evaluation of information, the legal and ethical use of information and the barriers to effective use and access to information.

4.2. Background Information of Respondents

This section presents the results and analysis on the background information of respondents. The key variables analysed included programme of study, gender of respondents, their ages, and levels of study.

4.2.1 Programmes of Study

The respondents were sampled across different programmes of study, where information literacy course is being taught. The various programmes that considered information literacy as a necessary requirement and the proportion of respondents taking the course are listed in Table 4.1. The programmes are: Agricultural Technology, Development Education, B.ED Business Studies, B.ED Social Studies, Early Childhood and Basic Education, Renewable Natural Resources and Social Change Communication (SCC).
Table 4.1: Programmes of Study

<table>
<thead>
<tr>
<th>Programmes</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Technology</td>
<td>11</td>
<td>4.1</td>
</tr>
<tr>
<td>B.ED Business Studies</td>
<td>35</td>
<td>13.1</td>
</tr>
<tr>
<td>B.ED Social Science</td>
<td>53</td>
<td>19.9</td>
</tr>
<tr>
<td>Development Education</td>
<td>78</td>
<td>29.2</td>
</tr>
<tr>
<td>Early Childhood &amp; Basic Education</td>
<td>30</td>
<td>11.2</td>
</tr>
<tr>
<td>Renewable Natural Resources</td>
<td>16</td>
<td>6.0</td>
</tr>
<tr>
<td>Social Change Communication.</td>
<td>44</td>
<td>16.5</td>
</tr>
<tr>
<td>Total</td>
<td>267</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field Survey (2019)

From Table 4.1, the frequencies and percentages show the relative population of students who offered the respective programmes. This means that Development Education programme had 78 (29.2%) the highest enrolment of students followed by B.ED Social Science, 53(19.9) while Agricultural Technology had 11 (4.1%) the least enrolment of students and is followed by Renewable Natural Resources with 16 (6.0%).

4.2.2 Gender of Respondents

The results from the study revealed that the respondents consisted of both male and female students. From Table 4.2, there were 187(70%) male student while female students constituted 80(30%) of the sample.
Table 4.2: Gender of Respondents

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>187</td>
<td>70</td>
</tr>
<tr>
<td>Female</td>
<td>80</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>267</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Field Survey (2019)

The results on gender distribution of the respondents suggest that male dominated over female students in academic programme where information literacy course was being taught. It could also mean that the female population was less than that of male population in terms of student enrolment in the University for Development Studies. Further analysis was done in respect of gender distribution by academic programme of study and the results are shown in Table 4.3.
Table 4.3: Gender Distribution by Academic Programmes of Study

<table>
<thead>
<tr>
<th>Academic Programme</th>
<th>Male</th>
<th></th>
<th>Female</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Freq.</td>
<td>%</td>
<td>Freq.</td>
<td>%</td>
<td>Freq.</td>
<td>%</td>
</tr>
<tr>
<td>Agricultural Technology</td>
<td>6</td>
<td>54.5</td>
<td>5</td>
<td>45.5</td>
<td>11</td>
<td>100.0</td>
</tr>
<tr>
<td>B.ED Business Studies</td>
<td>32</td>
<td>91.4</td>
<td>3</td>
<td>8.6</td>
<td>35</td>
<td>100.0</td>
</tr>
<tr>
<td>B.ED Social Science</td>
<td>45</td>
<td>84.9</td>
<td>8</td>
<td>15.1</td>
<td>53</td>
<td>100.0</td>
</tr>
<tr>
<td>Development Education</td>
<td>60</td>
<td>76.9</td>
<td>18</td>
<td>23.1</td>
<td>78</td>
<td>100.0</td>
</tr>
<tr>
<td>Early Childhood &amp; Basic Education</td>
<td>16</td>
<td>53.3</td>
<td>14</td>
<td>46.7</td>
<td>30</td>
<td>100.0</td>
</tr>
<tr>
<td>Renewable Natural Resource</td>
<td>11</td>
<td>68.8</td>
<td>5</td>
<td>31.2</td>
<td>16</td>
<td>100.0</td>
</tr>
<tr>
<td>SCC</td>
<td>17</td>
<td>38.6</td>
<td>27</td>
<td>61.4</td>
<td>44</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>187</td>
<td>70.0</td>
<td>80</td>
<td>30.0</td>
<td>267</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field Survey (2019)

4.2.3 Age Range of Respondents

Table 4.4 Age of Respondents

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-23</td>
<td>132</td>
<td>49.4</td>
</tr>
<tr>
<td>24-29</td>
<td>122</td>
<td>45.7</td>
</tr>
<tr>
<td>30-35</td>
<td>12</td>
<td>4.5</td>
</tr>
<tr>
<td>Above 36</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>267</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field Survey (2019)
The ages of students were elicited and put into different categories. The categories consisted of 18-23 years, 24-29 years, 30-35 years and those above 36 years of age. The frequency and percentage distribution of the ages of students is shown in Table 4.4. The results indicated that 132 (49.4%) respondents were within the age category of 18-23 years, and 122 (45.7%) respondents were within the age category of 24-29 years. It was also discovered that 12 (4.5%) were within the age category of 30-35 while only 1 (0.4%) respondent was above age 35. The results on age distribution of the respondents imply that majority of the students were in their middle 20s while a relatively smaller proportion of respondents were above 30 years. This means that there was variation in the ages of the students.

4.2.4 Levels of Study

Table 4.5: Levels of Study

<table>
<thead>
<tr>
<th>Level</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>115</td>
<td>43.1</td>
</tr>
<tr>
<td>300</td>
<td>143</td>
<td>53.6</td>
</tr>
<tr>
<td>400</td>
<td>9</td>
<td>3.4</td>
</tr>
<tr>
<td>Total</td>
<td>267</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field Survey (2019)

The students selected as respondents of the study were in different year groups or levels of study. For example, 115 (43.1%) were in Level 200, while 143 (53.6%) respondents who constituted the majority were in their third year of study. (Level 300). Finally, 9 (3.4%) respondents were in their
final years of study (level 400) of the undergraduate studies. The distribution of the levels of study of the respondents is shown in Table 4.5.

The background information of the respondents presented shows a variation among the students. Such differences occurred with respect to their gender, programmes of study, age and levels of study. These differences could influence their level of access to information, information evaluation skills, ethical use of information, and hence their information literacy skills.

4.3 Students’ Access and Use of Information

This section presents the results of students’ access and use of information. Key variables presented included the frequency of students visiting the library, purpose of visiting the library, library assistance offered to students, and students’ awareness of electronic resources in the library. Other issues presented under this section included students’ participation in information literacy programme, their knowledge of information sources, and access and use of internet among the students.
4.3.1 Frequency of Visiting the Library

Figure 4.1: Frequency of Visiting the library

Source: Field Survey (2019)

One of the ways of measuring students’ access to and use of information is their frequency of visit to the University’s library. It was discovered that the frequency of using the University’s library varied from student to student. The results shown in Figure 4.1, indicated that 25 (9.4%) respondents visited the library every day. This means that this was the category of students that had frequent access and use of academic information. They probably had considered the library as a place for learning and conducting their research and hence visiting it became a daily habit. This was expected to grant them access to valuable information as they became familiar with the resources in the library as well as assistance, they received from the library staff.

Besides, 90 (33.7%) respondents visited the University’s library at least once every week. This category of people also had access to information once they visited it weekly. This also means that the students who visited the library weekly had not considered the library as a place where they learned daily but probably visited it only when they needed valuable information. It was also found that 87 (32.6%) respondents visited the library once a month. This category of people were
not regular users of the library but only visited the library occasionally to look for information. Such people were likely not to become familiar with new developments of the library and hence may lack access to vital information. Further, 4 (1.5%) respondents claimed that they visited the library once a Trimester. Finally, 61 (22.8%) respondents did not visit the library at all. Such people had no knowledge on the academic information that was kept at the library and hence had no opportunity of using the library’s information to enhance their work.

Table 4.6 Academic Programmes of Study and Frequency of Visiting the Library

<table>
<thead>
<tr>
<th>Academic Programme</th>
<th>Frequency of Visiting the library</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Everyday</td>
<td>Weekly</td>
</tr>
<tr>
<td>Agricultural Technology</td>
<td>1 (9.1%)</td>
<td>6 (54.5%)</td>
</tr>
<tr>
<td>B.ED Business Studies</td>
<td>0 (0.0%)</td>
<td>7 (20.0%)</td>
</tr>
<tr>
<td>B.ED Social Science</td>
<td>4 (7.5%)</td>
<td>23 (43.4%)</td>
</tr>
<tr>
<td>Development Education</td>
<td>9 (11.5%)</td>
<td>22 (28.2%)</td>
</tr>
<tr>
<td>Early Childhood &amp; Basic Education</td>
<td>4 (13.3%)</td>
<td>13 (43.3%)</td>
</tr>
<tr>
<td>Renewable Natural Resource</td>
<td>2 (12.5%)</td>
<td>5 (31.2%)</td>
</tr>
<tr>
<td>SCC</td>
<td>5 (11.4%)</td>
<td>14 (31.8%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>25 (9.4%)</strong></td>
<td><strong>90 (33.7%)</strong></td>
</tr>
</tbody>
</table>

N = 267, Pearson Chi-square = 38.57, df = 24, Asymptotic Significance (p-value) = 0.030

Source: Field Survey (2019)
Further analysis was done to compare how students visited and used the University Library. These varied by academic programmes of the students. This was done by generating cross tabulation of library visits and academic programmes. Chi-square test of independence was used to test the claim that students’ visits to the library were independent of their academic programmes of study. The results generated is shown in Table 4.6.

The Chi-square statistics revealed a test value of 38.57 and this was found to be significant at 5% (p-value = 0.030 < 0.05). This provides enough evidence to reject the claim of independence of students’ academic programmes and library visits and hence students’ academic programmes of study influences the frequency of their library visits. The frequencies and relative percentages shown in Table 4.6 also support the findings that frequency of library visits varied according to students’ academic programmes of study. For example, among those that visited the library every day were students pursuing Development Education, Early Childhood and Basic Education, Renewable Natural Resources, and Social Change Communication. On the other hand, none of the students pursuing B.ED Business Studies visited the library every day and majority of them did not visit it all.
4.3.2 Purpose of Visiting the Library

Table 4.7: Purpose of Visiting the Library

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>For reading of one’s notes</td>
<td>86</td>
<td>32.2</td>
</tr>
<tr>
<td>For reading story books</td>
<td>19</td>
<td>7.1</td>
</tr>
<tr>
<td>For reading textbooks</td>
<td>61</td>
<td>22.8</td>
</tr>
<tr>
<td>For research on coursework</td>
<td>108</td>
<td>40.4</td>
</tr>
<tr>
<td>To look for specific information when needed</td>
<td>50</td>
<td>18.7</td>
</tr>
<tr>
<td>To read newspapers</td>
<td>6</td>
<td>2.2</td>
</tr>
</tbody>
</table>

Source: Field Survey (2019)

The respondents provided several reasons for visiting the library. From Table 4.7, the main purpose of their visit to the library included visiting the library to read different kinds of books, research for coursework, and to search for specific information when needed. Table 4.7 specifically revealed that 86 (32.2%) visited the library to read their own notes taken during lectures, 19 (7.1%) visit the library to read story books, 61 (22.8%) visited the library to read textbooks, while 108 (40.4%) visited to library do research for coursework. Other purposes discovered included going to the library to search for some specific information as was indicated by 50 (18.7%) of the respondents and finally, a small proportion 6 (2.2%) visited the library to read newspapers.

The respondents were asked to indicate whether their purpose of visiting the library had been achieved. Multiple responses were considered at this section. The respondents generally suggested that they had been achieving their purpose of visiting the library. From Table 4.8, (61)70.9% of
those who visited the library to read their own notes claimed that they had achieved their purpose of going there. This means they made effective use of the library, as according to them, it helped them to revise their notes and get supplementary information from the library conveniently.

Further, among the respondents who visited the library to read story books, majority of them 16 (84.2%) indicated that they had achieved their purpose of going to use the library while the remaining 3 (15.8%) felt that the library facility had not been helping them to achieve their purpose of going there. Further evidence suggested that the library had relevant textbooks that supported students’ research and search for information for their coursework materials. From Table 4.8, 43 (70.5%) of those who visited the library to read textbooks have been achieving their purpose of going there. Similar findings had been found for those who either visited the library to search for coursework materials or to search for specific information on a subject matter. From Table 4.8, 74 (68.5%) and 39 (78%) of the respondents were found to have achieved their purpose for going to the library for research on course work and finding specific general information respectively.
Table 4.8: Achieving Purpose of Visiting the library

<table>
<thead>
<tr>
<th>Purpose of Visiting library</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>Visit the library to read my notes</td>
<td>61</td>
<td>70.9</td>
<td>25</td>
</tr>
<tr>
<td>For reading of story books</td>
<td>16</td>
<td>84.2</td>
<td>3</td>
</tr>
<tr>
<td>For reading textbooks</td>
<td>43</td>
<td>70.5</td>
<td>18</td>
</tr>
<tr>
<td>For research on coursework</td>
<td>74</td>
<td>68.5</td>
<td>34</td>
</tr>
<tr>
<td>looking for specific information when needed</td>
<td>39</td>
<td>78.0</td>
<td>11</td>
</tr>
<tr>
<td>To read newspapers</td>
<td>2</td>
<td>33.3</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: Field Survey (2019)

Finally, students have not been achieving their purpose of visiting the library to read newspapers. From Table 4.8, only 2 (33.3%) out of the 4 (66.7%) respondents who visited the library to read newspapers had achieved their purpose. What could be the reason is that the University library probably had not got current or adequate number of newspapers in its collection in line with students’ needs.
4.3.3 Library Assistance

Figure 4.2: Receiving Support from Library Staff

The respondents were asked to indicate whether they often received assistance from the library staff regarding access and use of the library. The results as shown in Figure 4.2 indicated that 138 (51.7%) respondents confirmed that they had received support in the form of instruction and guidance from the library staff regarding the use of the library. The remaining 129 (48.0%) respondents did not receive any support or did not even use the library facility.
The respondents who received assistance from library staff in using the library had listed the kinds of support or assistance received. The frequency and percentages of the distribution are shown in Table 4.9. From Table 4.9, the main assistance received by students were in the area of activation of library card, basic library ethics, cataloging, database research, accessing the library, how to borrow a book, how to retrieve information, general library orientation and instruction on research methodology.

The findings in Table 4.9 indicate that 111 (41.57%) respondents had received assistance from the library in connection with their library cards activation. The library card is very important for users
of the library because it was an identity card which students often used to access services of the library. The library card can only be obtained by the student himself/herself with the assistance of library staff. The fact that 58 (43 %) had not received any assistance on activation of library card suggested that they were not effective users of the library.

The findings in Table 4.9 shows that 138 (51.69%) respondents indicated that they received support in the form of orientation in the area of basic library ethics which is part of the University for Development Studies curriculum to offer orientation to Level 100 students on the use of the library to facilitate students’ familiarity with access and use of the library. Such a programme involves showing students the process of identifying library materials, and where to seek support when needed. Besides, students could go to the library staff to seek more knowledge on basic ethics of the library. The fact that such basic orientations had been given to students especially, during their first-year orientation, makes it the dominant support often received as reported in Table 4.9.

It was also discovered that 84 (31.46%) received assistance on the use of the library catalogue while 76 (28.46%) received assistance on how to access key reference materials in the library. Assistance on how to borrow a book and how to locate a book were indicated by 115 (43.07%) and 117 (43.82%) respectively. This means that the UDS Campus Libraries had been performing crucial roles in assisting students to locate and access or borrow books. However, less than 50% of the respondents had accessed these services, and this implies that despite the crucial role of library staff, the students themselves have not considered library services as important process of improving their information literacy skills.
4.3.4 Awareness of Electronic Resources and Database

Table 4.10: Awareness of Electronic Resources in the library

<table>
<thead>
<tr>
<th>Academic Programme</th>
<th>Yes</th>
<th>%</th>
<th>No</th>
<th>%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Technology</td>
<td>7</td>
<td>63.6</td>
<td>4</td>
<td>36.4</td>
<td>11</td>
</tr>
<tr>
<td>B.ED Business Studies</td>
<td>18</td>
<td>51.4</td>
<td>17</td>
<td>48.6</td>
<td>35</td>
</tr>
<tr>
<td>B.ED Social Science</td>
<td>23</td>
<td>43.4</td>
<td>30</td>
<td>56.6</td>
<td>53</td>
</tr>
<tr>
<td>Development Education</td>
<td>31</td>
<td>39.7</td>
<td>47</td>
<td>60.3</td>
<td>78</td>
</tr>
<tr>
<td>Early Childhood &amp; Basic Education</td>
<td>18</td>
<td>60.0</td>
<td>12</td>
<td>40.0</td>
<td>30</td>
</tr>
<tr>
<td>Renewable Natural Resource</td>
<td>11</td>
<td>68.8</td>
<td>5</td>
<td>31.2</td>
<td>16</td>
</tr>
<tr>
<td>SCC</td>
<td>25</td>
<td>56.8</td>
<td>19</td>
<td>43.2</td>
<td>44</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>133</td>
<td>49.8</td>
<td>134</td>
<td>50.2</td>
<td>267</td>
</tr>
</tbody>
</table>

N = 267, Pearson Chi-square = 9.31, df = 6, Asymptotic Significance (p-value) = 0.156

Source: Field Survey (2019)

The respondents were asked to indicate whether they were aware of electronic resources in the University library. The results obtained, as shown in Table 4.10, indicated that 133 (49.8%) respondents claimed that they were aware of the electronic resources in the library. Cross-tabulation of students’ academic programmes of study and awareness of electronic resources were generated and tested for independence using the Chi-square test. The proportion of respondents were aware of the availability of these resources was almost the same as those who were not aware. The results of a chi-square test of independence was found not to be significant even at 5% (p-
value > 0.05). This means that awareness of electronic resources did not vary by programmes of study.

From Table 4.10, majority 134 (50.2%) of the students from the various programmes were not aware of the electronic resources in the library. It was, however, expected that most of the students would have become more aware of the electronic resources in the library since information about the materials were normally communicated to the students during their first year orientation. This means that the 133 (49.8%) awareness rating was not sufficiently large enough once students were informed of the availability of such electronic resources and were thus expected to be using them.

Table 4.11 Access to Electronic Resources of the Library

<table>
<thead>
<tr>
<th>Academic Programme</th>
<th>Access to electronic resources</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Agricultural Technology</td>
<td>4</td>
</tr>
<tr>
<td>B.ED Business Studies</td>
<td>8</td>
</tr>
<tr>
<td>BE.D Social Science</td>
<td>11</td>
</tr>
<tr>
<td>Development Education</td>
<td>12</td>
</tr>
<tr>
<td>Early Childhood &amp; Basic Education</td>
<td>13</td>
</tr>
<tr>
<td>Renewable Natural Resource</td>
<td>4</td>
</tr>
<tr>
<td>SCC</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>66</td>
</tr>
</tbody>
</table>

N = 267, Pearson Chi-square = 11.74, df = 6, Asymptotic Significance (p-value) = 0.068

Source: Field Survey (2019)
Further analysis was done to determine whether students had access to the electronic resources of the University library by asking them to indicate whether they had accessed the electronic resources. The results were presented in Table 4.11. These showed that only 66 (24.7%) respondents claimed that they had access to the electronic resources. The remaining 201 (75.3%) which constituted most of the respondents reported that they did not have access due to the lack of skills necessary to search the databases and hence have not been using the electronic resources of the library. Besides, the researcher wanted to know whether access to electronic resources of the library varied according to students’ academic programmes of study. This was done by generating cross-tabulation of academic programmes and access to electronic resources. Frequencies and percentages (in parenthesis) were used to report the findings as shown in Table 4.11. The chi-square test results provided a test value of 11.74 and this was found to be not significant at 5% (p-value > 0.05). This means that the hypothesis of independence of access to electronic resources with reference to academic programmes of study should be accepted.

The relative frequencies and percentages shown in Table 4.11, suggest a variation in access to electronic resources of the library by students’ academic programmes of study. Despite the generally low access 66 (24%), some programmes of study had relatively lower access than others. For example, students pursuing Early Childhood and Basic Education had relatively higher access 13 (43.3%). Besides, 4 (36.4%) of students pursuing Agricultural Technology also had access and this is considered relatively better. However, students pursuing Development Education had relatively lower access to the electronic resources because only 12 (15.4%) had access. Students pursuing Renewable Natural Resources, B.ED Social Science or B.ED Business Studies, all had lower access because less than 30% of had access to the University Library’s electronic resources.
4.3.5 Participation in IL Training Programme

Table 4.12: Participation in Information Literacy Training Programme

<table>
<thead>
<tr>
<th>Academic Programme</th>
<th>Yes</th>
<th>%</th>
<th>No</th>
<th>%</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Technology</td>
<td>6</td>
<td>54.5</td>
<td>5</td>
<td>45.5</td>
<td>11</td>
<td>100.0</td>
</tr>
<tr>
<td>B.ED Business Studies</td>
<td>8</td>
<td>22.9</td>
<td>27</td>
<td>77.1</td>
<td>35</td>
<td>100.0</td>
</tr>
<tr>
<td>B.ED Social Science</td>
<td>10</td>
<td>19.2</td>
<td>42</td>
<td>80.8</td>
<td>53</td>
<td>100.0</td>
</tr>
<tr>
<td>Development Education</td>
<td>16</td>
<td>20.5</td>
<td>62</td>
<td>79.5</td>
<td>78</td>
<td>100.0</td>
</tr>
<tr>
<td>Early Childhood &amp; Basic Education</td>
<td>10</td>
<td>33.3</td>
<td>20</td>
<td>66.7</td>
<td>30</td>
<td>100.0</td>
</tr>
<tr>
<td>Renewable Natural Resource</td>
<td>10</td>
<td>62.5</td>
<td>6</td>
<td>37.5</td>
<td>16</td>
<td>100.0</td>
</tr>
<tr>
<td>SCC</td>
<td>16</td>
<td>36.4</td>
<td>28</td>
<td>63.6</td>
<td>44</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>76</strong></td>
<td><strong>28.6</strong></td>
<td><strong>190</strong></td>
<td><strong>71.4</strong></td>
<td><strong>267</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

N = 267, Pearson Chi-square = 19.56, df = 6, Asymptotic Significance (p-value) = 0.003

Source: Field Survey (2019)

The University for Development Studies has Information Literacy training programmes for students to improve on their information literacy skills. However, this training was considered an optional capacity building training for the students. The students who participated in this study were, therefore, asked to indicate whether they had ever participated in such an Information Literacy training programmes. From Table 4.12, 76 (28.6%) respondents had participated in the Information Literacy programmes while the remaining 190 (71.4%) respondents had not participated in the programme. The results implied that majority of the students had not participated
in the Information Literacy programmes. Further, cross-tabulations were generated on participation in Information Literacy programmes by academic programmes being pursued. The independence of participation in the academic programme was tested using the Chi-square test. The test value (19.56, as reported in Table 4.12 was found to be significant at 5% (P-value > 0.05). This means that there was enough evidence to conclude that students’ participation in Information Literacy programme is influenced by a student’s academic programme pursued. This conclusion can be defended considering the relative frequencies and percentages of participation by academic programmes as shown in Table 4.12.

From Table 4.12, there is a significant difference in students’ participation in information literacy training by academic programmes being pursued. For example, in some of the academic programmes, students had high level of participation while others did not. It was evidenced from Table 4.12 that students pursuing Agricultural Technology had 6 (54.5%), and Renewable Natural Resources had 10 (62.5%) level of participation in Information Literacy programmes. On the other hand, low participation of students in Information Literacy programmes is associated with B.ED Business Studies, 8 (22.9%), BE.D Social Science 10 (19.2%) and Development Education, 16 (20.5%) An interview with a library staff of the University for Development Studies confirmed that students have been participating in the Information Literacy programme as follows:
Respondent 1

“Yes, students have been attending Information Literacy Programme regularly because they have come to understand the importance of the programme. As a result, most of them are able to search and locate relevant information themselves.”

The above statement implied that UDS students had developed a favourable attitude towards Information Literacy programmes as an academic course of study. Besides, the students are noticing the relevance of the programme because it improves on their information literacy skills through facilitating their access to relevant information.

Table 4.13: Effectiveness of Information Literacy Programme

<table>
<thead>
<tr>
<th>Effectiveness of IL Training Programme</th>
<th>Very effective</th>
<th>Effective</th>
<th>Ineffective</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td>Academic Programme</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agricultural Technology</td>
<td>1</td>
<td>16.7</td>
<td>5</td>
<td>83.3</td>
</tr>
<tr>
<td>B.ED Business Studies</td>
<td>5</td>
<td>35.7</td>
<td>4</td>
<td>28.6</td>
</tr>
<tr>
<td>B.ED Social Science</td>
<td>6</td>
<td>60.0</td>
<td>2</td>
<td>20.0</td>
</tr>
<tr>
<td>Development Education</td>
<td>7</td>
<td>41.2</td>
<td>8</td>
<td>47.1</td>
</tr>
<tr>
<td>Early Childhood &amp; Basic Education</td>
<td>2</td>
<td>22.2</td>
<td>7</td>
<td>77.8</td>
</tr>
<tr>
<td>Renewable Natural Resource</td>
<td>5</td>
<td>45.5</td>
<td>6</td>
<td>54.5</td>
</tr>
<tr>
<td>SCC</td>
<td>10</td>
<td>58.8</td>
<td>7</td>
<td>41.2</td>
</tr>
<tr>
<td>Total</td>
<td>36</td>
<td>42.9</td>
<td>39</td>
<td>46.4</td>
</tr>
</tbody>
</table>

Source: Field Survey (2019)
The respondents (students) had different opinions regarding their assessment of the effectiveness of the Information Literacy programme. From Table 4.13, the respondents had assessed the programme to be very effective, effective or ineffective. Generally, 36 (42.9%) respondents indicated that the Information Literacy programme was very effective, while 39 (46.4%) respondents indicated that the programme is effective. However, 9 (10.7%) respondents shared their opinion that the programme was ineffective.

Among the students pursuing Agricultural Technology, (1) 16.7% considered the Information Literacy programmes as very effective, while (5) 83.3% considered it effective. This means that these students had at least attached importance to the programme once they had not considered it as ineffective. Besides, students of B.ED Business Studies provided mixed opinions on the effectiveness of the Information Literacy programmes. It was discovered that (5) 35.7% of them considered the programme to be very effective, (4) 28.6% considered it to be effective and (5) 35.7% considered it ineffective. This means that this category of students was not very certain on their opinions regarding the effectiveness of the Information Literacy programmes. The results also revealed that more than half 6 (60%) of students pursuing B.ED Social Science had rated the Information Literacy programme as very effective. Moreover, 2 (20%) of them considered it as effective and the remaining 2 (20%) indicated that it was ineffective. This means that majority of the respondents had at least considered the Information Literacy programme as effective for the improvement of their information literacy skills.

The results in Table 4.13 also revealed that students pursuing Development Education see the Information Literacy programme as at least effective in improving their information literacy skills.
The results indicated that 7 (41.2%) of them maintained that the programme is very effective and another 8 (47.1%) said it is just effective. A smaller proportion 2 (11.8%), however, claimed that the Information Literacy programmes is ineffective. Finally, students pursuing Early Childhood and Basic Education, Renewable Natural Resources, and Social Change Communication have all assessed the Information Literacy programmes as at least effective. This means that none of the respondents from these categories have considered the programme as ineffective. Even though there were differences in opinions on the degree of effectiveness, the fact that none had considered it as ineffective underscores the effective role of information literacy training programme in developing the information literacy skills of the students.

The results in Table 4.13 imply that the University’s Information Literacy Programmes is effective in transforming the information literacy skills of the students. However, previous discussions suggest that students’ participation in the programme was low relative to their assessment of its effectiveness. This also means that students own behaviours play a significant role in their information literacy skills development.
4.3.6 Knowledge of Information Sources in the Library

The respondents were asked to indicate their knowledge of information sources in the library that they can use to develop their information literacy skills. The results obtained are shown in Figure 4.3, which shows that the main information sources identified include the Encyclopedia, Directory, Almanac, Dictionary, Manual, and Handbook.

The distribution of these respondents revealed that 68 (25.5%) respondents identified the Encyclopedia as a source of information in the Library, 35 (13.1%) respondents cited the Directory as a source of information in the library. Furthermore 21 (7.9%) respondents mentioned Almanac, 63 (23.6%) respondents identified Dictionary as information source while 5.6% and 4.9% identified the Manual and the Handbook respectively.

Source: Field Survey (2019)
Table 4.14: Sources Used in Finding Information

<table>
<thead>
<tr>
<th>Source</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encyclopedia</td>
<td>45</td>
<td>16.9</td>
</tr>
<tr>
<td>Directory</td>
<td>14</td>
<td>5.2</td>
</tr>
<tr>
<td>Almanac</td>
<td>3</td>
<td>1.1</td>
</tr>
<tr>
<td>Dictionary</td>
<td>5</td>
<td>1.9</td>
</tr>
<tr>
<td>Manual</td>
<td>9</td>
<td>3.4</td>
</tr>
<tr>
<td>Handbook</td>
<td>5</td>
<td>1.9</td>
</tr>
<tr>
<td>No response</td>
<td>186</td>
<td>69.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>267</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source: Field Survey (2019)

The research also revealed that some sources of information are very relevant for some purposes. For example, students rely on various sources of information when finding background information of the research. The results, as shown in Table 4.14, indicate that 45 (16.9%) of the respondents used the encyclopedia to obtain background information while 14 (5.2%) used the directory. Majority 186 (69.6%) of the students from various programmes gave no response to the question. The remaining sources, as shown in Table 4.14, were not widely used because the proportion of students using them was less than 5%. This means that even though the students identified the sources in the table through which information could be sought, they were not very much relevant for background information.
Table 4.15: Source Used in Finding Names and Addresses of People

<table>
<thead>
<tr>
<th>Source</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encyclopedia</td>
<td>4</td>
<td>1.5</td>
</tr>
<tr>
<td>Directory</td>
<td>47</td>
<td>17.6</td>
</tr>
<tr>
<td>Almanac</td>
<td>12</td>
<td>4.5</td>
</tr>
<tr>
<td>Dictionary</td>
<td>8</td>
<td>3.0</td>
</tr>
<tr>
<td>Manual</td>
<td>13</td>
<td>4.9</td>
</tr>
<tr>
<td>Handbook</td>
<td>6</td>
<td>2.2</td>
</tr>
<tr>
<td>No response</td>
<td>177</td>
<td>66.3</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field Survey (2019)

Further evidence suggests that students use some specific sources of information to find names and addresses of people. This is common among 90 (33.7%) respondents of the sample. Specific sources of information used to find names and addresses of people include encyclopedia, directory, almanac, dictionary, manual and handbook. Table 4.15 shows the distribution of respondents using such information sources in their search process. Additionally, 47 (17.6%) of the respondents relied on a directory to find names and addresses of people. 4 (1.5%) used the Encyclopedia, 12 (4.5%) used the Almanac, 8 (3.0%) used the Dictionary, 13 (4.9%) used the Manual, and 6 (2.2%) used the Handbook. This shows that students used different sources of information to find names and addresses of people.

The results in Table 4.15 imply that the students have not been using most of the information sources in the Library. For example, only 6 (2.2%) students were found to be using handbooks.
(1.5%) students used the encyclopedia and 8 (3.0%) students used the dictionary in finding the names and addresses of people. One can argue that these sources may not be appropriate in finding names and addresses of people but the fact that even only 17.6% are using the directory to do so suggest low utilisation of the information sources in the library.

Table 4.16: Sources Used in Finding Meanings of Words

<table>
<thead>
<tr>
<th>Source</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encyclopedia</td>
<td>7</td>
<td>2.6</td>
</tr>
<tr>
<td>Dictionary</td>
<td>109</td>
<td>40.8</td>
</tr>
<tr>
<td>No response</td>
<td>151</td>
<td>56.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>267</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Field Survey (2019)

Data analysis also showed that, some of the students relied on some specific information sources in finding meanings of words. From the study, the sources used by students included the encyclopedia and the dictionary. The distribution of this is shown in Table 4.16. The table indicates that 7 (2.6%) of the respondents used an encyclopedia to find meanings of words, while 109 (40.8%) indicated that they used the dictionary to find meanings of words. 56.6% had no response to the question.
Table 4.17: Source Used in Finding Miscellaneous Information

<table>
<thead>
<tr>
<th>Source</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encyclopedia</td>
<td>10</td>
<td>3.7</td>
</tr>
<tr>
<td>Directory</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>Almanac</td>
<td>15</td>
<td>5.6</td>
</tr>
<tr>
<td>Dictionary</td>
<td>3</td>
<td>1.1</td>
</tr>
<tr>
<td>Manual</td>
<td>10</td>
<td>3.7</td>
</tr>
<tr>
<td>Handbook</td>
<td>12</td>
<td>4.5</td>
</tr>
<tr>
<td>Others</td>
<td>215</td>
<td>80.7</td>
</tr>
<tr>
<td>Total</td>
<td>267</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Field Survey (2019)

Further investigation revealed the sources of information used in finding miscellaneous information. These sources as shown in Table 4.17 included the Encyclopedia, the Directory, the Almanac, the Dictionary, the Manual, and the Handbook. The distribution in Table 4.17 shows that 10 (3.7%) respondents used the encyclopedia to find miscellaneous information, 2 (0.7%) respondents used the directory to find miscellaneous information, and 15 (5.6%) respondents used the Almanac to find miscellaneous information. Furthermore, 20 (3.7%) respondents used manuals while 12 (4.5%) respondents used the handbooks to find miscellaneous information. Majority 215 (80.7%) of the respondents stated they used other source to find miscellaneous information.

The results on sources used to find miscellaneous information imply that majority of the students have not been searching for such information using the sources provided in Table 4.17. This suggests a generally low utilization of library resources by students.
Table 4.18: Information sources

<table>
<thead>
<tr>
<th>Source</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encyclopedia</td>
<td>10</td>
<td>3.7</td>
</tr>
<tr>
<td>Directory</td>
<td>11</td>
<td>4.1</td>
</tr>
<tr>
<td>Almanac</td>
<td>6</td>
<td>2.2</td>
</tr>
<tr>
<td>Dictionary</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>Manual</td>
<td>39</td>
<td>14.6</td>
</tr>
<tr>
<td>Handbook</td>
<td>8</td>
<td>3.0</td>
</tr>
<tr>
<td>Others</td>
<td>197</td>
<td>71.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>273</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source: Field Survey (2019)

Finally, the students were asked to indicate other sources from which they obtain information such as the names of countries and their presidents, international organizations, diplomatic lists, emergency telephone numbers etc. The sources they identified included encyclopedia, directory, almanac, dictionary, manual, and handbook. The distribution in Table 4.18 indicates that 10 (3.7%) respondents obtained their information from the encyclopedia, 11 (4.1%) respondents obtained their information from directory, 6 (2.2%) respondents claimed that their source of information for finding other things such as useful website links, regional organisations etc. was the almanac. Moreover, respondents 2 (0.7%) obtained their information from the dictionary, 39 (14.6%) respondents also indicated that their source of information is manual and 8 (3%) respondents obtained their information from handbooks.
The sources of information shown in Table 4.18 suggest that only 28.5% of the respondents used these sources. There is, therefore, low utilization of information sources in the library and students were found to have negative attitude towards information use. This will limit the development of information literacy skills among the students.

### 4.3.7 Access and Use of the Internet

**Table 4.19: Access to the Internet**

<table>
<thead>
<tr>
<th>Academic Programme</th>
<th>Yes</th>
<th>%</th>
<th>No</th>
<th>%</th>
<th>Sometimes</th>
<th>%</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Technology</td>
<td>8</td>
<td>72.7</td>
<td>1</td>
<td>9.1</td>
<td>2</td>
<td>18.2</td>
<td>11</td>
<td>100.0</td>
</tr>
<tr>
<td>B.ED Business Studies</td>
<td>12</td>
<td>34.3</td>
<td>14</td>
<td>40.0</td>
<td>9</td>
<td>25.7</td>
<td>35</td>
<td>100.0</td>
</tr>
<tr>
<td>BE.D Social Science</td>
<td>29</td>
<td>54.7</td>
<td>8</td>
<td>15.1</td>
<td>16</td>
<td>30.2</td>
<td>53</td>
<td>100.0</td>
</tr>
<tr>
<td>Development Education</td>
<td>33</td>
<td>42.3</td>
<td>16</td>
<td>20.5</td>
<td>29</td>
<td>37.2</td>
<td>78</td>
<td>100.0</td>
</tr>
<tr>
<td>Early Childhood &amp; Basic Education</td>
<td>22</td>
<td>73.3</td>
<td>1</td>
<td>3.3</td>
<td>7</td>
<td>23.3</td>
<td>30</td>
<td>100.0</td>
</tr>
<tr>
<td>Renewable Natural Resource</td>
<td>9</td>
<td>56.2</td>
<td>1</td>
<td>6.2</td>
<td>6</td>
<td>37.5</td>
<td>16</td>
<td>100.0</td>
</tr>
<tr>
<td>SCC</td>
<td>29</td>
<td>65.9</td>
<td>6</td>
<td>13.6</td>
<td>9</td>
<td>20.5</td>
<td>44</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>142</td>
<td>53.2</td>
<td>47</td>
<td>17.6</td>
<td>78</td>
<td>29.2</td>
<td>267</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field Survey (2019)

One way of seeking for information is having access to the internet and the purpose for which one uses the internet. The respondents were asked to indicate whether they had access to the internet. The responses obtained were “Yes”,” No” and “Sometimes”. In all, 142 (53.2%) respondents
indicated that they had access to the internet, 47 (17.6%) respondents indicated that they did not have access to the internet, while 78 (29.2%) respondents also indicated that they sometimes had access to the internet.

The results in Table 4.19 also show access to the internet by students per their academic programmes of study. For example, among students pursuing Agricultural Technology 8 (72.7%) had regular access to the internet, 2 (18.2%) sometimes had access to the internet while only 1 (9.1%) did not have access to the internet. Also, students of B.ED Business Studies were found to record low responses of 12 (34.3%) who said they had access to the internet, 14 (40%) indicated that they did not have access to the internet and 9 (25%) attest that they sometimes had access to the internet. Data analysis revealed that 29 (54%) students of B.ED Social Science had access to regular internet and 16 (30.2%) sometimes had access. However, 8 (15.1%) do not have access to the internet at all.

The distribution of internet access by students pursuing Development Education revealed that 33 (42.3%) respondents often had access to the internet and 29 (37.2%) indicated that they sometimes had access to the internet. It was also found out that 16 (20.5%) of this category of respondents did not have access to the internet at all. The results of internet access among students pursuing Early Childhood and Basic Education are impressive because majority 22 (73.3%) of them indicated that they had access to the internet while 7 (23.3%) sometimes had access. Only 1 (3.3%) indicated that they did not have access to the internet at all. Further findings, as shown in Table 4.19, revealed that some students pursuing Renewable Natural Resources as well as those pursuing
SCC had access to the internet as indicated by 9 (56.2%) and 29 (65.9%) respectively. On the other hand, 1 (6.2%) and 6 (13.6%) respondents did not have access to the internet respectively.

Table 4.20: Frequency of Accessing the Internet

<table>
<thead>
<tr>
<th>Programme</th>
<th>Everyday</th>
<th>Freq</th>
<th>%</th>
<th>Once a week</th>
<th>Freq</th>
<th>%</th>
<th>Twice in a month</th>
<th>Freq</th>
<th>%</th>
<th>Never used it</th>
<th>Freq</th>
<th>%</th>
<th>Total</th>
<th>Freq</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agricultural Technology</td>
<td>9</td>
<td>81.8</td>
<td>1</td>
<td>9.1</td>
<td>1</td>
<td>9.1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td>11</td>
<td>100.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.ED Business Studies</td>
<td>17</td>
<td>50.0</td>
<td>8</td>
<td>23.5</td>
<td>4</td>
<td>11.8</td>
<td>5</td>
<td>14.7</td>
<td>34</td>
<td></td>
<td>100.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.Ed Social Science</td>
<td>30</td>
<td>56.6</td>
<td>12</td>
<td>22.6</td>
<td>5</td>
<td>9.4</td>
<td>6</td>
<td>11.3</td>
<td>53</td>
<td></td>
<td>100.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development Education</td>
<td>49</td>
<td>62.8</td>
<td>14</td>
<td>17.9</td>
<td>6</td>
<td>7.7</td>
<td>9</td>
<td>11.5</td>
<td>78</td>
<td></td>
<td>100.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early Childhood &amp; Basic Education</td>
<td>24</td>
<td>80.0</td>
<td>3</td>
<td>10.0</td>
<td>3</td>
<td>10.0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td>30</td>
<td>100.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Renewable Natural Resource</td>
<td>10</td>
<td>62.5</td>
<td>3</td>
<td>18.8</td>
<td>3</td>
<td>18.8</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td>16</td>
<td>100.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCC</td>
<td>29</td>
<td>65.9</td>
<td>8</td>
<td>18.2</td>
<td>5</td>
<td>11.4</td>
<td>2</td>
<td>4.5</td>
<td>44</td>
<td></td>
<td>100.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>168</td>
<td>63.2</td>
<td>49</td>
<td>18.4</td>
<td>27</td>
<td>10.2</td>
<td>22</td>
<td>8.3</td>
<td>266</td>
<td></td>
<td>100.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Field Survey (2019)
The respondents with access to the internet had varying intensity of using this ICT tool. The results indicated that 168 (63.2%) used the internet every day, 49 (18.4%) used it once a week, 27 (10.2%) used the internet twice a month and 22 (8.3%) did not use it at all. From Table 4.20, 168 (63.2%) respondents indicated that they used the internet every day, 49 (18.4%) respondents indicated that they used the internet once a week, 27 (10.2%) respondents said they used the internet twice every month while 22 (8.3%) respondents were found not to be effective users of the internet. The results imply that majority of the respondents are at least regular users of the internet since 168 (63.2%) had been using it every day.

Table 4.21: Uses of the Internet

<table>
<thead>
<tr>
<th>Uses of the Internet</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use the internet in playing games</td>
<td>61</td>
<td>22.8</td>
</tr>
<tr>
<td>Use the internet in searching for information</td>
<td>186</td>
<td>69.7</td>
</tr>
<tr>
<td>Use the internet for e-mail</td>
<td>88</td>
<td>33.0</td>
</tr>
<tr>
<td>Use the internet for Facebook</td>
<td>100</td>
<td>37.5</td>
</tr>
</tbody>
</table>

Source: Field Survey (2019)

Furthermore, internet use was analysed according to academic programmes of study and the results indicate that among all the programmes more than half of the students were found to have been using the internet every day. However, students who had not been using the internet at all were found to have been pursuing programmes in Education such as B.ED Social Science, B.ED Business Studies, and Development Education. Students pursuing programmes in the field of natural sciences were the least users of the internet.
It was discovered from the study that students accessed the internet for different purposes. They were, therefore, asked to indicate the various purposes for which they used the internet. From Table 4.21, 61 (22.8%) respondents indicated that they used the internet for playing games. Besides, 186 (69.7%) respondents indicated that they used the internet in searching for academic information. Results in Table 4.21 further indicate that 88 (33%) respondents used the internet for e-mail communication while 100 (37.5%) respondents used the internet for Facebook.

Table 4.22: Search Engines Frequently Visited by Student

<table>
<thead>
<tr>
<th>Search Engines</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yahoo</td>
<td>44</td>
<td>16.5</td>
</tr>
<tr>
<td>Google</td>
<td>213</td>
<td>79.8</td>
</tr>
<tr>
<td>Wikipedia</td>
<td>63</td>
<td>23.6</td>
</tr>
<tr>
<td>Alta Vista</td>
<td>6</td>
<td>2.2</td>
</tr>
</tbody>
</table>

Source: Field Survey (2019)

Students make use of different search engines to access their needed information. Among these are Yahoo, Google, Wikipedia, and Alta Vista. The distribution in Table 4.22 indicates that 44 (16.5%) respondents used Yahoo, 213 (79.8%) respondents used Google, 63 (23.6%) respondents used Wikipedia and only 6 (2.2%) respondents used Alta Vista.
4.4 Students’ Evaluation of Information Sources

This section presents results on students’ evaluation of information sources. Issues under discussion include their specific sources of information, ways of determining good source of information, and determination of good sources of information from websites.

4.4.1 Main Sources of Academic Information

Table 4.23: Main Sources of Additional Information for Studies

<table>
<thead>
<tr>
<th>Source of Information</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbooks</td>
<td>87</td>
<td>32.6</td>
</tr>
<tr>
<td>Internet sources</td>
<td>188</td>
<td>70.4</td>
</tr>
<tr>
<td>Newspapers</td>
<td>27</td>
<td>10.1</td>
</tr>
<tr>
<td>Journals</td>
<td>54</td>
<td>20.2</td>
</tr>
<tr>
<td>Lecturers</td>
<td>81</td>
<td>30.3</td>
</tr>
<tr>
<td>Course Mates</td>
<td>67</td>
<td>25.1</td>
</tr>
</tbody>
</table>

Source: Field Survey (2019) Multiple responses were given.

Students obtained their academic information from textbooks, internet sources, newspapers, journals, lecture notes and from course mates (friends). The distribution in Table 4.23 indicated that 188 (70.4%) respondents obtained their academic information from internet sources and this constitutes the major source of academic information for students of the University for Development Studies. In addition, 87 (30.3%) respondents indicated that they obtained their academic information from textbooks, 81 (30.3%) relied mostly on lecture notes, while 67 (25.1%) got their academic information from friends (course mates). Other sources of academic information as identified by the respondents, are journals 54 (20.2%), and newspapers 27 (10.1%).
Table 4.24: Checking the Authenticity of Source of Additional Information

<table>
<thead>
<tr>
<th>Source</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>Textbooks</td>
<td>68</td>
<td>78.2</td>
<td>19</td>
</tr>
<tr>
<td>Internet sources</td>
<td>150</td>
<td>79.8</td>
<td>38</td>
</tr>
<tr>
<td>Newspapers</td>
<td>20</td>
<td>74.1</td>
<td>7</td>
</tr>
<tr>
<td>Journals</td>
<td>42</td>
<td>77.8</td>
<td>12</td>
</tr>
<tr>
<td>Lectures</td>
<td>65</td>
<td>80.2</td>
<td>16</td>
</tr>
<tr>
<td>Course Mates</td>
<td>50</td>
<td>74.6</td>
<td>17</td>
</tr>
</tbody>
</table>

Source: Field Survey (2019) Multiple responses were obtained

It is important for users of information to check for the authenticity of information before using it effectively. The respondents were therefore, asked to indicate whether they checked the sources of information before using them. The responses gathered are shown in Table 4.24, which shows, that more than (80%) of users of all sources of information checked for their authenticity before using them. For example, among those using lecture notes as primary source of academic information, 65 (80.2%) claimed that they have been checking for the authenticity of the information before using it. Also, 150 (79.85%) of users of internet source of information indicated that they checked for the authenticity of the information before using it. In addition, 68 (78.2%) of users of information obtained from textbooks indicated that they checked for the authenticity of the information before using it. The percentage of respondents who have also checked the sources of information from journals, course mates and newspapers respectively 42 (77.8%), 20 (74.6%) and 50 (74.1%).
4.4.2 Ways of Determining Good Source of Information

Table 4.25: Determination of Good Source of Information

<table>
<thead>
<tr>
<th>Determinants</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Checking for the sources of the information</td>
<td>187</td>
<td>70.0</td>
</tr>
<tr>
<td>Checking authors name</td>
<td>142</td>
<td>53.2</td>
</tr>
<tr>
<td>Verifying publisher</td>
<td>94</td>
<td>35.2</td>
</tr>
<tr>
<td>Checking the country of origin</td>
<td>40</td>
<td>15.0</td>
</tr>
<tr>
<td>Checking the qualification of author</td>
<td>94</td>
<td>35.2</td>
</tr>
<tr>
<td>Checking the popularity of author name</td>
<td>67</td>
<td>25.1</td>
</tr>
<tr>
<td>Checking the date of publication</td>
<td>79</td>
<td>29.6</td>
</tr>
</tbody>
</table>

Source: Field Survey (2019) Multiple responses were given

The respondents were able to indicate their own ways of checking for the authenticity of the sources of information they used for their academic work. Some of the ways identified are shown in Table 4.25. It was discovered that the common ways of determining good sources of information include checking for the source of the information, author’s name, verifying the publisher of the information, and checking the country of origin of the publication. Other ways of verification as shown in Table 4.25 include checking the qualification of the author, the popularity of the author and the date of publication of the information to determine whether it is current. The researcher sought for multiple responses. The frequency and percentage distribution of these responses are shown in Table 4.25.
4.4.3 Determination of Good Information from Websites

Table 4.26: Determination of Good Information from Websites

<table>
<thead>
<tr>
<th>Determinants of Good Information</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Checking the popularity of the website</td>
<td>102</td>
<td>38.2</td>
</tr>
<tr>
<td>Checking whether the site is often used by people</td>
<td>44</td>
<td>16.5</td>
</tr>
<tr>
<td>Checking the authors information</td>
<td>106</td>
<td>39.7</td>
</tr>
<tr>
<td>Checking whether the information is current</td>
<td>89</td>
<td>33.3</td>
</tr>
<tr>
<td>Checking for the wider coverage of the website</td>
<td>71</td>
<td>26.6</td>
</tr>
<tr>
<td>Checking for people mentioning the same website</td>
<td>35</td>
<td>13.1</td>
</tr>
</tbody>
</table>

Source: Field Survey (2019)

It was discovered that the respondents can determine the features of good information from websites. The distribution in Table 4.26 shows the various ways the respondents check for the authenticity of information obtained from websites. For example, 102 (38.2%) respondents indicated that they checked for the popularity of the website before they considered the information to be authentic. Besides, 44 (16.5%) respondents indicated that they checked the frequency of use of the website by other users. This means that if more people are using the website more frequently then there was the likelihood of being capable of providing relevant and authentic information. Also, 106 (39.7%) respondents indicated that checking of author’s information is a way of determining that information from a website is good.

It was discovered that 89 (33.3%) respondents indicated that they preferred to see the information contained in the website because it was current. Also, 71 (26.6%) respondents indicated that the
subject coverage of the website is used to check that the information it contains is good. Finally, 35 (13.1%) of the respondents did believe that checking for the people mentioning the same website is one way of verifying that the information it contains is good.

The results in Table 4.26 imply that the credibility of online information obtained from a website can be verified through several checks such as the popularity of the website, its frequency of use, author’s information and the coverage of the website.

**4.5 Legal and Ethical Use of Information**

Students’ understanding of the legal and ethical use of information is one aspect of information literacy skills that needs analysis. Therefore, their attitude and evaluation of the legal and ethical implications define the extent to which they find the information literacy programmes in their curricular useful. This section, therefore, presents the results of the study on students’ awareness of plagiarism, how they acknowledge information sources they use and their familiarity with copyright issues.

**4.5.1 Awareness of Plagiarism**

**Figure 4.4: Awareness of Plagiarism**
Source: Field Survey (2019)

The respondents were asked to indicate whether they were aware of plagiarism in the use of academic information. It was discovered that 185 (69.3%) respondents indicated their awareness of plagiarism while the remaining 8 (30.7%) respondents indicated that they were not aware of plagiarism. The distribution of the responses is shown in Figure 4.4.

Table 4.27: Awareness of Plagiarism

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presenting someone’s idea as yours</td>
<td>185</td>
<td>69.3</td>
</tr>
<tr>
<td>Copying someone’s work without proper acknowledgement</td>
<td>185</td>
<td>69.3</td>
</tr>
<tr>
<td>Using someone’s original words without quoting</td>
<td>157</td>
<td>58.80</td>
</tr>
<tr>
<td>Correct use of someone’s work without permission</td>
<td>123</td>
<td>46.07</td>
</tr>
<tr>
<td>Paraphrasing someone’s idea without referencing</td>
<td>121</td>
<td>45.32</td>
</tr>
<tr>
<td>Improper referencing of someone’s work</td>
<td>89</td>
<td>33.33</td>
</tr>
</tbody>
</table>

Source: Field Survey (2019)

The respondents who indicated that they were aware of plagiarism as it relates to academic information use, were asked to further indicate their knowledge on the subject. Several multiple responses were given by them regarding their knowledge of plagiarism and these are recorded in Table 4.27 below. From the table, 185 (69.3%) respondents indicated that plagiarism is associated with presenting someone’s idea as their own. Another group of respondents 185 (69.3%) indicated that plagiarism is committed when one copies someone’s work without proper acknowledgement. According to these respondents, presentation of another author’s idea as one’s own or failing to
properly indicate the source of one’s information, represents an academic misconduct called plagiarism.

A group of respondents who represent 185 (69.3%) indicated that plagiarism is presenting someone’s ideas as yours. Furthermore, 157 (58.8%) indicated that their understanding of plagiarism is when one used someone’s original words without providing quotation marks. What they meant is that when one is using someone’s original words, the set of words or phrases used should be kept in inverted commas to indicate that they are words that have directly been repeated from another author. However, what the respondents imply is that some people use other words without such inverted commas or any sign to indicate that they are words of another author. Plagiarism has also been associated with even correct use of academic information without permission. This is the view of 123 (46.7%) respondents.

It was also discovered, as indicated in Table 4.27, that paraphrasing someone’s’ idea(s) without proper citation (acknowledgement) and referencing amount to plagiarism. This is the view held by 121 (45.32%) respondents’ sample. This means that plagiarism does not involve taking only the direct words of authors without acknowledgement but also covers using an author’s idea without acknowledgement. According to this group of respondents, if one rewrites someone’s academic output in his own words that reflects the idea of the first writer, the mere changing of the words does not make it an original piece of information but a duplication of the existing one using synonyms.

The results in Table 4.27 had explained the various ways students were aware of plagiarism regarding their use of academic information.
4.5.2 Acknowledging Use of Information Source

**Figure 4.5: Acknowledgement of Information Source**

To determine whether students commit plagiarism in the use of information, the respondents were asked to indicate whether they did acknowledge information sources they used. It was discovered, as indicated in Figure 4.5, that 150 (56.2%) respondents indicated by responding yes, which means that they acknowledge the information source upon using it. On the other hand, 117 (43.8%) respondents indicated that they did not acknowledge information sources upon using them.

The results point out that majority of respondents 15 (56.2%) acknowledged information sources when they used them. Such categories of students are more likely to be free from plagiarism. On the other hand, 117 (43.8%) of the respondents stated that they did not acknowledge information sources after using them and are therefore more likely to infringe on plagiarism in accessing and using information.
Further enquires were made to know how the respondents acknowledged the sources of used information. The responses given were citation, referencing, and bibliography, and the distribution of these responses is shown in Figure 4.6. The Figure shows that 130 (48.69%) respondents indicated that they (refer to) acknowledge the sources of information by providing a list of references. In addition, 120 (44.94%) respondents indicated that they did in-text citation of the information as a way of acknowledging the source thereby giving credit to the original author of the information. According to these respondents, referencing means that one provides the author’s details, the date of publication, title of the information, the publisher of the information and the place of publication. These descriptions give clarity to where to locate the information for verification. It was also noted that 98 (36.7%) respondents provided both in-text citation and references to the information used. Finally, 28 (10.49) respondents indicated that they included a list of bibliography as a way of acknowledging information used.
The respondents who did not acknowledge their information sources were asked to give reasons for not doing that. Some of the reasons given were lack of the skills to acknowledge, not knowing how to cite information sources, acknowledgement is not necessary and only needed the information.

As indicated in Figure 4.7, 108 (40.4%) respondents indicated that they lacked the skills of acknowledging the sources of information used. Also, 78 (29.2%) respondents were of the view that they could not cite information sources and hence did not often provide in-text citations. On the other hand, 17 (6.4%) respondents considered acknowledgement of information sources as not necessary and 13.9% of the sample maintained that they needed only the information and as such it was not necessary to acknowledge the sources they used.
4.5.3 Familiarity with Copyright

Figure 4.8: Familiarity with Copyright

Copyright pertaining to academic information use, restricts users in a way regarding the use of the information. The respondents were asked to indicate their familiarity with copyright laws governing the use of information. From Figure 4.8, 134 (50.2%) respondents indicated that they were aware of copyright laws and hence were familiar with them. On the other hand, 133 (49.8%) respondents were not familiar with copyright laws.
Table 4.28: Knowledge about Copyright

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>A legal right to reproduce a document</td>
<td>83</td>
<td>33.4</td>
</tr>
<tr>
<td>A legal right for ownership of research output</td>
<td>53</td>
<td>21.4</td>
</tr>
<tr>
<td>Law protecting intellectual property</td>
<td>67</td>
<td>27</td>
</tr>
<tr>
<td>Law that governs the use of research information</td>
<td>29</td>
<td>11.7</td>
</tr>
<tr>
<td>Legal backing to private ownership of an innovation</td>
<td>16</td>
<td>6.5</td>
</tr>
<tr>
<td>Total</td>
<td>248</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field Survey (2019)

The 134 (50.2%) respondents who were familiar with copyright were asked to indicate the type or kind of knowledge about copyright that they knew. Several responses were recorded as illustrated in Table 4.28. From the table, the respondents described copyright as a legal right to reproduce a document. This was the view of 83 (33.4%) respondents, followed by 53 (21.4%) respondents were of the view that copyright consisted of the right of ownership of research output. In addition, 67 (27%) respondents indicated that copyright had to do with the law protecting an intellectual property. Further response given by 29 (11.7%) was that copyright is the law governing the use of research output while 16 (6.5%) responses indicated that it was the legal backing to private ownership of an innovation.
The respondents were therefore, asked to indicate whether they have ever photocopied a whole book for their academic purposes. In all, 86 (32.2%) respondents confirmed that they had ever photocopied a whole book for their academic purpose. On the other hand, 181 (67.8%) respondents indicated that they had never photocopied a whole book for their academic use. This distribution of the responses is shown in Figure 4.9.

### Table 4.29: Reasons for Photocopying a Whole Book

<table>
<thead>
<tr>
<th>Reason</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>The book not available in the bookshop</td>
<td>23</td>
<td>26.74</td>
</tr>
<tr>
<td>The book was very expensive</td>
<td>39</td>
<td>45.35</td>
</tr>
<tr>
<td>The book not available in the library</td>
<td>19</td>
<td>22.09</td>
</tr>
<tr>
<td>The book is out of print</td>
<td>5</td>
<td>5.81</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>86</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source: Field Survey (2019)
The results in Figure 4.9 provided evidence of students’ violation of the copyright laws by photocopying a whole book. However, majority (67.8%) of respondents were aware of the implication of such academic misconduct and had abstained from doing that. Further enquiries were made to know what influences a student to photocopy a whole book. The responses obtained are summarized in Table 4.29. Among the key reasons for photocopying a whole book are shortage of such books, high cost of books, non-availability of such books in the library, and the book not being available for printing.

From Table 4.29, 23 (26.74%) respondents indicated that the book they had photocopied was not available in the bookshop for sale and this means that they had to reproduce the existing one in order to have access. Besides, 39 (45.35%) respondents indicated that the book they had photocopied was very expensive and that they would not have been able to buy it given the high cost. Another 19 (22.09 %) respondents were of the view that they could not have found the book they had photocopied in the library hence they reproduced it. Finally, 5 (5.81%) respondents indicated that the book they had photocopied is unavailable for print.

4.6 Barriers to Effective Use and Access to Information

This section presents results and analysis of the barriers to effective use and access to information. It specifically contains the challenges students face and their opinions on how to overcome the challenges.
4.6.1 Challenges Students Encounter in Accessing the library

Table 4.30: Challenges Students Encounter in Accessing the library

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate books in the library</td>
<td>183</td>
<td>68.5</td>
</tr>
<tr>
<td>Library staff not helpful</td>
<td>142</td>
<td>53.2</td>
</tr>
<tr>
<td>Loss of library card</td>
<td>139</td>
<td>52.1</td>
</tr>
<tr>
<td>Cannot borrow from the library</td>
<td>132</td>
<td>49.4</td>
</tr>
<tr>
<td>Password restriction on database</td>
<td>138</td>
<td>51.7</td>
</tr>
<tr>
<td>Poor internet connectivity</td>
<td>140</td>
<td>52.4</td>
</tr>
</tbody>
</table>

Source: Field Survey (2019) Multiple responses given

The respondents were asked to indicate (if any) the challenges they encountered in accessing the library. Several multiple responses were given as shown in Table 4.30. From the table, the access to the library had been challenged because of inadequate essential reference materials as indicated by 183 (68.5%) of the respondents. In addition, 142 (53.2%) were of the view that the library staff were not helpful, and this means that students were not being given the needed assistance or guidance in using the library facilities.

The study also revealed that 139 (52.1%) of the respondents had lost their library cards which were used to access the library resources. The library confirms the student’s identity, and a student without a valid library card will not be able to access some essential resources in the library. Moreover, 132 (49.4%) of the respondents indicated that they could not borrow from the library. Such a response was not expected since all students have equal rights regarding access and use of library materials. However, a student that had not obtained a valid library card or has lost it and
had failed to replace it would not be able to borrow materials from the library. In addition, students mentioned password restriction and poor internet connectivity as challenges they encountered in using the library resources. These were major challenges because 50% and above of the respondents were found to have encountered these challenges.

Besides the challenges associated with access and use of Library resources, analysis of the findings of the study revealed other challenges confronting faculties in the implementation of the Information Literacy Programmes. An interview with a Library staff revealed the following challenges:

Respondent 2

“Implementation of the Information Literacy Programme is limited in the University because of course load, lack of facilities for practical sessions, insufficient lecturers and lack of interest among some senior members. Some faculties are not offering IL because they claim they exceed the maximum credit hours even with their own courses.”
4.6.2 Students Expectations of the Services of the library

Table 4.31: Students Expectations of the Services of the library

<table>
<thead>
<tr>
<th>Suggestions</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provision of regular internet connectivity</td>
<td>153</td>
<td>57.3</td>
</tr>
<tr>
<td>Books should be made accessible</td>
<td>146</td>
<td>54.7</td>
</tr>
<tr>
<td>The need for effective orientation on the use of the library</td>
<td>125</td>
<td>46.8</td>
</tr>
<tr>
<td>Library staff should be more helpful</td>
<td>107</td>
<td>40.1</td>
</tr>
<tr>
<td>Expansion of library space</td>
<td>148</td>
<td>55.4</td>
</tr>
<tr>
<td>Provision of more computers in the library</td>
<td>164</td>
<td>61.4</td>
</tr>
<tr>
<td>Expansion of online resource base</td>
<td>79</td>
<td>29.6</td>
</tr>
<tr>
<td>Staff training to improve their service delivery</td>
<td>58</td>
<td>21.7</td>
</tr>
</tbody>
</table>

Source: Field Survey (2019)

The study elicited multiple responses, it was discovered from the study that students had expectations on how the library should function for them to access and utilise the resources effectively. They therefore suggested that some facilities and services be provided to match with their needs in the library. Table 4.31 contains opinions on the services needed in the library. The main issues recorded include provision of regular internet connectivity as indicated by 153 (57.3%) of the respondents. Also, 146 (54.7%) were of the view that adequate books should be made available and accessible in the library.

Further evidence from Table 4.31 is that 125 (46.8%) respondents indicated the need for effective orientation on the use of the library and 107 (40.1%) recommending for library staff to be more helpful in guiding students on how to use the library resources. Some of the respondents 148
(55.4%) were of the view that the library space should be expanded while others 164 (61.4%) recommend that more computers should be provided to increase access to internet services. In addition, 79 (29.6%) of the respondents indicated that the online databases should be expanded to increase access to a variety of information materials while 58 (21.7%) advocated for staff training to improve service delivery.
CHAPTER FIVE
DISCUSSION OF FINDINGS

5.1 Introduction

This chapter presents the discussion of the findings. The analysis and discussion of findings was done under the background characteristics of the respondents, students’ access and use of information, students’ evaluation of information sources, the legal and ethical use of information, and the barriers to effective use and access to information. There is diversity in the background characteristics of the respondents. Specifically, male respondents dominate over female respondents. This suggest that there was a variation in gender of students offering academic programme where Information Literacy programme is being taught. The variations exist more in students offering specific programmes than others. For example, the variation in the distribution was found among the students offering B.ED Business Studies, B.ED Social Science, Development Education, Renewable Natural Resources and Social Science Communication (SCC). Across these programmes, the proportions of male students far outweigh that of female students by more than 50%. On the other hand, programmes with little variation in the proportion of male and females were Agricultural Technology, and Early Childhood and Basic Education. The results imply that some of the academic programmes were sensitive to gender of students and hence could have similar effects on their information literacy orientation.

There are mixed findings on the issue of gender and participation in information literacy programme. For example, the results of Al-Aufi et al. (2017) showed significant statistical differences in favour of female respondents toward the level of perceptions in information ethics, but male respondents showed higher levels than females in skills pertaining to legal issues and
information privacy. This means that males are often more likely to devote attention to information literacy programme as related to the findings of this study. However, the statistics of Pinto and Fernandez-Pascual (2017) revealed no significant differences between female and male students in their levels of knowledge regarding searching and evaluation of legal and ethical issues. This also suggest that more male representation in the sample as found in this study will have no effect on their use and evaluation of the Information Literacy programme that had been implemented in the University for Development Studies (UDS)

5.3 Students’ Access and Use of Information

This section presents discussions on students’ access and use of information. Key variables discussed included the frequency of visiting the library, purpose of visiting the library, library assistance, and awareness of electronic resources in the library. Other issues discussed under this section include students’ participation in information literacy programme, their knowledge of information sources, and access and use of the internet among the students.

5.3.1 Frequency of Visiting the Library

It was found out that some students visited the library every day, others weekly, some monthly, others once in a trimester, while some did not visit the library at all for academic information. The results implied that students had not considered the library as a source of vital academic information once their frequency of visiting it was low. Also, the proportion of students who used the library at least once a week was only 43.1% and this means that the remaining 56.9% either visited it once a month or not at all. This can limit their level of information literacy skills once access to vital information was not guaranteed.
The results also suggest that students’ academic programmes of study had influence on the frequency of library visit as supported by the Chi-square test analysis. For each of the academic programmes, significant proportion of 66.3% of the students were found to have been visiting the library either once a week or once a month. This suggests that despite variations in frequency of visits, there was generally low access to library information among the students. Despite the low attendance of students to the University Library, this finding confirms the results of Al-Aufi et al. (2017) which states that some students still used the library resources to equally get information for their academic work or research. Keshalu and Srinivasulu (2016) had offered an explanation to the low utilisation of library resources among students. In their view, the internet was serving as an alternative to traditional libraries (Libraries without modern technologies) because students could have access to information more conveniently in academic libraries without effective internet.

4.3.2 Purpose of Visiting the Library

The main purpose of students’ visit to the library included reading different kinds of books, doing research for coursework, and to search for specific information when needed. The results suggest that students went to the library for general purposes, but their focus was on looking for academic information pertaining to their research or their coursework. It was also discovered that some 32.2% students visited the library to read their own notes and not purposely to search for information in the library. This means that students on the various campuses who accessed the library resources were making good use of the library. The results also imply that the university library has got facilities for students to do their private reading. Also, the library had stock of academic materials that enabled students search for information for research and coursework, read
story books and any other special information that the students may need. This finding agrees with the work of Kimani (2014) which emphasised that, aside the library providing information to students for assignment, it also helped them in research and provided them recreational information materials. This means that the purpose of the University library in a way had been achieved since it was able to assist the students’ access relevant information for their academic activities.

The library had a variety of newspapers which included sports papers, political and entertainment papers. However, most students who visited the library did not use the newspapers. This finding also implies that lack of non-essential materials in the University library limited access and use of academic information by students. This result also relates to the findings of empirical studies elsewhere in the world. For example, in Greece, Malliari et al. (2014) established that school libraries had not thrived for several reasons. Some of the reasons were that, libraries had not been treated as an integral part of the educational system and that they had not been connected to the teaching process; they had been regarded as redundant in a centralized as well as teacher centered system, where teaching was limited to a single textbook. Such neglect could lead to shortage of essential materials needed by students as the case of this study.

5.3.3 Library Assistance

The main assistance received by students was in the area of activation of library cards, basic library ethics, browsing the automated catalogue, database research, accessing the library, how to borrow and return a book, how to retrieve information, general library orientation and instruction on research methodology. However, 48% of the respondents had not received any support in the form
of instruction regarding using the library. This means that such affected students may likely not be active users of the library and hence may not even ask for any support from staff or the library staff are incapable of assisting users access library facilities. In either case the information literacy skills of the students would be affected negatively.

Some empirical studies had also identified a related challenge affecting users of libraries. For example, Lwehabura and Stilwell (2008) pointed out the lack of proactive librarians and inadequate library staffing as challenges associated with access to library resources. Also, Kapiz (2003) reported on the failure on the part of librarians to push and assist students develop information literacy skills. This means that the low capacity of library staff to assist users in the library is a general challenge to the operations of the library. Such a general challenge had manifested itself in the University for Development Studies and is posing a limitation to students’ access and use of academic information.

5.3.4 Awareness of Electronic Resources and Databases

The findings discovered that 133 (49.8%) of the respondents were aware of the subscribed electronic resources and databases in the library. The proportion of respondents 134 (50.2%) who were not aware of these resources was almost the same as those who were aware. However, only 66 (24.7%) of the respondents had access to the electronic resources and majority 201 (75.3%) did not have access to the electronic resources due to various reasons. The findings also indicated that access to electronic resources of the library vary by students’ academic programmes of study. Similar results were reported by Baro and Endouware (2011) who discovered that users rarely used electronic resources such as Medline, Hinari, the Cochrane library and EbscoHost, possibly
because of the lack of awareness and skills necessary to search the databases. This means that the 133 (49.8%) awareness of electronic resources, as reported by this study, was not sufficiently large to stimulate more access to the library’s electronic resources among the potential users.

The foregoing discussion had revealed that 133 (49.8%) of the students who offered different programmes were aware of the electronic resources of the library but access to them turned out to be low. This means that students had not yet discovered the potentials of the electronic resources to the development of their information literacy skills. It could also be that the library staff were not resourceful enough towards motivating students to use the electronic resources of the library.

5.3.5 Participation in IL Training Programme

Further, only 76 (28.6%) of the respondents had participated in the Information Literacy (IL) programme while the remaining 190 (71.4%) had not participated in the programme. The results imply that majority of the students had not participated in the IL Programme. Data analysis also showed that, participation in information literacy training programme was found to have an association with some academic programmes of study. For instance, students pursuing Renewable Natural Resources and Agricultural Technology had the majority participation in the programme, that was 6 (54.5%) and 10 (62.5%) respectively, showing the level of participation in Information Literacy programme. On the other hand, low participation of students in Information Literacy programme was associated with B.ED. Social Science 10 (19%), Development Education 16 (20.5%) and B.ED Business Studies 8 (22.9%). This means that students pursuing programmes related to natural science participated more in information literacy programmes than those who pursued programmes in the social sciences.
The responses from previous studies did not match exactly with the findings of this research on the issues of students’ participation in information literacy training. Anafo and Filson (2014) explained that information literacy is an important component of any university library system because of its role in academic achievement and lifelong learning. As a result, library orientation was one way of educating students to be information literates. It involved taking the freshmen/women, or new students round the library and showing them the various sections of the library, where the catalogue is located, showing them the reference staff who would assist them when they needed help and other basic things about the library (Dorvlo, 2016). However, students’ participation in such training programmes was low in the University for Development Studies. This could affect their information literacy skills (levels) and attitude towards information literacy programmes.

5.3.6 Knowledge of Information Sources in the library

The respondents’ knowledge of information sources available in the library for use to develop their information literacy skills was identified. The main information sources identified included encyclopedias, directories, almanacs, dictionaries, manuals, and handbooks. The students were aware of encyclopedias and dictionaries as sources of information than the other sources. This means that directories, almanacs, manuals and handbooks are not known by majority of the students and these sources were likely not widely used. However, several studies by (Oware, 2010; Sasikala & Dhanraju, 2011) indicated that students relied mostly on the internet as their preferred source of information for academic work and research. It was revealed that the internet was mostly used because of its ease of access and could be used from everywhere, and the fact that it was convenient, and gave much information within a limited time. There was, therefore, a limitation
on the part of the students (in this study) in respect of the use of library resources to improve on their information literacy skills. Related findings had been reported in some empirical studies. For example, Al-Aufi et al. (2017) identified that undergraduate students at Sultan Qaboos University used social media for academic purposes such as completion of course assessments and self-development in their academic specialties. Medical students in the College of Health Science in Niger Delta University, Nigeria mostly relied on textbooks, journals, the internet, colleagues and the National University Commission Libraries to identify their needed information (Baro & Endouware, 2011). This means that similar sources of information as used by UDS students are being used elsewhere by other students.

The results also suggested that despite the low utilisation of information sources in the library pertaining to finding meanings of words, direction to places and the list of set of forthcoming events in the next year, the most common source used by the students was the dictionary. This was convincing since dictionaries have words and phrases with their meanings from which people could consult and make references to, the encyclopedia was also relevant in finding meanings of words but the fact that the students were not using them meant that probably they were not very much aware of the potentials of the encyclopedia. Students were therefore, limited in the utilisation of information sources of the library and this can affect the effective development of their information literacy skills.

5.3.7 Access and Use of Internet

The distribution of internet access by students pursuing Development Education revealed that 33 (42.3%) often had access to the internet and 29 (37.2%) maintain that they sometimes had access
to the internet. It was also found out that 16 (20.5%) of the respondents did not have access to the internet at all. Among all the programmes of study by the students, more than 50% of all the respondents were found to have been using the internet every day. Several studies (e.g. Oware, 2010; Sasikala & Dhanraj, 2011) also mentioned that students relied mostly on the internet as their preferred source of information for academic work and research. However, students who had not been using it at all were found to have been pursuing programmes in the social sciences such as BE.D Social Science, B.ED Business Studies, and Development Education. Students pursuing programmes in the field of social sciences were the least users of the internet. Many scholars have tried to finding ways by which students located their needed information. For instance, Malliari, Togia, Korobili and Nitsos (2014) conducted a study to explore how students evaluated themselves in certain information literacy skills. They found that majority of the students in Greek High School felt very capable of retrieving information from the internet. This means that many students in their study had access to the internet.

The results of this implied that students accessed the internet for both academic and entertainment purposes such as social media and games. The use of the internet for a variety of purposes exposed the students to different kinds of information and this could be beneficial for the development of their information literacy skills. They also made use of different search engines to access their needed information. Saunders et al. (2015) stated that library and information science (LIS) students seem to be comfortable with developing search strategies, choosing search terms, and finding resources in libraries and on the Web. They relied heavily on search engines to express some concern about their ability to evaluate Web sources. This meant that the use of search engines was becoming popular among students in accessing their information needs. Additionally,
Sriborisutsakul et al. (2012) indicated that the most frequent source of information most of the undergraduates used for their course-related assignments and everyday life research was through search engines. This may be because these search engines had ease of use, convenience of access and fast retrieval of information on the internet by browsing through web dictionaries. Such engines used by students in this study included Yahoo, Google, Wikipedia, and Alta Vista.

5.4 Students’ Evaluation of Information Sources

This section presents discussion of the results on students’ evaluation of information sources. Issues under discussion were their specific sources of information, ways of determining good sources of information, and determination of good sources of information from websites.

5.4.1 Main Sources of Academic Information

The study pointed out that students obtained their academic information from textbooks, internet sources, newspapers, journals, lecture notes, and from course mates (friends). It was noted that the students relied on one or more of the sources of academic information. Sriborisutsakul et al. (2012) also reported similar findings. They indicated that the most frequent source of information most of the undergraduates used for their course-related assignments and everyday life research was through search engines. However, the fact that majority used the internet sources meant that the internet had largely been used as a primary source of information among the students. Some sources such as friends (course mates) had not been cited by majority of the respondents but appear important in the analysis of students’ attitude towards information literacy programme. Learning from peers was one way of sharing knowledge and ideas which could improve on collaborative
learning. Students that obtained further academic information from friends should be able to access large materials since friends could read more on areas not readily accessible by colleagues.

More than 70% of users of all sources of information had checked for the authenticity before using them. Checking of information sources before using will enable the user (of the information) to be sure that he/she was using the right information from the right source. This was necessary especially for academic activity where unpublished research output was subject to subjectivity and hence may lack the academic credentials for public use. Further, issues of copyright may affect and restrict the type of information one accessed for academic purpose. Students’ ability to verify information sources before it was used represents a good attitude towards the development of one’s information literacy skills.

5.4.2 Ways of Determining Good Sources of Information

Some of the ways used by students to check the authenticity of information sources included checking for the source, author’s name, verifying the publisher of the information, and checking the country of origin. Other ways of verification included checking the qualification of the author, the popularity of the author and the date of publication of the information to determine whether it was current. This agrees with the study of Al-Issa (2013) which indicated that in identifying the right and needed information, students were to examine and compare information from resources for reliability, validity, accuracy, authority timeliness to draw conclusions. Students in this study did the same by verifying the author, date of publication, and the publisher. In analysing the perceptions of information literacy skills among undergraduate students of Sultan Qaboos
University, Al-Aufi et al., (2017) also placed much emphasis on credibility and accuracy of the information.

The results implied that students were aware of the need to verify academic information before use. Most of them were aware that the source of the information was very important in determining its quality. This was important especially nowadays with the proliferation of literature in the web. The respondents were also aware that good information must have an author, publisher and date of publication. Knowledge of these will facilitate the students understanding of information access and use and hence an improvement towards the development of one’s information literacy skills. However, the fact that the sample indicating some of these checks were small meant that majority of the students were not aware of all the important things to check before using a source of information.

5.5 Legal and Ethical Use of Information

Students’ understanding of the legal and ethical use of information was one aspect of information literacy skills that needed analysis. Therefore, their attitude and evaluation of the legal and ethical implications defined the extent to which they found the information literacy programme in their curricular useful. This section, therefore, presents the discussion of the results of the study on students’ awareness of plagiarism, how they acknowledged information sources that were being used and their familiarity with copy right.
5.5.1 Awareness of Plagiarism

It was discovered that 69.3% of the respondents confirmed their awareness of plagiarism while 30.7% confirmed that they were not aware of plagiarism. Majority of the students were aware of plagiarism as it relates to the use of academic information. This was in line with what Sasikala and Dhanraju (2011) found in their study on assessment of information literacy skills among science students of Andhra University. They reported that majority of the students were aware of copyright issues and their implications. Dorvlo (2016) explained that the legal and ethical use of information was one of the major factors to be considered in information literacy. This meant that the 30.7% of students who were not aware of plagiarism meant that they can easily use academic information without adhering to the legal and ethical considerations associated with information use.

It can be understood from the results that plagiarism means different aspects of information use. However, the focus of attention was often on the use of one idea without proper acknowledgement, Wrong acknowledgement or changing the meaning of concepts or ideas and presenting it as one’s own. A group respondent 33.33% indicated that if one paraphrases an idea and tries to acknowledge it but ended up writing a wrong reference it was still an act of plagiarism. The wrong referencing will mean giving credit to another person who did not own the work or not giving credit to anybody at all. Wrong referencing may occur when one was not able to describe clearly the author, date of publication, title of the information, the edition, the publisher, and the place of publication. This meant that when a wrong reference was given to a source of information, people will not be able to trace to get the same information and may not be able to verify the authenticity of the information used.
Al-Aufi et al. (2017) assessed information literacy perceptions of undergraduate students at Sultan Qaboos University in their use of social media. Their results demonstrated overall moderate levels of perceptions towards the evaluation of information, information ethics, legal issues, and privacy issues. In terms of legal issues, Al-Issa (2013) found that plagiarism was evident among government school students’ projects in the State of Kuwait because they were not familiar with citations and citation styles. This attests to the fact that they were not aware of the legal implications of plagiarism.

In Ghana, Anafo and Filson (2014) identified lack of ethical and legal use of information on the part of Ashesi University undergraduates and this suggested low level of information literacy skills among some undergraduate students in Ghana. The findings of the studies, therefore, implied that legal and ethical use of information remained a challenge to students in different locations all over the globe. This meant that the 31% of students who were not aware of these issues in the case of the University for Development Studies library was not abnormal. Similar studies also reported on related findings in Ghana. For example, Dorlvo (2016), in a paper on information illiteracy among post graduates of the university of Ghana, showed low levels of ethical concerns even though some of them knew about copyright issues.

5.5.2 Acknowledge Information Source upon Using It

It was discovered that 56.2% of the respondents confirmed that they acknowledged the information sources after using them. This meant that majority of the respondents often acknowledged information sources in using them and hence were more likely to avoid plagiarism.
The results implied that most of the respondents who claimed to have been acknowledging the sources of information they used were conversant with only referencing. Besides, the number that used both citation and referencing were relatively small and this might have provided the basis for plagiarism in their information use. This suggested that many students were unable to understand the ethical concerns in the use of academic information. The results also suggested that people committed plagiarism mainly because of ignorance. Such people were aware that such an act constituted plagiarism and hence an academic misconduct but lacked the capability or skills to cite. The other group of students who did not see it necessary to acknowledge any source of information were also ignorant of the implications of plagiarism and academic misconduct. This means that plagiarism remains a main challenge among the students and this will affect their information literacy skills.

5.5.3 Familiarity with Copyright

The study revealed that 50.2% of the respondents were aware of copyright laws and hence were familiar with them. On the other hand, 49.8% were not familiar with copyright laws. The results suggested that the number of respondents who were aware of copyright issues were almost equal to the number that was not aware. Awareness of copyright laws will make the students aware of the legal implications of using information wrongly. They will, therefore, likely desist from copying all pages of books and complied with the fair use principle.

The respondents gave different interpretation to copyright laws and this reflected on their conceptualisation and understanding of such laws. They were able to explain that copyright law encompasses the exclusive right over ownership of an intellectual property. This meant that the
copyright law, as known by the respondents, was a way of protecting one’s intellectual property such as research output. The respondents were also aware that one cannot reproduce part or whole of another person’s intellectual property when there were copyright laws protecting it. Sasikala and Dhanraju (2011) assessed information literacy skills among science students of Andhra University and found that majority of the students were aware of the copyright law and its implications just as the case of this study. Moreover, incoming first year undergraduate students of Catholic University of Eastern Africa in Kenya exhibited little knowledge of issues relating to intellectual property right and copyright (Kimani, 2014). This meant that the issue of copyright could be very strange to some students as it applied to information use.

Some of the respondents indicated that they sometimes photocopied a whole textbook for some reasons. Among the key reasons for photocopying whole books included unavailability of such books, high cost of original books and non-availability of copies in the library. Reasons for violation of copyright laws were associated with limited access of reference materials and not merely the (law of knowledge not clear). Such limitations had to do with cost or non-availability. A study by Dorlvo (2016) on information illiteracy among post graduates of the University of Ghana, showed low levels of ethical concerns even though some of them knew about copyright issues. This suggested that knowledge on copyright issues were only a necessary condition for adherence but not enough condition because of cost implications associated with information use.

5.6 Barriers to Effective Use and Access to Information

The challenges encountered by students in using the library resources were varied and consisted of technical and behavioural issues. The technical issues had to do with their inability to use the
library facility due to poor internet connectivity, issue of bandwidth, lack of space and password restrictions. On the other hand, the behavioural issues had to do with students misplacing their library and students’ cards that were given to them to access the library facility. The attitude of some library staff and their refusal and reluctance to assist students, discouraged students from using the library. Similar results were reported by Maro (2008) that, uneven distribution of ICT facilities, lack of internet connectivity, poor as well as low IL skills to access electronic resources, lack of computer skills, and low sensitisation of IL training programme by the library discouraged respondents from using the library. This meant that the challenges confronting the development and promotion of information literacy programme were universal across many tertiary institutions in Africa.

Besides, the results implied that major stakeholders of the universities did not have much interest in Information Literacy programme and had preference for their department specific courses to information literacy. As a result, there was little preparation for the implementation of information literacy programme in UDS as evidenced by lack of lecturers and facilities for practical sessions. This finding confirmed the result of Emmanuel and Sife (2011) reported on the insufficient knowledge on the awareness of the importance of ICTs among University top management was a great obstacle to ICT development, and hence information literacy programme. They further argued that it was difficult for University top officials to support initiatives that aimed at increasing availability, accessing and utilisation of information resources at the University.

The results on students’ opinion and expectations on the services of the library had implications for access and use of library resources. Their responses had registered their needs which were
currently insufficient. This meant that they were faced with challenges in accessing and using the library resources. This suggest that, for effective use of the library resources, the students’ opinions outlined in Table 4.31 should be provided to minimise the challenges of using library resources. This will have many implications for the development of information literacy skills among the students.
CHAPTER SIX

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter presents the summary of major findings, the conclusion and recommendations of the study. The summary of findings, conclusions and recommendations are presented under students’ access and use of information, students’ evaluation of information sources, the legal and ethical consideration of information, and the barriers to effective use and access and use of information. The study was conducted to assess students’ attitude on information literacy programmes in the University for Development Studies. The respondents were selected from students from various faculties. (Faculty of Agribusiness and Communication Sciences, Faculty of Agriculture, Faculty of Natural Resources and Environment, and Faculty of Education) where information literacy programme had been implemented and its related courses are taught. In all, 267 students were selected, and copies of a questionnaire were distributed to them and retrieved for analysis. Semi-structured interviews were used to collect data from academic librarians and academic members of staff. The primary data were coded and keyed into the SPSS spread sheet for analysis. Descriptive statistics were used to analyse the quantitative data. Besides, qualitative data collected using interview guide were analysed to support the quantitative data.

6.1.1 The objectives of study were

The main objectives

The main objective of the study is to investigate the status of existing information literacy programmes provided to students for effective utilization at UDS.
6.1.2 Specific objectives

- To analyse Students’ Access and Use of Information.
- To examine Students’ Evaluation of Information Sources.
- To ascertain the students’ awareness of the legal and ethical implication of information use.
- To identify challenges that hinder IL programmes for undergraduate students at UDS
- To recommend strategies for effective IL implementation at UDS

6.2 SUMMARY OF MAJOR FINDINGS

6.2.1 Students’ Access and Use of Information

It was revealed from the study that students have not considered the library as a source of vital academic information once their frequency of visiting was low. The proportion of students who used the library at least once a week was (43.1%) while the majority (56.9%) of the respondents either visited it once a month or not at all.

Students’ access to library resources varied by their academic programmes of study. Among those that visited the library everyday were students pursuing Development Education, Early Childhood and Basic Education, Renewable Natural Resources, and Social Change Communication. On the other hand, none of the students pursuing B.ED Business Studies visited the library every day and (48.6%) of them did not visit it all.

Also, (58%) of the respondents had not received any support in the form of instruction regarding using the library. This means that such affected students were not active users of the library and
hence may not even ask for any support from the library staff. Library staff may therefore not be able to assist such students to utilise the library facilities. In either case, the information literacy skills of the students would be affected negatively.

It was discovered that (49.8%) respondents were aware of the availability electronic resources in the library. The remaining (50.2%) who were not aware of such resources will not have access to them and will not also use them. Access to electronic resources also varied by academic programmes of study. Students pursuing Early Childhood and Basic Education had relatively higher access to such information resources.

Students had developed the interest of participating in Information Literacy programmes organised by the University and this has improved their information literacy skills. With their knowledge and skills in information literacy, they can use the internet to locate and retrieve their needed information for academic purposes.

6.2.2 Students’ Evaluation of Information Sources

The main sources of academic information to students were textbooks, internet sources, newspapers, journals, lecture notes from course mates (friends). However, (70.4%) of the respondents used the internet sources, this means that the internet has largely been used as a primary source of information among the students.

More than (70%) of users of all sources of information had checked for their authenticity before using them. Checking of information source before using, enables the user (of the information) to
be sure that he/she was using the right information from the right source. Students’ ability to verify information sources before use represents a good attitude towards the development of one’s information literacy skills. It was discovered that the common ways of checking to determine credible sources of information included checking for the source of information, author’s name, verifying the publisher of the information, and checking the country of origin or source of information.

The study revealed that the respondents were able to determine the features of good information from websites. The credibility of online information obtained from a website can be verified through several checks such as the popularity of the website, its frequency of use, author’s information and the coverage of the website. Knowledge of this facilitates the students’ understanding of information access and use and hence an improvement towards the development of one’s information literacy skills.

6.2.3 Legal and Ethical Use of Information

It came out of the study that 185(69.3%) respondents confirmed their awareness of plagiarism while the remaining 82(30.7%) respondents also confirmed that they were not aware of plagiarism. The respondents who indicated that they were aware of plagiarism related it to different concepts regarding academic misconduct in the use of information. Such misconduct as cited by the respondents include presenting someone’s idea as yours, copying someone’s work without proper acknowledgement, using someone’s original words without quoting, correct use of someone’s work without permission, paraphrasing someone’s idea(s) without referencing, and improper/inaccurate referencing of someone’s work.
The results point out that majority (56.2%) of the respondents had often acknowledged information sources upon using them. Such category of students was more likely to be free from plagiarism. On the other hand, the (43.8%) of the respondents were not able to acknowledge information sources upon using them are more likely to commit plagiarism in their information use.

The respondents (56.2%) who claimed to have been acknowledging the sources of information they used were conversant with only referencing. Besides, the (43.8%) respondents that used both citation and referencing was relatively small and this may provide the basis for plagiarism in their information use.

It was noted that 50.2% of the respondents were aware of copyright laws and hence were familiar with them. Such category of respondents described copyright laws as the legal right to own an intellectual property and hence placing restrictions on reproduction except with permission. Awareness of copyright laws makes the students become aware of the legal implications of information use.

They respondents explained that copyright laws encompass the exclusive right over ownership of an intellectual property. This means that copyright laws as known by the respondents were aware of protecting one’s intellectual property such as research output. The respondents were also aware that one cannot reproduce part or whole of one’s intellectual property when there are copyright laws protecting it. Despite the knowledge in copyright laws, 86 (32.2%) respondents still photocopied a whole book which is against the copyright law. Among the key reasons for
photocopying a whole book included shortage of such books, high purchase cost, non-availability in the library and books out of print of a book.

6.2.4 Barriers to Effective Use and Access to Information

The students listed several barriers to their effective use and access to information. The prominent ones among them included: inadequate books in the library, library staff not helpful, loss of library cards, inability to borrow from the library, password restriction on databases, and poor internet connectivity. Each of these challenges had been cited by almost half or more than half of the respondents. Further, major stakeholders of the university do not have much interest in Information Literacy programme and have preference for their Department specific courses to Information Literacy. As a result, there is little preparation for the implementation of information literacy programme in the University as evidenced in the lack of lecturers and facilities for practical sessions.

Students’ expectations of how the Information Literacy Programme should have been organised and supported with library resources have not been met. It was expected that the library was provided with regular internet service, stocked with relevant textbooks that are accessible, and library staff that can effectively offer library services to students to maximize the use of the library resources.
6.3 Conclusion

The results of the study had several implications for the development of information literacy skills in students and how the students perceived information literacy programme in the University. The results implied that management of the University for Development Studies had made efforts to implement information literacy as an academic programme in four (4) out of the thirteen (13) Faculties. This effort had turned students’ attention on how information literacy could be very beneficial in their lives.

The information literacy programme has given students some basic orientation on information access, recognition of good information, information retrieval and analysis. The various programmes such as freshers’ orientation on library ethics and use of the library, as well as the periodic lectures on information literacy are sources of skills development among the students. This means that the introduction of the information literacy programme had a positive influence on students’ access to information and use of information.

Students could evaluate information sources and were well informed that good sources of information should have key features among them: authorship publishers, date of publication, qualification of the author and whether the information is widely used by people in related fields. This means that students’ participation in the information literacy programme had helped them to apply the SCONUL (2011) seven pillars of information literacy which are the following: - identify personal needs for information, understand the scope of information, plan, gather, evaluate, manage, present. Students were able to recognise that information retrieved from the web can be
good or bad and hence some salient features must be considered before it is used. This means that their skills in evaluation has been developed when it comes to information use.

It is important to note that the legal and ethical considerations in information use constitute an important element of information literacy. Students were able to demonstrate their knowledge on this by recognising that information taken from relevant sources must be duly acknowledged. A significant number (69%) of the students were aware of plagiarism and its consequences in information use. This has highlighted the important role of the information literacy programme in the University. The students will be empowered to avoid plagiarism in their use of information as well as becoming aware of copyright laws.

However, the results of the study implied that management of the University for Development Studies were not adequately prepared to implement the Information Literacy programme. Their major setbacks such as lack of interest, shortage of staff and inadequate library infrastructure meant that students would not be able to grasp the full potential of the programme. This had been evidenced in the number of students who were not taking the programme serious and were not yet acquainted with some basic information literacy skills.

Challenges confronting the students in the use of library resources and proper user orientation was a discouraging student’s participation in the programme. This can develop negative attitudes in the students regarding the benefits of information literacy programme. The current challenges imply that the programme cannot be easily extended to other faculties of the University. This may mean
that students’ morale could be reduced and the full objective of information literacy programmes will not be achieved.

6.4 Recommendations

The study offers the following recommendations to enhance the effective implementation of Information Literacy Programmes at the University for Development Studies.

6.4.1 Enforcement of Academic Board Decision on IL Programmes

Information Literacy is an approved programme by the Academic Board of the University for Development Studies. The Principals, Deans, University Librarian and Heads of Academic Departments are all members of Academic Board. The University Librarian should petition the Academic Board to direct the Faculties and Schools to implement the Information Literacy Programmes in all the Faculties, Schools and Departments of the University for the benefit of the students.

6.4.2 There should be Coordination between Principals and Deans to Enforce IL Programme

The study revealed that only four (4) out of the thirteen (13) Faculties and Schools offer the Information Literacy Programme in the University. This may be as a result of the lack of interest in the programme among major stakeholders due to programme load and insufficient lecturers to handle the programme. The Campus Principals and Deans should liaise with their counterparts from all the four (4) campuses and enforce the implementation of the Information Literacy Programme by making it compulsory for all students. This can be achieved by first recognising
the relevance and the need for the Information Literacy Programmes. This will influence Heads of departments and their staff to develop favourable attitude towards the programme. This can be done effectively when there is coordination between Principals and Deans to ensure that all the thirteen (13) Faculties and Schools comply and enforce the IL programme as part of the curriculum.

6.4.3 Involve More Staff in the Teaching of the IL Programmes

The study established that there are nine (9) qualified senior members at post in the University library, yet only three (3) of them are involved in the teaching of the IL Programmes. The rest should also be assigned by the University Librarian to participate in the teaching of the programme. This will reduce the workload of the few teaching the programme. It will also enable the library to have a pool of available talents to handle such a programme.

6.4.4 Staff Readiness/willingness to Assist Students in the Library

Students are ready to exploit the opportunities of the Information Literacy Programmes by using the library resources. However, there is a lack of effective guidance for the students on how to maximize the use of available resources. As such, many of them cannot effectively use the library on their own. Staff of the university library should thus increase their readiness to support and assist students who visit the library to use its resources.

The University Librarian should ensure that library staff are well equipped with the knowledge and skills to assist students’ access library resources and utilise them effectively. Staff should also improve on their attitude with regards to customer relations so that they serve their users better.
6.4.5 In-house and in-service training of Library staff

One appropriate way of helping students to be users of the library and its resources is to train library staff to love their work and be happy to assist users. Achieving this is through staff development training. There can be periodic staff training in the form of in-service or in-house training for library staff on Library Ethics and Customer Care to equip staff to assist students develop the skills of using the library. Other off campus training such as further education as well as seminars, workshops and conferences can also help improve on the capacity and skills of library staff of the University.

6.4.6 Aggressive Marketing of the Library and Library’s Electronic Resources

The results of the study also indicated that majority of the respondents did not use the library and almost half of the respondents were aware of the subscribed electronic databases. However, only 24.7% had access to the library’s electronic resources. The results further showed that students did not have access to the passwords to the various databases. This could mean that the library staff were not doing enough to create awareness of the fact that the students can have free access to all the databases so far as they were hosted on the University’s IP addresses.

In view of the above, the library should intensify the marketing of the library and its subscribed databases to create awareness among the students. This can be done using the social media platforms, brochures, face to face interaction, the university website, open day forums, intensive orientation, organise talks and workshops for students and through the campus radio, display of library services and resources on large digital screens in the library. Training should also be
organised on a regular basis to equip the students with the necessary skills to identify, navigate, access and use available library and other information resources.

6.4.7 Provision of Internet Facility

It was realised that majority of the respondents used the internet for their daily academic information search. However, poor internet connectivity was revealed as one of the major challenges that confronted them. The University should therefore ensure a regular and stable internet connection in the library for easy access and use of online information resources. To achieve this, there should be a separation of the library’s network from the main University servers. A separate and dedicated server for the library would ensure a stable internet supply for its users.

6.4.8 Qualified IT staff to manage Library ICT Infrastructure

IT staff should be recruited for the library to manage its ICT architecture and ensure consistent and stable internet connection. There is always a need to have stable server and internet connectivity. The study therefore recommends that library management recruits separate qualified IT staff to see to the day to day management and administration of the library’s ICT infrastructure.

6.4.9 Strengthen the Quality of IL Instruction

Some students still lack the skills to evaluate information sources and consider all information they come across as relevant once the content matches with what they are looking for. This means that the information literacy programme is not yet very effective. Lecturers of the Information Literacy programme should focus more on teaching students to access information in the library and use of the library resources and concentrate more on practical lessons to sharpen their information literacy
skills. This can also be improved through strengthening the quality of instruction by ensuring that those teaching programme in Information literacy were given the necessary training to help them put up their best. To achieve this, there should be effective practical sessions to empower students understand the processes involved in searching, evaluating and use of information.

6.4.10 Students should be Encouraged to Undertake IL Programmes

The study revealed that majority of the students do not participate in Information Literacy programme. This could affect their information literacy skills and attitude towards information literacy programme. Students who had passed through the IL Programme should encourage other students to take the programme seriously. This can be done when students share their experiences with their mates in terms of the skills and knowledge gained through their registering and offering the programme. This will also help the students to realise the relevance of the programme, hence increasing their participation. This has the potential of improving on their information literacy skills and their attitude towards information literacy thereby enabling them to become lifelong learners.

6.4.11 Collect user-experience feedbacks

The library should make it a point to collect feedbacks from the users on their experiences and expectations of the library. The library can do that by placing suggestion boxes at vantage points in the library where users can drop their suggestions and feedbacks for consideration by library management.
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APPENDIX A

(Questionnaire Distributed to Undergraduate IL Students of UDS)

Assessment of Students Attitude on the Information Literacy Programme in University for Development Studies, Tamale (UDS)

Dear Students,

I am a postgraduate student of University of Ghana, researching on the above topic. I would be grateful if you would spare a little time to answer the following questions sincerely to help me have a fair idea about the above research topic.

The information being sought is purely for academic purposes and under no circumstance would it be disclosed to any person.

Information Literacy (IL) in this study means: skills in seeking, locating, and accessing as well as using, synthesizing and evaluating information obtained from various sources and communicate it in an ethical and legal manner (be it electronically or printed)

Thank you.
Yours sincerely.

Franklina Adjoa Yeboawaah
SECTION A: BIOGRAPHICAL DATA
Please tick [ ] as appropriate and supply answers where required

1. Gender  a. Male [  ]  b. Female [  ]

2. Age group  a. 18-23 [  ]  b. 24-29 [  ]  c. 30-35 [  ]  d. Above 36

3a. State your faculty ……………………………………………………………………………………………………………………………

3b. Which level are you? ……………………………………………………………………………………………………………………………

3c. What program are you offering? ……………………………………………………………………………………………………………………………

SECTION B: STUDENTS ACCESS AND USE OF INFORMATION (Please tick as applicable)

e. Not at all [  ]

5. What is your purpose for visiting the library? (tick all that apply)
   a. Read my Notes [  ]  b. Read story books [  ]  c. Read a textbook [  ]  d. Do research for my coursework [  ]
e. Look for specific information f. [  ]  e. Newspapers for current affairs

6. Do you find your needed information at the library?  a. Yes [  ]  b. No [  ]

7a. Did you receive library instruction or orientation from the UDS Library staff?  a. Yes [  ]  b. No [  ]
7b. If yes, what kind of library training did you receive? ………………………………………………………………………………………………………………………………………
7c. If no, how then do you get the skills to search for information? ………………………………………………………………………………………………………………………………………

8a. Are you aware of the availability of electronic resources and databases in the UDS Library?  a. Yes [  ]  b. No [  ]
8b. List some of these electronic resources and databases you are familiar with.
8c. Do you access these electronic resources and databases from the Library?  a. Yes [  ]  b. No [  ]
8 d. What are the purposes for accessing these electronic resources and databases?
9. Did you attend the IL training programmes conducted by UDS for undergraduate students? a. Yes  b. No
10. If yes, how effective were these programmes? A. Very effective  B. Effective  C. Ineffective
12. Which of the above sources would you use in finding information on the following?
   a. General background information
   b. Names and address of people, places etc
   c. Meaning of a word
   d. Miscellaneous information
   e. How to do things
13a. Do you have Computer Laboratory in your University? a. Yes b. No
13b. If yes, are the computers connected to the Internet? a. Yes  b. No
14. Do you access the Internet? a. Yes b. No c. Sometimes
15. How often do you use the Internet? a. Everyday  b. Once a week c. twice a month d. Others please specify
16. What do you use the Internet for? (Tick all that apply) a. Play Games  b. search for information c. E-mail d. Facebook Other (please specify)
18. Please explain why you use these website(s).
20. Do you check for the sources of the information? a. Yes  b. No
21. How will you determine a good source of information? (Tick as many as applicable) 
   a. Check the authors name [ ]  b. Verify the publisher [ ]  c. Country of origin [ ]  d. Qualification of the author [ ]  e. Popularity of the Author [ ]  f. Date of Publication [ ]  f. Others (please specify)……………………………

22. How will you determine whether information on a Website is from a right source? (Tick as many as applicable) a. The Popularity of the Website [ ] b. The website is always used and accessed by friends [ ] c. The author of the information [ ] d. The currency of the information [ ] e. Wider Coverage [ ] f. People have been mentioning the name of the website [ ] g. Others (please specify)

SECTION D: LEGAL AND ETHICAL USE OF INFORMATION

23a. Have you heard about plagiarism? Yes [ ] b. No [ ]
23b If yes, what is the meaning?

24a. Do you acknowledge the author of a book if you use part of his or her works for your work or research? a. Yes [ ] b. No [ ]
24b. If Yes, what form does the acknowledgement take?
24c. If no why is this so?

25. Are you familiar with copyright? a. Yes [ ] b. No [ ]
26. If yes, what do you know about copyright?

27 a. Have you photocopied a whole book before? A. Yes [ ] b. No [ ]
27b. If yes what was the reason? a. The book was not available in the bookshop to buy [ ] b. very expensive [ ] c. Not available in the library [ ] d. The book is out of print [ ] e. Others (please specify)
SECTION E: BARRIERS TO EFFECTIVE USE AND ACCESS OF INFORMATION [tick as many as applicable)

28. What kind of problems do you encounter in accessing information? a. No enough books in the library [ ] b. library staff are not helpful [ ] c. loss of library card [ ] d. cannot borrow a book from the library [ ] e. password restrictions on databases[ ] f. High cost of textbooks [ ] f. No Internet facilities in the University [ ] g. Others (please, specify)

29 What do you recommend should be done to improve the services of the library for easy access to information?

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Thank you very much for your time and cooperation.
APPENDIX B

INTERVIEW SCHEDULE FOR UNIVERSITY LIBRARIAN

Assessment of Students Attitude on the Information Literacy Programme in University for Development Studies, Tamale (UDS)

Dear Sir,

I am a postgraduate student of University of Ghana, Legon researching on the above topic. I would be grateful if you would spare a little time to candidly answer the following questions to help me have a fair idea about the above research topic.

The information being sought is purely for academic purposes and under no circumstance would it be disclosed to any person.

**Information Literacy (IL)** in this study means: skills in seeking, locating, and accessing as well as using, synthesizing and evaluating information obtained from various sources and communicate it in an ethical and legal manner (be it electronically or printed).

Thank you.

Yours sincerely.

Franklina Adjoa Yeboawaah
1. Do you have enough sources and resources in your library which satisfy the information needs of the students? Example: Dictionaries, Encyclopedias, Directories, Almanacs, textbooks, databases and others?

2. Do you have trained and qualified professionals who take the course IL to help students understand IL, access, locate and use information effectively?

3a. Do you offer IL training for undergraduate students? a Yes [  ] b No [  ]
3b. If Yes, for how long now?
3c. And for which category of students?
3d. Why is it that not all categories of students offer IL programme

4. What challenges do you face in organising IL programmes/ training?

5a. Do you have a computer laboratory? a. Yes [  ] b. No [  ]
5b. If yes, how often do the students use it.................................
5c. And for what purpose?

6a. Are the computers connected to the internet?
6b. If yes, how would you assess their (Students) level of searching skills?

6c. If No, are there immediate plans for internet connectivity?

7. Where do they get extra information apart from their notes to support their studies?

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8. What are some of the challenges they face in their effort to access these sources of information

9. Information Literacy program is Academic Board approved programme which is compulsory for all undergraduate students of UDS. Why is it that not all the Faculties are offering IL

10. Please your recommendations to facilitate IL in UDS for students?

Thank
APPENDIX C

INTERVIEW SCHEDULE FOR IL TEACHERS

Assessment of Students Attitude on the Information Literacy Programmes in University for Development Studies, Tamale (UDS)

Dear Sir,

I am a postgraduate student of University of Ghana, researching on the above topic. I would be grateful if you would spare a little time to answer the following questions sincerely to help me have a fair idea about the above research topic.

The information being sought is purely for academic purposes and under no circumstance would it be disclosed to any person.

**Information Literacy (IL)** in this study means: skills in seeking, locating, and accessing as well as using, synthesizing and evaluating information obtained from various sources and communicate it in an ethical and legal manner **(be it electronically or printed)**.

Thank you.

Yours sincerely.

Franklina Adjoa Yeboawaah
1. Please may I know your educational qualification and background?

2. How long have you been teaching IL at UDS?

3.a Have you had any formal training in Librarianship?   a. Yes [ ]  b. No [ ]
3b If yes, what kind of training?

4.a Do you attend any workshop, seminar or training on information management?  a. Yes [ ]   b. No [ ]
4b If yes, what kind of training?.........................
4c And if No, how do you then learn new skills for your work?

5a. Do students attend IL class regularly? a. Yes [ ] b. No [ ]
5b If yes do they participate to benefit or they attend to make their grades?
5c If no what are the reasons?

6.a Have students improved on their search skills since the introduction of IL? a. Yes b. No [ ]
6b. If no, what are the reasons?

7. If the students use the internet to search for information, do they consider and understand the issue of plagiarism?

8. What kind of information sources are in the library?
9. When do the students use information sources such as Encyclopedias, Dictionaries, Almanacs and other sources of information?

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10. Information Literacy program is an Academic Board approved programme which is compulsory for all undergraduate students of UDS. So why is the programme not fully implemented?
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11. In your view, how will you rate the level of information literacy of your students?
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Thank you very much for your time.
UNIVERSITY FOR DEVELOPMENT STUDIES
(Office of the Registrar)

MEMORANDUM

From : Registrar
To : Franklina Adjoa Yebowaah
Date : 4th April, 2019
Subject : RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT UNIVERSITY FOR DEVELOPMENT STUDIES

Please, I refer to your letter on the above subject, dated 31st January, 2019 and write to convey approval of your request to enable you conduct your research study on the topic ‘Assessment of student’s attitude on information literacy (IL) programme in the University for Development Studies, Tamale’.

Note that, you will be governed by all rules and regulations that apply to the University.

Should you have any challenge, do not hesitate to contact the Office of the Registrar.

Thank you.

Alhassan Paul Nabila
(Senior Assistant Registrar)
For: Registrar

Ce:
Vice Chancellor
Pro- Vice Chancellor