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# INFORMATION LITERACY AMONG STUDENTS OF THE UNIVERSITY OF GHANA BUSINESS SCHOOL AND GHANA INSTITUTE OF MANAGEMENT AND PUBLIC ADMINISTRATION BUSINESS SCHOOL

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# INFORMATION LITERACY AMONG STUDENTS OF THE UNIVERSITY OF GHANA BUSINESS SCHOOL AND GHANA INSTITUTE OF MANAGEMENT AND PUBLIC ADMINISTRATION BUSINESS SCHOOL

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**ABSTRACT**

The acquisition of information literacy skills empowers students to understand the content, extend their research and assume greater control over their learning. The purpose of the study is to assess information literacy skills of levels 300 and 400 students of the University of Ghana Business School, Legon and Ghana Institute of Management and Public Administration Business School, Achimota. From a population of 2,579 respondents (students), a sample size of 202 that is, 86 UGBS and 116 GIMPABS were selected for the study. The questionnaire was used to gathered and analysed data. The findings of this study show that students agreed that information literacy is very important and helpful in academic work and research. It was also found that students were not information literate. In the light of the findings, several recommendations are made including the following, the incorporation of a credit-bearing information literacy program in the course curriculum; and a collaboration between librarians and faculty to facilitate the implementation of information literacy programs.

**Keywords**: Information Literacy (IL), Information need, Lifelong learning, ICT, Academic libraries, Students, Universities, Ghana

## INTRODUCTION

The 21st century has been tagged “Information Age” because of the massive explosion of information resources. This was unlike fifty years ago when people had limited sources such as books, newspapers, and community experts from which to obtain needed information. In the postmodern “information society”, however, information is not only available from these sources but also online databases, the Internet, multimedia packages, and digitized government documents among others. The amount of information from all of these sources, especially the electronic, is awe-inspiring and the issue of quality of information such as its authenticity, scope of coverage and objectivity is often compromised. Such is the case because anyone with adequate knowledge in information technology can post or upload information onto the Internet, and according to Wilson (2001) this overload of information, especially as it relates to the growth of digital information, has even caused a new ailment called 'information fatigue syndrome' (IFS).

In the Alexandria Proclamation of 2005, Information Literacy (IL) and lifelong learning were declared the beacons of the information society, whereby IL lies at the core of lifelong learning (UNESCO, NFIL, & IFLA, 2005). Lifelong learning enables individuals, communities and nations to attain their goals and to take advantage of emerging opportunities in the evolving global environment, while IL provides the key to effective access, use and creation of content to support economic development, education, health and human services, and all other aspects of contemporary societies, and thereby provides the vital foundation for fulfilling the Millennium Development Goals (Garner, 2006).

The problem of information overload is not going to recede, and solutions need to be found to enable people to reduce the amount of information overload they experience. Epstein (2007) intimates that a single issue of today’s New York Times, for instance, contains more

information than an average man in the seventeenth century would have had access to in his lifetime. The American Library Association (ALA), (2000) infers that due to the escalating complexity of this information environment everyone, especially students, is faced with diverse abundant information choices in their academic studies and their personal lives. According to Kwasowitz-Scheer, & Pasqualoni (2002) students today face a daily explosion of information resources and the challenge of using these resources effectively and responsibly. Saunders (2009) opines that as the sheer volume of information and the methods of accessing, organizing and utilizing it increase, the skills necessary to find and use that information effectively also increase in complexity.

This is where the need for information literacy comes into play since it is the skills and competencies that enable patrons of information resources to decipher information that is of value to them from that which is not. Information literacy is a crucial skill in the pursuit of knowledge since it involves recognizing when information is needed and being able to efficiently locate, accurately evaluate, effectively use, and communicate information in various formats. It refers to the ability to navigate the rapidly growing information environment, which encompasses an increasing number of information suppliers as well as the amount supplied, and includes bodies of professional literature, popular media, libraries, the Internet, and much more. Increasingly, information is available in unfiltered formats, raising questions about its authenticity, validity, and reliability. This abundance of information is of little help to those who have not learned how to use it effectively. Bruce (2004) fittingly hints that information literacy is the catalyst needed to transform the information society of today into the learning society of tomorrow. He sees information literacy as critical literacy and describes it as the overarching literacy needed for 21st-century living. Ojedokun (2007) argues that the issue of information overload gives priority to Information Literacy (IL) skills; that is, the ability to seek and find information, crystallize issues, formulate testable hypotheses, evaluate evidence,

and solve problems. In a similar regard, Candy (2002) declares that IL is a key competency that enables learners to master content and extend their investigations, become more self-directed and assume greater control over their learning.

While it can be justifiably argued that there has always been a need to find, evaluate, and effectively use information, the challenge at the present moment is that the skills, competencies and abilities needed to do so have grown bigger, more complex, and more important as the volume of available information has mushroomed beyond everyone's wildest imagination, especially with electronic resources. The heightened existence of the mixture of both “good” and “bad” information makes it imperative for patrons or consumers of information to be apt on information literacy (IL) to decipher the needed or good information from the available abundant information sources.

The Chartered Institute of Library and Information Professionals (CILIP), (2012) designated Information Literacy as knowing when and why you need information, where to find it, and how to evaluate, use and communicate it in an ethical manner. According to the Online Dictionary of Library and Information Science, Information Literacy (IL) is the “skill in finding the information one needs, including an understanding of how libraries are organized, familiarity with the resources they provide (including information formats and automated search tools), and knowledge of commonly used research techniques. The concepts also include the skills required to critically evaluate information content and employ them effectively, as well as understanding the technological infrastructure on which information transmission is based, including the social, political and cultural context and impact” (Reitz, 2010).

It behoves on consumers of information, especially students in tertiary institutions to aspire to be more information literate to make maximum and effective use of the available resources in libraries.

**Statement of the Problem**

Students of UGBS and GIMPABS, just like their counterparts in other tertiary institutions, need information for a range of activities. Academic libraries to fulfil their mandate of supporting teaching, research and learning functions of the universities have in their custody vast information resources in almost every format to meet these needs. Presently, there is a proliferation of information resources especially the electronic ones and the anticipated challenge of students will be how to "*acid test*" or decode information that is of value to them from that which is not amidst the chunks of available or existing information resources. This brings to the fore the mastery or supremacy of information literacy skills.

For it is the information literate student who recognizes his or her need for information and is also able to identify what resources are available for exploitation. The information literate has the know-how or the ability to search the appropriate resources effectively and can evaluate the information for its authenticity, accuracy, currency, value and bias; as well as analyses and works with the information to provide accurate, presentable research results or to develop new knowledge and understanding. It is also the information literate student who communicates or shares information in a manner or format that is appropriate to the information, the intended audience and situation.

Literature has established that information literacy involves much more than traditional library orientation or user education. Yet, in the University of Ghana Business School Library and GIMPA Library, it is these traditional library skills that feature conspicuously. Students of both UGBS and GIMPABS are given a general guided tour of their libraries principally to show

them what resources are available when they first enrol at their respective universities. The time allotted for this session, however, does not exceed two hours. Arguably the 1-2 hour orientation sessions for students may not be enough to inculcate in them the skills and dexterity needed for them to be able to identify all the resources that are available for exploitation; to understand how the information is organized, and how to effectively access it.

Baro et al. (2011) revealed that lack of IL skills is partly accountable for the under-utilization of information resources among tertiary students which eventually leads to poor knowledge development, poor academic performance and scare research skills among students. The consequences of ignoring issues of information literacy can be very grave since it may deprive students of gaining the sophisticated skills of IL that are needed to maximally exploit all the information resources in both print and electronic formats that are available in their respective university libraries and also in other repositories outside their precincts in this information age. Students might settle for less than optimal information and miss out on the adventures of applying IL skills, which is a sure foundation for continued growth throughout their careers, as well as in their role as informed citizens and members of communities. It is information literacy skills which open the gateway of information to students and all information seekers and users across disciplines. It is against this background that this current study is being undertaken to find out how UGBS and GIMPABS students are deploying their IL skills in their search for information to meet their academic needs.

**Purpose of the Study**

The purpose of this study is to investigate the Information Literacy skills of Level 300 and Level 400 undergraduate students of the University of Ghana Business School (UGBS) and GIMPA Business School (GIMPABS).

## Specific Objectives

The objectives of the study are to.

a. investigate how students of UGBS and GIMPABS define their information needs.
b. examine the extent to which students of UGBS and GIMPABS access and use information.
c. determine the UGBS and GIMPABS students' knowledge and level of awareness of ethics of information especially about legal issues involved in using information.
d. determine the indicators students of UGBS and GIMPABS use to evaluate information.
e. identify problems encountered by students in using information resources.

## Theoretical Framework

The theoretical framework explains why and how variables in a study are interconnected. It is a group of models from the literature which supports or underpins the study. A theory is a coherent group of general propositions used to explain phenomena. Twumasi (2001) mentions that without theory, the social researcher will not be able to function effectively, and his data collection techniques will be ineffectual or sterile. The social scientist needs a body of theories for his analysis. Theories can be tested in a field to assess whether they are relevant in a particular social setting. Ary, D. et al (1990) opined that theory generally classifies and gives meaning to the previously isolated empirical findings and there are quite a several theories relating to IL. Some of the theories are Garner's theory of multiple intelligences, critical literacy theory, self-determination theory, the theory of adult learning and the theory of lifelong learning. Almost without exclusion, literature summaries that the definitive goal of IL is to impart the skill of lifelong learning or learning how to learn. Afful-Yeboah (2011) asserts that

one cannot discuss IL theories without a brief discourse of learning theories because IL by its very nature is implicitly tied to learning theories. According to Afful-Yeboah educational theorists have advanced learning theories that can be broadly categorized into four (4) orientations or segments- behaviourist, cognitive, humanistic and social/situational. Advocates of behaviourism propose the stimulus-response-model that is the notion of operant conditioning. The cognitive orientation focuses on the learner's internal mental process of knowing while the humanistic is concerned with the effective part or feelings of the learner, and also looks at the development of the learner as a whole – the complete intrapersonal growth and not just the cognition. The social/situational orientation involves the development of the learner in the context of a society on the learner's interpersonal interactions and eventually personal growth. Personal growth in this context can be likened to the information literate person.

The American Library Association Information Literacy Competency Standards for Higher Education which was formulated and reviewed by the Association of College and Research Libraries (ACRL) (2000) was the theoretical framework the researcher used for the study. The researcher chose The Information Literacy Competency Standards for Higher Education for the work because under each standard and performance, are varied lists of outcomes for assessing student progress towards information literacy. These outcomes act like guidelines for stakeholders to develop local methods in measuring student learning considering the institution's vision and mission. This standard would help the researcher to determine how level 300 and 400 students of both UGBS and GIMPABS go through the various steps in meeting their information need.

**Information Literacy Competency Standards for Higher Education formulated and reviewed by the Association of College and Research Libraries (ACRL) (2000)**

According to ACRL (2000), and information literate student:

a. Determines the nature and extent of information needed.

b. Accesses the required information effectively and efficiently

c. Evaluates information and its sources critically and incorporate selected information into one's knowledge base and value system.

d. Uses information effectively to accomplish a specific purpose.

e. Understands the economic, legal and social issues surrounding the use of information and access and use information ethically and legally.

The standards and their performance indicators are detailed below:

**Standard One** – The information literate student determines the nature and extent of the information needed

**Performance Indicators**:

- The information literate student defines and articulates the need for information.
- The information literate student identifies a variety of types and formats of potential sources for information.
- The information literate student considers the costs and benefits of acquiring the needed information.
- The information literate student reevaluates the nature and extent of the information need.

**Standard Two** – The information literate student accesses needed information effectively and efficiently.

**Performance Indicators**:

- The information literate student selects the most appropriate investigative methods or information retrieval systems for accessing the needed information.
- The information literate student constructs and implements effectively-designed search strategies.
- The information literate student retrieves information online or in-person using a variety of methods.
- The information literate student refines the search strategy if necessary.
- The information literate student extracts, records, and manages the information and its sources.

**Standard Three** – The information literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system.

**Performance Indicators**:

- The information literate student summarizes the main ideas to be extracted from the information gathered.
- The information literate student articulates and applies initial criteria for evaluating both the information and its sources.
- The information literate student synthesizes main ideas to construct new concepts.
- The information literate student compares new knowledge with prior knowledge to determine the value-added, contradictions, or other unique characteristics of the information.
- The information literate student determines whether the new knowledge has an impact on the individual's value system and takes steps to reconcile differences.
- The information literate student validates understanding and interpretation of the information through discourse with other individuals, subject-area experts, and/or practitioners.
- The information literate student determines whether the initial query should be revised.

**Standard Four** – The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose.

**Performance Indicators**:

- The information literate student applies new and prior information to the planning and creation of a product or performance.
- The information literate student revises the development process for the product or performance.
- The information literate student communicates the product or performance effectively to others.

The **Standard Five** – The information literate student understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally.

**Performance Indicators**:

- The information literate student understands many of the ethical, legal and socio-economic issues surrounding information and information technology.
- The information literate student follows laws, regulations, institutional policies, and etiquette related to the access and use of information resources.
- information literate student acknowledges the use of information

September (1993) asserts that students need some level of these skills to make decisions about academic matters and other aspects of their daily lives. The extent to which level 300 and 400 students of UGBS and GIMPABS apply the standards and performance indicators of Information Literacy Competency Standards for Higher Education in their quest for information will be determined at the end of the study. The researcher would then make recommendations based on the findings of the study.

## Significance of the Study

This study will be useful for all stakeholders in many ways.

This study may draw the attention of librarians and information professionals to take an active interest in establishing IL for various patrons to enable them to acquire the much-needed skills to search, identify, evaluate and use information resources effectively.

It would help students to know their current IL status and might even inspire them to be more information literate.

The results of this study may help design IL instruction programs in Ghanaian universities. It would also focus attention on IL at the national level especially at the tertiary level. Policymakers would be guided to start the process of coming out with a national model and standards on IL for various institutions to adopt and adapt as necessary. This would be done in collaboration with the relevant international standard-setting agencies and organisations.

## LITERATURE REVIEW

Information literacy (IL) has attracted a lot of attention among librarians and information professionals throughout the world and this interest is mirrored in the extensive literature on IL since the term was first introduced by Paul Zurkowski in 1974 (Behrens, 1994, Bruce, 1997, Webber and Johnston, 2000; Limberg et al. 2002, Opoku 2013). Zurkowski used the term "information literacy" to address a goal within an information policy, to accommodate the transformation of traditional library services into innovative private-sector information provision, for the new information industry that was emerging. In his perspective, information literacy was associated with the effective use of information within a working environment, specifically for problem-solving. The change or revolution from an economy

based on labour and capital to one based on information requires information literate workers who will know how to interpret information. This change requires that workers possess information literacy skills and as a result, a lot of literary works on IL have been produced in industrialized, English-speaking countries, especially from the United States and Australia. Instances of how information literacy initiatives and standards have been applied in the United States can be found at various levels. At the state level, for example, Colorado, Wisconsin, and Oregon have adopted standards and several initiatives have been developed by state-wide systems of higher education, including SUNY Information Literacy Initiative, the California State University System Information Competence Project, Wisconsin and the University of Massachusetts. Individual colleges and universities have also implemented standards. Some of these are Earlham College, Kings College, University of Louisville, University of Washington, University of Iowa, and Florida International University (Snavely, 2002; Wilson, 2001).

Much of this literature contends that IL is a major educational goal and should, therefore, feature as a fundamental part of the educational program. Swift improvements in digital technologies have resulted not only in a proliferation of the quantity of information available to students but also in the packaging of that information in an increasing multiplicity of formats. It is within this context that the expression IL has achieved its current popularity with its variant definitions.

The term embodies a challenge to librarians to extend the skills that they teach beyond instruction in traditional library resources to prepare students to exploit effectively the vast collection of digital information that is available (Lowry, 1990). In recent years, a shift from bibliographic to information literacy instruction has occurred in colleges and universities. According to Behrens (1994) if the term is understood this way, then IL, as opposed to library instruction or bibliographic instruction (BI), should not be restricted to library resources or holdings alone; since it presupposes the acquisition of the technical skills needed to access

digital information, and, crucially, it extends beyond the ability to locate information simply to include the ability to understand it, evaluate it, and use it appropriately.

The Association for College and Research Libraries, ACRL- (1987) reports information literacy is a new concept with a broader meaning covering concepts such as library skills, library user education, bibliographic instruction, literacy orientation, communication skills, computer literacy, etc. Breivik and Gee (1989) argue that the new concept embraces all the others specified above and acts as an expansion rather than replacement. Information literacy instruction can be formal or informal.

According to Plotnick (1999), although there are a lot of alternative definitions of IL, they all have probably stemmed from the one offered in the Final Report of the American Library Associations' Presidential Committee on Information Literacy:

"*To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information*" (ALA, 1989).

This definition recognises that IL is a proficiency that must be applied by the individual in ascertaining his/her need and taking the legitimate, applicable steps to satisfy that information need. It is extended further as the capacity to access, evaluate, organise, and use information from a range or variety of sources. This necessitates knowing how to unmistakably define a topic area under investigation by choosing the appropriate vocabulary that expresses the concept or issue; formulate a search strategy that takes into consideration diverse sources of information and the variable ways that information is organized; analyse the data collected for value, relevance, quality, and suitability; and subsequently turn information into knowledge (ALA, 1989). Grounded on the ALA definition, the Association of College and Research Libraries' Information Literacy Competency Standards for Higher Education (ACRL, 2009)

defines IL as “a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information”.

Various attempts have been made to better define the IL concept and its relationship to other skills and forms of literacy in pursuit of educational goals. Some of these literacies which are related to information literacy and are therefore important foundations for its development include traditional literacy, computer literacy, library skills, media literacy, and critical thinking skills in information literacy itself is emerging as a distinct skill set and a necessary key to one’s social and economic well-being in an increasingly complex information society. The expression has now been sustained with different designations, auxiliary terminologies, validation, elucidations and rationalisations for IL.

Bruce (1997) situates information literacy within the thinking-reasoning process that students engage in as they deal with the subject matter and defines IL as “the ability to access, evaluate, organise and use the information to learn, problem-solve, make decisions- informal and informal learning context, at work, at home and in an educational setting” She recommends an interactive technique that places at the centre of the definitional effort the perceptions of information users. This procedure results in the isolation of seven experiences representing how users view information literacy. The seven perceptions are:

a. the view of information literacy as using information technology for purposes of information retrieval and communication,
b. the act of finding information,
c. executing a process,
d. controlling information,
e. new knowledge accumulation,
f. working with knowledge to generate new insights and wise and beneficial use of information.

Shapiro and Hughes (1996) outline it with a bigger idea as "a new liberal art that extends from knowing how to use computers and access information to critical reflection on the nature of information itself, its technical infrastructure, and its social, cultural and even philosophical context and impact". They designate the curricula of information literacy to include the following:

a. Tool literacy – Ability to use print/electronic resources and software.
b. Resource literacy – Ability to understand the form, format, location and access methods of information resources.
c. Social-structural literacy – Knowledge of how information is socially situated and produced, including the process of scholarly publication.
d. Research literacy – Ability to understand and use information technology tools to conduct research, including discipline-related software.
e. Publishing literacy – Ability to produce a text/multimedia report of research results.
f. Emerging technology literacy – Ability to adapt to, understand, evaluate, and use continually emerging innovations in information technology.
g. Critical literacy – Ability to evaluate information technologies critically in terms of their intellectual, human, and social strengths and weaknesses as well as their potentials and limits, benefits and costs.

Parang et al., (2000), Prasanna, (2008) state it is the fusing of different concepts, the integration of literacy, computer literacy, media literacy, information ethics, critical thinking and communication skills. Bawden (2001) in his review on information literacy and digital literacy, attempts to clarify related concepts and a multiplicity of terms, which are often used synonymously. Some of these are information literacy; library literacy; media literacy; computer literacy (synonyms – IT/ information technology/electronic/ electronic information literacy); network literacy (synonyms – Internet literacy, hyper-literacy); and digital literacy

(synonym – digital information literacy). The same author (Bawden, 2001) argues that library literacy, media literacy and computer literacy are skills-based literacies that emerged to meet the needs of an evolving and increasingly complex landscape of information resources, with new technologies and a wider variety of media and services. In this context, library literacy refers to competencies in the use of libraries (collections and services), the ability to follow a systematic search strategy to locate and evaluate the most relevant information on a given topic (Humes, 1999).

Bruce (2002) intimates the idea of information literacy, emerged with the advent of information technologies in the early 1970s, and this has developed, taken shape and strengthened to become recognized as the critical literacy for the twenty-first century. Today, information literacy is inextricably associated with information practices and critical thinking in the information and communication technology environment. It can, therefore, be inferred that the notion of IL mushroomed largely in response to the expanding variety of information formats that were available to students, many of which were becoming increasingly accessible beyond the walls of the library. Because of these alternative information sources, many librarians were discovering that teaching only the traditional tools did not prepare students to use these new research tools effectively.

Webber and Johnston define information literacy as efficient and ethical information behaviour:

*...information literacy is the adoption of appropriate information behaviour to obtain, through whatever channel or medium, information well fitted to information needs, together with a critical awareness of the importance of wise and ethical use of information in society*. (Webber & Johnston, 2002)

Boekhorst (2003) hints that all definitions and descriptions of information literacy presented over the years can be summarized in three concepts: *The ICT concept*: Information literacy refers to the competence to use ICT to retrieve and *disseminate information.*

*The information (re)sources concept*: information literacy refers to the competence to find and use information independently or with the aid of intermediaries.

*The information process concept*: information literacy refers to the process of recognizing information need, retrieving, evaluating, using and disseminating of information to acquire or extend knowledge. This concept includes both the ICT and the information (re)sources concept and persons are considered as information systems that retrieve, evaluate, process and disseminate information to make decisions to survive, for self-actualisation and development. He also sees the process of becoming information literate as a lifelong endeavour that should be started at primary school and be a part of formal training in all phases and all subject areas during the whole education process and suggests the consideration of information literacy/illiteracy in information-rich versus information-poor context (Boekhorst, 2003).

Rupak (2008) enumerates an almost inclusive and a comprehensive list of the components of IL. These are basic literacy, library literacy, mass media literacy, ICT literacy, media literacy, technology literacy and visual literacy. Others are tool literacy, resource literacy, social-structural literacy, research literacy, publishing literacy, emerging technology literacy and critical literacy.

The National Higher Education Information and Communication Technology (ICT) Initiative has also developed a definition of literacy for the 21st century which combines cognitive and technical skills with an ethical/legal understanding of information. ICT proficiency is the ability to use digital technology, communication tools, and/or networks to define an information need, access, manage, integrate and evaluate information, create new information

or knowledge and be able to communicate this information to others (International ICT Literacy Panel, 2002).

The Australian and New Zealand Institute of Information Literacy (ANZIIL) states that "information literacy initiates, sustains, and extends lifelong learning through abilities that may use technologies but are ultimately independent of them" (Bundy, 2004). In 2002, the IFLA established a new IFLA section on IL. The main purpose of the section is to promote and foster international cooperation in the development of information skills education in all types of libraries (International Federation of Library Associations, 2004).

UNESCO's Information for All Programme (IFAP, 2008) has defined a model and framework for the measurement of IL. IFAP stated that "information literacy is part of an integrated set of skills which adults need to be effective in all aspects of their lives." IFAP also mentioned that information literacy is the capacity of people to recognize their information needs; locate and evaluate the quality of information; store and retrieve information; make effective and ethical use of information, and apply information to create and communicate knowledge.

According to Okiki, and Asiru (2011) the area that has been impacted very much by the Information Technology (IT) cliché is education and that it has affected the way education is delivered and research conducted especially in the universities. Agboola (2003) had earlier enlightened that Information and Communication Technology (ICT) has affected the education sector so much so that in using ICT, a researcher in his office can access the full-text digital contents of local and distant libraries and databases using computers and the Internet. Students as well have access to this opportunity but according to Zemanek, (2012) many students who exhibit high technical skills in using ICT are automatically experts in information literacy skills.

The expansion of virtual environments in the early 21st century have gradually shifted the world toward a knowledge economy in which people need to keep learning, even after

graduating from formal education, to cope with the rapid changes in society. In response to social reform, the concept of information literacy has expanded to include digital literacy, network literacy, media literacy, and library literacy for lifelong learning (Chevillotte, 2010). The prospect brought about by electronic information sources has in recent years wielded pressure on the educational intuitions and their libraries. The pressure on the institutions is the provision of the necessary infrastructure and the actual access to these sources whereas the pressure on the library and information centres is in the sourcing, acquisition and repackaging of these sources; as well as the provision of necessary guidance to end-users.

Authors such as (Zaychikov 2011, 2012, 2013; Zaychikov & Voznesenskaia 2012) intending to help young people select “useful” information amid “destructive” ones, conducted a survey entitled “Young humanitarians in the labyrinths of information literacy: from knowledge and skills to motivation and actions” wherein their opinion; information literacy professionals working with the young – be they teachers or librarians, school psychologists or social workers – are defined by their attitude to the young people. The first type of attitude is "young people are not able and do not want to select useful information for themselves; only an adult can select such information for the young people". The second attitude is "young people are exposed to attacks of 'bad information', and adults should block this 'bad information' by setting up a variety of restrictions and online content filters". The third attitude is "the youth can create positive and interesting information, and adults need to teach the young how to create such information. In their opinion, only the third attitude makes one an information-literate professional. Such specialists are not fighting the interests of the young people or information targeting young people, they are rather learning themselves and teaching the young how to create constructive and engaging information. It is most helpful that today a professional can successfully adhere to such attitude with the help of extensive and readily accessible social

networks and services, which seem to be naturally fine-tuned for the free hunt for meanings and creative work. Thus, a proper attitude for an information-literate professional would be not to condemn the young or directly forbid deviatory behaviour, but rather support the motivation to learn and act upon the truth learned.

Fatoki (2004) submits that "academic libraries work together with other members of their institutional communities to participate, support, and achieve the educational mission of their institutions by teaching core competencies of information literacy – abilities involved in identifying a need, accessing needed information, evaluating, managing and applying information, and understanding the legal, social, and ethical aspects of information use.

**Awareness of Information Literacy in Tertiary Education Worldwide**

Since the 1970s, the importance of information literacy in academia has been described (Maybee, 2006). UNESCO intimates that "information literacy should be introduced wherever possible within national curricula as well as in tertiary, non-formal and lifelong education programs" (UNISIST Newsletter, 2003). Before this recommendation by UNESCO, various tertiary institutions in the developed countries have already realised the importance of information literacy among their citizens and have implemented programs to inculcate information literacy competencies and skills among students at all levels. For instance, Andretta (2005) chronicles that information literacy itinerary was set as early as 1974 in the USA by a report created by the Information Fraternity Association, even though their viewpoint then centred mainly on the impact of technology on information use and limited its contextualization to the world of work. Many countries in the developed and developing parts of the world have recognized the importance of information literacy among their citizens and have implemented programs to inculcate the information literacy competencies and skills

among students at all levels. In the United States, the National Forum on Information Literacy established in 1989 and the Institute for Information Literacy established in 1998 were instrumental in formulating IL Standards for school and higher education sectors. The US Department of Education has included information literacy as one of the country's five goals in education since December 2000. Information literacy developments have also taken place in Canada, China, Japan, Mexico, Namibia, New Zealand, Singapore and South Africa. In Europe, many European countries have implemented information literacy programs as a result of realizing the importance of information literacy, seen in the following Memorandum on Lifelong Learning: "Europe has moved towards a knowledge-based society and economy. More than ever before, access to up-to-date information and knowledge, together with the motivation and skills to use these resources intelligently on behalf of oneself and the community as a whole, are becoming the key to strengthening Europe's competitiveness and improving the employability and adaptability of the workforce. Hence, learning how to learn, to adapt to change and to make sense of vast information flows are now generic skills that everyone should acquire."

Many websites are springing up devoted to IL. One of such is the International Information Literacy Resources Directory available at http://www.uv.mx/usb_ver/unesco. The directory is designed by the Information Literacy Section of the International Federation of Library Associations and Institutions with the support of UNESCO. The directory aims to enable the sharing of information literacy experiences and resources around the world with the attention on country reports, standards assessment tools (Sayers, 2006). There are others such as http://www.informationliteracy.org.uk/, which is designed and developed by information professionals from key United Kingdom organisations actively involved in the field of Information Literacy. It supports practitioners by providing updates, case studies, models of best practices and freely available tool kits. Other models are also available that can easily be

adapted to suit local conditions in tertiary institutions. Parker (2003), for instance, mentions the open-source generic model at the Open University in the UK called SAFARI: Skills in Accessing, Finding And Reviewing Information (Open University, 2001) and the Making Sense of Information in the Connected Age (MOSIAC) (Open University, [n.d.]). "Digital literacy" at the Open University (OU) refers to "the skills, competences, and dispositions of OU students using digital technologies to achieve personal, study and work-related goals" (Open University, 2012a). There is also an Open University Digital and Information Literacy (DIL) Framework which provides a common reference point for librarians, academics and learning technologists seeking to integrate these skills into the curriculum. This Framework is used to develop learning activities, meet learning outcomes and support progression and it consists of five 'stages' of development of DIL skills, mapped against 'levels' of OU study from Access (level 0) to Masters. The Framework has been made available via an interactive website, which allows users to look at skills at one particular level or the progression of skills through several levels. A set of facilitation cards has been created (Open University, 2012b) to enable easy engagement with the concepts by academics during the production of new modules. A growing collection of bite-size learning materials to illustrate the skills in the Framework is available via the award-winning 'Being Digital' site (Open University Library Services, 2012c) and complements the activities being developed by curriculum teams themselves. It includes a self-assessment checklist which enables students to check their skills level. To track progress and ensure consistency, mapping of digital and information literacy content in qualifications is being carried out. This will enable clear auditing of activities and helps to identify any gaps in a provision so that greater coherence for skill progression can be achieved. Librarians are regarded as key promoters for integrating these skills and have an imperative role in upholding how DIL can enhance independent academic study, provide students with employability skills and deliver a sound basis for lifelong learning.

There are several recent projects in the UK such as Project CoPILOT which ran in late 2012, building on an earlier project, DELILA (Developing Educators Learning and Information Literacies for Accreditation) (DELILA, 2012), which was aimed at fostering a community of practice using the UNESCO Knowledge Communities online platform. The Project is led by the University of Birmingham, in partnership with London School of Economics, UNESCO and the CILIP Information Literacy Group and is aimed at encouraging the sharing of information literacy teaching materials resources as open educational resources (OERs). Project CoPILOT also coincided with the formation of a special interest group in the UK, for those interested in sharing IL resources, supported by the CILIP IL Group. Information literacy and OERs are both core interests for UNESCO who recognised the importance of this work back in June 2012, when they invited the authors to speak at the World Open Educational Resources Congress (Secker and Graham. 2012).

Dadzie (2007) alerts that many studies have been conducted into information literacy in universities and the workplace. (e.g. Parker, 2003; Clyde, 2005; Lloyd, 2006). These studies have demonstrated that information literacy is a competency required right from the first year of academic study and is particularly important for independent essay and thesis writing. It is also required for subsequent professional activity, as part of lifelong learning. Several institutions in the developed countries have produced standards, guidelines, models and research reports on information literacy. Webber and Johnston (2003) have postulated their model of an information literate university which requires that all members of the university – administrators, academics and researchers as well as students become information literate.

According to Owusu-Ansah (2004), knowledge and people who are information literate are America's most valuable articles of trade rather than minerals or agricultural products or factory-made goods. The grounds upon which societies used to stand have been

metamorphosed, and people and the educational system are being challenged to establish new foundations known as information literacy to cope with an overdose of available information resources they have to deal with in their daily activities. The building of information society demands the development of skills and capabilities of individuals connected with efficient locating, access, understanding, and using the information in their day to day chores and life in general (Singh & Klingenberg 2012).

Fidzani (2000) informs that many information professionals think that user education is a continuous process which should be performed for all groups. Indeed, it has been observed that to ensure that users are equipped with sufficient methods of accessing, evaluating information from a variety of sources and synthesizing the information into a coherent whole, training can be organized around a level of difficulty of information and or of user educational background. Homann, (2001; 2003) gives an extensive synopsis about the development of user education and information literacy in academic libraries in Germany. He highlights the orientation towards new pedagogic concepts and influence of the Anglo-American models of information literacy at the end of 1990s. Both the University of Heidelberg and the University of Hamburg have been experimenting with information literacy courses and online tutorials for several years. A modular teaching approach was developed at the University Library of Heidelberg and a 'Dynamic Model of Information Literacy' (Dynamisches Modell der Informationskompetenz/DYMIK) based on the Anglo-American models of information literacy was adapted to their library requirements. The library is considering integration in the new e-learning activities of the University and extension of information literacy courses. The project-oriented approach, including the use of individual thematic problems as starting points and integrating information literacy and learning, was developed in the last few years at the Department of Library and Information at the Hamburg University of Applied Sciences. The teacher took a role of assisting on demand and an online tutorial 'Der schlaueDet' was

developed to offer the users additional support for self-testing and communication with the librarian (Homann, 2001; 2003). Modularised courses and activating teaching methods are now used in many university libraries in Germany.

Gavriilidis (2003), reports that information literacy has been established in the German library profession since the end of the nineties of the last century. Between the years 2000 and 2001, the Federal Government supported a study on the information behaviour of students and faculty who show a lack of information literacy. According to Hapke, (2007), there is no university library in Germany today that does not promote information literacy by some means or other. He (Hapke) mentions that information literacy scope in Germany ranges from library practice which grew from or out of classical user education to new course-integrated teaching activities as a result of library-faculty relationships because of the on-going transformation of German universities through the Bologna process. Each library in higher education meets its context within its parent institution. The new possibilities concerning electronic learning environment led also to library activities to produce online tutorials as well as to integrate their services in e-learning systems.

Tiamiyu (2012) quoting Cox, et al., (2008), reports that during the 1980s, educational reform, in general, was very much on the agenda in higher education because several reports have highlighted shortcomings in student learning and the values of the academia. Notable among these reports were the Modern America College: Responding to the new realities of diverse students and a changing society (1981); A nation at risk (1983); and Boyer's College: the undergraduate experience in America (1987); Scholarship reconsidered: Priorities of the Professoriate (1990). These reports laid the foundation for many educational reforms and experiments to improve teaching and learning practices, expanding access to education among a wider demographic area; and creating a richer conception of scholarship as an integrated set of faculty responsibilities encompassing research, teaching, application and service. State-wide

university systems and individual colleges and universities deliberately undertook strategic planning to determine information competencies, to incorporate instruction in information competence throughout the curriculum and to add information competence as a graduation requirement for students. The Middle States Commission on Higher Education (1994) recognized the importance of information literacy when it encouraged colleges and universities to ‘‘foster optimal use of its learning resources through strategies designed to help students develop information literacy. In 2002, the Commission went a step further by declaring information literacy a requirement of undergraduate education.

This original interpretation of information literacy was subsequently broadened past the acquisition of computer skills as captured in the Boyer Commission’s Report on undergraduate education published in 1995. The report asserts that for students to achieve a substantial level of academic competence they must become intelligent information patrons or consumers who see information as an indispensable commodity for survival (Doherty et al., 1999). The importance of students being able to access and evaluate information is also highlighted in several other strategic documents (Spitzer, et al., 1998; Riley, et al., 2000; Koch, 2001; Muir & Oppenheim, 2001). There are also numerous information literacy interest groups in the United States (McCartin & Feid, 2001; Seaman, 2001).

According to Tovoté, (2001) students are undertaking independent information searches in connection with their class assignments and the range of study aids has become more varied as well as the use of libraries for teaching. The old system of handing out lists of required reading for each course is being replaced by a method where the students take responsibility for their learning. She also describes a special project at Malmö University attracting students from non-academic backgrounds and finding out if there was a need for a special pedagogical approach to their courses in information searching. This project was a great success, partly because of relationship marketing. There is now a programme aimed at the information literate student

and conducted on different levels, from a pre-degree level to a doctoral level. The Higher Education Administration, who recently gave Malmö University the right to award bachelor's degrees, mentions especially the ambitious IT support and the courses in searching, evaluating and handling information integrated into the subject areas, as an important quality factor when awarding this right. Tovoté also refers to a new distance education course called Communication for Development within the area of Arts and Communication where students can deepen the insight into their interaction between social development and information, communication and media, through both theoretical studies and through a specific project assignment in a developing country where the library has an important role.

Julien (2002) intimates that IL instruction in Canadian academic libraries reveals instructional librarians continue to face numerous challenges, particularly regarding limited resources and faculty and student attitudes. The study exposes that the main "resources" for which instruction is provided by the majority of Canadian libraries are: catalogue; library use in general; Internet and the web; CD-ROM indexes; other print materials; print indexes; classification system; government documents; and audio-visual materials. The "mode of teaching" used by most Canadian academic libraries include the following items: group instruction for specific courses; individualized instruction; group library tours; classroom lectures and demos; pathfinders or subject guides; hands-on instruction in a lab; library guides/handbooks; computer-assisted instruction; self-paced library tours; and non-credit course.

Canadian libraries have set up a variety of "objectives" in conducting their user education and IL programs, but the majority of these libraries are concerned with teaching students the following topics: general research strategies, how to find information in various sources, how to evaluate information found, how to locate materials in the library, and how databases are structured (Julien, 2002). Many librarians have shared their information literacy teaching

materials with colleagues both within their institution and more widely for some years and there have been several initiatives in Canada and the United States to do this more formally (ANTS and PRIMO). Besides, some librarians are using national learning resource repositories such as the US database, Merlot and the UK based collection, Jorum to share their materials.

According to Harbo (2002), Information Literacy is flourishing in Danish libraries and The Danish Electronic Research Library (DEF) initiative has positively contributed to information literacy developments in higher education in Denmark. For example, together with the Faculty of Modern Languages, the Library at the Aarhus School of Business (LASB) is a partner in an innovative IT-project financed by the Danish Ministry of Education: IT-reorganization project - Faculty of the Future! (2001-2004). In this project, LASB is acting as a learning and teaching support unit for IT-based presentation and dissemination of information as well as being the content provider concerning electronic course packages. Since 1998 LASB has cooperated closely with the faculty at the Aarhus School of Business on the integration of electronic library facilities into an e-Learning environment. As a result, several flexible Web-based course packages have been developed in which the LASB has provided electronic library resources, cleared copyright materials, taught information skills and created IT solutions and platforms for the electronic course packages. Another project, METRO, a virtual learning resource centre using a metro map as a metaphor to guide students to valuable information and learning resources, was developed at the Aarhus School of Business as a joint venture between the Library and Faculty (Harbo, 2002; METRO, 2003).

Borovansky, (2000) informs that quite a lot of grant proposals have been submitted at the Czech Technical University. The project 'The Concept of Information Education' was a part of a larger proposal 'Contribution to the Development of Distance and Lifelong Education at CTU'. The other proposal was called 'Information Preparation of CTU Users'. The objective of funding

the proposal was to work on the system of the information preparation of users, mostly students, according to the stages of information literacy. The proposed solution made use of the possibilities of modern ICTs to advise users on how to use information systems, sources and services, as well as the instructional programmes for the end user, searching. There are many other studies and research activities which include aspects of information literacy even though the term information literacy may not be used explicitly. There is at present in the Czech Republic Information Education and Information Literacy Working Group – IVIG, which is part of the Association of Libraries of Czech Universities – ALCU (ALCU, c2003-2012) established in 2000. IVIG activities cover introducing conceptual and theoretical documents, including terminology and definitions, as well as preparing teaching materials, organizing workshops and sharing best practices. The co-operation with key IL actors within and outside of the Czech Republic has become an essential part of IVIG's work. In the beginning, there was a crucial task of developing applicable Czech terminology related to information literacy issues.

In 2008, the IVIG working group published a crucial strategic document – *Information Education Strategy at Universities in the Czech Republic* (ALCU, 2009). Several issues related to IL were presented and discussed on the practical level as well. An IVIG seminar was established in September 2003 that is now an annual event. To share the experiences at the international level, Czech librarians and IL specialists have presented their research results at several workshops and conferences (Dombrovská et al., 2006; Tichá, 2007). At the same time, they have participated in the creation of a strategic document for central and south-east European countries (Pejova et al., 2006), and contributed to a publication discussing the IL issues European-wide (Landová et al., 2008).

Feo (1998) hints many Information Literacy initiatives were mounted in several universities in the 1980s, solely encouraged by the ministry responsible for scientific and technical information. University of Paris 8 (Universite Vincennes-Saint-Denis Paris 8) is a case in point where an information methodology course was established which is now a requirement in quite a lot of university departments and over 1000 students take this course every year. Coulon (1999) also evaluates positively the impact of the teaching of information literacy courses at the same university. The Service Commun de la documentation (SCD), the joint information service, at the University of Paris 4 (Université Paris Sorbonne- Paris IV) participates in the teaching of information skills for third-year undergraduates and postgraduates. The role of the SCD can take different forms and the duration and content of courses vary from one faculty to another. However, two conditions are systematically met: the integration of the information component in disciplinary or methodological university teaching, and its adaptation to the specifics of each discipline. The objective is to educate students in the research and exploitation of the information, so that they can profit from such courses in the preparation of their master's thesis or higher diplomas (Fayet, 1999).

**Information Literacy in Developing Countries.**

Wijetunge and Alahakoon (2005) have indicated that though there are several IL models already available, re-inventing the wheel or developing another model is essential because of the composite culture and local conditions in developing countries. They intimate that if an existing model from a developed country was imposed on developing nations, it would be difficult for the stakeholders to understand the philosophical roots behind the model. This supposition by Wijetunge and Alahakoon (2005) is in harmony with the assertion that clarity of definitions provides a more stable atmosphere for practical initiatives, while controversies

over definitions distract from the action. Information Literacy is necessarily demonstrated in a context and within a domain of content. In proposing standards for tertiary education an assumption is made that, at a general level, information literacy involves the same processes across contexts and content domains. This hypothesis needs to be explored, given that these standards offer a description of what some people conceive to be Information Literacy since it is plausible that the concept will involve different skills in some settings. Consequently, users of these standards in a different context, should scrutinize the application of each standard, rather than assume it will be appropriate. This may be the reason why some critics have challenged the relevance of a Western-influenced IL model into the educational fabric of developing countries and advocated consideration of the range of contextual variables that affect how and why individuals learn. IL in developing countries must then be developed to suit specific needs and the local environment. Aiyepeku, Atinmo and Aderinoye (2002) have proposed that the goal of IL programmes in Africa should be to help "inculcate a lifelong habit of identifying information need and efficiently searching for, and using, indigenous oral, print, electronic and other sources of information to satisfy that need and thereby enhance the personal, community, and national socio-economic interests".

Dorner and Gorman (2006) define IL for the developing country as the: the […] ability of individuals or groups in their unique context: to understand when information can help, to know how to find and evaluate it, to understand how 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 their experience.

Dorner (2009) informs that Information Literacy education is a cooperative process. The process of collaboration for information literacy instruction includes librarians and faculty establishing contact, discussing goals and planning, working together in the instruction phase, and working together in the assessment. The Association of College & Research Libraries

emphasizes the importance of this collaboration in official publications, such as "Guidelines for Instruction Programs in Academic Libraries" (ACRL 2003). Under this arrangement, librarians collaborate with teaching faculty to provide a new approach to teaching students about the effective use of networked electronic information and publications, along with more traditional print resources. The library bibliographer works directly with a faculty member to provide instruction related to the research skills necessary to complete the course project and to build a greater understanding of the organization of knowledge in the field. This close collaboration ''yields a seamless blend of core subject information and information seeking evaluation skills'' (Black, Crest, & Volland, (2001). In this process, the teacher facilitates information-related learning experiences and at the same time learners critically and reflectively engage with information as a resource for self-actualisation in their unique local contexts.

Hofstede, Hofstede & Minkov, (2010) also report of a two-week field research work they carried out at a South African University Library in October 2011 where they investigated differences and similarities in approaches to user education and information literacy in context and paying particular attention to the cultural and social context of user education. Several factors emerged which in interaction influenced user education and they came out with the conclusion that information literacy must be understood in the light of social and cultural practices, while at the same time keeping pace with the effects of increasing globalization and internationalization in higher education.

A study by Vicki et al., (2012) who explored the connection between contextual influences and professional development, particularly concerning the concept of legal information literacy and the value of acquired educational skills in the context of legal practice in Nigeria. Using the mixed method of both the quantitative and qualitative strategies for data collection, the report of findings which were supportive of the importance of information literacy as central

to the development of professional competence of aspirant barristers which can be achieved through restructuring the teaching methods and curricula of the Nigerian Law School (NLS). The study makes recommendations for the adoption and integration of information literacy as a conceptual framework by which skills training can be developed into the curriculum of the Nigerian Law School.

Okiki, & Mabawonko (2013) undertook a study on the impact of information literacy skills on academic staff research productivity in Nigerian federal universities. The outcome of the study revealed that the academic staff attained information literacy skill mostly through attending workshops/seminars, self-taught, assistance from other colleagues, trial and error, guidance from library staff and faculty/departmental training. Furthermore, the investigation showed that the research productivity of the academic staff in Nigerian federal universities was higher in journal publications, technical reports, conference papers, working papers and occasional papers. Conversely, the research output of the academic staff in Nigerian federal universities was lesser in textbook publications, monographs, patents and certified inventions. The result of the study has raised some implications for implementation of information literacy skills activities to improve the quality and quantity of academics' research productivity in Nigerian universities.

**Challenges of Introduction of Information Literacy to Tertiary Institutions in Developing Countries**

Studies have revealed that unlike the developed nations where IL programs have mushroomed with relative ease or less resistance, developing countries faced several teething problems in their bid of developing their IL programs (The World Bank Group 2003). The World Bank

Group Report identifies three major handicaps that militate against IL in developing nations and these are: traditional educational system, low literacy rate and low level of publishing.

Despite the above challenges, some developing countries have been able to brace the storm and have introduced IL programs in their university and college curricular through the instrumentality of their librarians. This is a laudable accomplishment because librarians and information professionals are supposed to be the torchbearers of information literacy.

Kinengyere (2007) carried a study on three academic and research institutions in Uganda namely, Makerere University (which has the oldest library and biggest library); Nkozi and National Agricultural Advisory Services (NAADS) and Martyrs University. He (Kinengyere) reported that Uganda was on the right track of ensuring that information resources that were available for researchers and students are been used in the best way possible albeit not all. For instance, academic and research libraries are actively involved in supporting and achieving the missions of their respective institutions by teaching information literacy skills. They have developed programmes for information skills sessions based on their individual specific needs. These sessions include library orientations to graduates, undergraduates and new faculty members; tutorial workshops and seminars; how to keep research up-to-date, reference management, and accessing electronic journals/databases (Kinengyere, 2007). As stated earlier, though Uganda was on the right track of ensuring the maximum utilization of available resources, the report also revealed that some of the available resources have not been exploited at all because users were not aware of this. Kinengyere suggested that Information professionals should be engaged so that they can impart IL skills to library users since IL is very vital in influencing utilization of information resources especially the electronic ones. Library patrons should also endeavour to find out what information is available as their attitudes and perceptions influence the level of resource utilization.

Some challenges the researcher identified in his study include the fact that IL had not been embedded in the curricular to give it the much seriousness it deserves, shortage of computers for all library users, power interruptions countrywide which impede the utilization of electronic resources, limited bandwidths that impact negatively on all the three universities. Among the recommendations Kinengyere made was that IL should be included in the respective universities curricular to give it more prominence and the needed attention from students; Consortium of IL programmes should be encouraged and supported and that IL standards should be set not only for the three institutions but for the whole consortium; Libraries in universities and research institutions in Uganda should offer a range of opportunities for staff and students (Kinengyere 2007).

Mukungu (2011) also reports of another study he conducted at Makerere University which was aimed to cultivate information literacy among graduates in Uganda. The researcher endeavoured to establish information literacy skills offered to university students and the employers' expectations from university graduates. The researcher reported that the graduates outlined several IL skills that were required at the workplaces which were not taught them at the university. His findings revealed that IL was not formally taught and therefore graduates in Uganda lacked adequate IL skills. They did not make proper use of the information resources at their workplaces hence their poor service delivery and production.

A similar study by Baro and Zuokemefa (2011) on 36 university libraries offering information literacy revealed that university libraries in Nigeria were found to be engaging in different information literacy (IL) practices ranging from library tour/orientations sessions to introductory information skills, database searching skills, bibliographic training and use of the library. Barriers such as lack of interest by students, teachers, and management, inadequate human resources to handle IL training, lack of facilities, low acceptance of online IL delivery approach and absence of IL policy were identified as factors militating against librarians'

efforts when advocating and providing IL programmes in university libraries in Nigeria. Adeyemi (2002) also states that IL in Nigeria universities is uncoordinated, purely introductory and non-examinable. The observation of Adeyemi confirms what Valenza (1998) had earlier reported about the unmethodical way IL has been tackled in many institutions in Nigeria. He (Valenza) intimates IL issues had been perfunctorily and that librarians have long called for discussion on information literacy in schools and colleges and argues that for effective impact to be made, the standards must be woven throughout the institution's curriculum. He asserts that IL skills can be grasped by students when their assignments require deeper thinking and urge teachers to set questions that would require students to think, analyse, compare and communicate.

Odiodi, (2005) reports of a study on approaches to information literacy in Nigeria and reveals that one of the foremost factors opposing the promotion of higher levels of information literacy is the lack of concentrated effort by academic libraries themselves in the pursuit of the programme. Reasons assigned by the libraries for this situation were the lack of institutional support; inadequate funds to vigorous promote IL issues. In a related vein, Underwood (2003) cites INFOLIT, an IL Project in South Africa, which is an access course to promote visual literacy under Cape Technikon. Additionally, there is accessing the INSPEC database, which seeks to improve IL skills and information society, and the Tools and Skills course by the University of Cape Town, South Africa. The University of Western Cape, South Africa also has a single-semester course for the first-year students in the Social Sciences called the Arts Information Literacy package and building Web-based Resources to improve biological information literacy of electronic resources. The Library and Information Association of South Africa (LIASA) has also started to address how best to lobby for the integration of IL in the curriculum, and De Jager and Nassimbeni, (2005) inform that good progress has been made by drawing on policy directives for advocacy purpose and positioning libraries as partners with

academics in the teaching and learning process, making explicit the links between information literacy, graduate skills and lifelong learning. In a similar fashion Jiyane et al., (2010) in a study on the theme Information literacy education and instruction in academic libraries and Library and Information Science (LIS) schools in institutions of higher education in South Africa report that there are concerted efforts towards the realization of information literate society in the country. They (Jiyane et al. 2010) apprise that librarians and LIS lecturers have accused each other of lack of support, cooperation as well as ignorance about the IL programme each party offers. The South Africa government through its Department of Arts and Culture provides conditional funds for training library workers through workshops, seminar, conferences etc., and Tiamiyu (2012) informs that that these participants recognise the fact that they are not supposed to be paid for their engagement in community service but can only benefit from the funds particularly in regards to the preparation of teaching materials, transport fees and issuance of certificates of attendance. Lwehabura et al., (2008) have stressed the importance of involving the teaching staff in the planning and development of IL programmes that were offered by libraries thus confirming Lwehabura (2007) assertion that librarians should make efforts to ensure that they involve faculty in IL activities, including teaching and designing or proposing IL programme content.

According to Mutula (2006), there is an online IL module for first-year students at the University of Botswana. This module comprises six key topics based on the Australian Capital Territory Library and Information Services. It covers literacy skills as defining the task; locating resources; selecting the most useful resource; organising the information; presenting the information effectively; and assessing what has been done.

The University of King Fahd University of Petroleum and Minerals (KFUPM) in Saudi Arabia was established by a Royal Decree in September 1963 and it was grounded on the American model of higher education. The KFUPM with its carefully planned academic program was

able to develop several successful IL initiatives. Since the early 1970s, KFUPM in collaboration with its international partners has consequently developed, over the last 25 years several IL initiatives. These include the "library-orientation program", the "library-user program", the "library-integrated English courses", and the "information-searching skills course". Ashoor (2005) reports that in Saudi Arabia there are various information literacy initiatives undertaken in the KFUPM and that, there is an "Information Searching Skills" course, which is a two-credit-hour course which teaches students various methods of locating and retrieving information from a variety of sources. In the words of Martin et al. (2010), there is a web-based information literacy tutorial developed and tailored to the Arab student population of the Emirate known as INFOASIS (http://www.zu.ac.ae/infoasis).

**Information Literacy in Tertiary Institutions in Ghana**

Ghana was part of the International Network for the Availability of Scientific Publication (INSAP) participants who attended an Information Literacy Workshop facilitated by UNESCO in South Africa; to provide Information Literacy instructors and potential trainers with specialized, authoritative, comprehensive and up-to-date training knowledge regarding Information Literacy education and training INSAP, (2008). In January 2009, a workshop was organized by INASP at UEW, Winneba for selected librarians and faculty members from all state universities, polytechnics and private universities to sensitize them to the need to embrace IL training in all academic institutions in Ghana. The increasing reliability of internet connectivity has now provided the right environment for the execution of information literacy programmes in higher institutions in Ghana. Tjitendero (2011) informs that journalism has been identified by Savana Signatures (SavSign) as a capable medium through which the social, economic and political growth of the nation can be attained. He (Tjitendero) intimates that it

was in recognition of the enormous roles that journalists and information literacy play to the realization of the Millennium Development Goals (MDGs) that SavSign with sponsorship from INASP organised a five-day information literacy workshop to expand the knowledge scope of twenty selected journalists across the various media houses in the Northern region of Ghana. Mr John Stephen Agbenyo of SavSign and Mr Joseph Kpetiglo of GINKS were the facilitators who took the media personnel through the rudiments of how to recognise useful information and to evaluate and use information effectively to meet local consumption and to enhance development and growth. Participants at the workshop were also taken through the process of understanding the economic, legal and social implications surrounding the information they access, and they were enjoined to use information ethically and legally with the ultimate goal of harnessing development (Agbenyo, 2011).

Bannerman (2000) asserts that there are IL programmes in some Ghanaian universities under various names. For instance, The University of Cape Coast (UCC) and University for Development Studies (UDS) has credited Information Retrieval Courses designed for all students as part of their degree courses. Various programmes have been specially structured to meet the needs of students at the Kwame Nkrumah University of Science and Technology (KNUST) and the University of Ghana (UG). GIMPA offers a non-credit bearing course on information literacy to some few categories of patrons. Kissiedu reports at a working session of the Ghana Library Association Seminar and Annual General Meeting 2013 on the theme "Trends in Information Literacy" that there is a 3 credit-bearing course on Information Literacy incorporated in the curricula of the Catholic University College of Ghana (CUCG) at Fiapre, Sunyani and the University College of Health Sciences at Ho.

It is vital to state that several studies and reports concerning IL in Ghana are available both in print and electronic formats. A study by Dadzie (2007) which corroborates Bannerman (2000) reveals that there are a series of information literacy initiatives going on in universities in

Ghana. She mentions the Information Retrieval Course and the Communicative Skills at the University of Cape Coast, and the Academic Writing Course at the Language Centre of the University of Ghana as laudable efforts towards the ultimate achievement of information literacy standards in Ghanaian universities. She recommended the need to have official information literacy environments where students can be prepared for lifelong learning. It is in the information literate environment that student engagement in active, self-directed learning activities. This will enable students to build on their competencies of knowing how to learn no matter where they find themselves later in life. She further alerts that if information literacy is embraced by universities as a sine qua non, then the universities can pat themselves on the back that they have fulfilled their mandate of churning out lifelong learners – a goal of tertiary institutions via information literacy. It is information literacy skills among which competencies include *knowing how to learn* that makes learning enjoyable among an avalanche of information resources.

A study by Lamptey (2008) on Information Retrieval course for undergraduates at the University of Cape Coast indicates that this programme did not have the intended effect on these students at their post-graduate level. He (Lamptey) therefore called for the strengthening of this course through colloquiums and workshops throughout students' programme of study at the university.

Aggrey (2009) also undertook a similar study on Information literacy among second and third-year medical students of the University of Ghana Medical and recommended that the course should not be limited only to the second and third-year students, but should be offered to all the category of students. He also recommended that students who pass the Information Retrieval course should be awarded Proficiency IL certificates to stimulate interest in the programme.

**Information Literacy among Students in Tertiary Institutions**

In the context of business, information literacy skills have been defined as "the ability to effectively and efficiently access and evaluate the information for problem-solving and decision making" (Hawes, 1994). Kanter (1996) intimates that since many business students will become chief executive officers and business managers in future, it is essential that these students become information literate to lead in the 21st-century information society. Albrecht, (2001) in a related vein states that "*if we look at every business as an information enterprise and recognize the emerging roles of people as knowledge professionals, we must seek ways to make them more effective and productive via information literacy*."

Business decision-making in this present era, as well as being an all-round success and productive citizen, requires skills in finding, retrieving, analysing and using information (ACRL, 2006). These skills, which form the foundation or basis of information literacy, are critical to triumphing in both academic and work contexts, as well as to the general quality of life in the information society. Such skills are vital for success in today's business world where "information has become the leading business asset" (Kanter, 2003). For example, in his speech to the 1999 graduating class at the University of Toronto, Anthony Comper, then President of the Bank of Montreal, stated that: "Whatever else you bring to the 21st-century workplace, however great your technical skills and however attractive your attitude and however deep your commitment to excellence, the bottom line is that to be successful, you need to acquire a high level of information literacy. What we need in the knowledge industries are people who know how to absorb and analyse and integrate and create and effectively convey information - and those who know how to use the information to bring real value to everything they undertake" (ACRL 2006). Thus, in business education, in particular, there is

an explicit need to train students how to locate, assess, and interpret information from a wide variety of information sources so graduates can properly utilize the information for knowledge-building and decision-making purposes when they work in organizations upon graduation. A strategic advantage over competitor organizations, productivity, and innovation, is significantly enhanced when workers are information literate. This view is substantiated by recent writings in the business librarianship literature that describe the critical importance of teaching information literacy skills to business students and the dire need for more instruction (Cooney & Hiris, 2003; Hawes, 1994). For example, Cooney (2005), in her recent survey of nearly 400 libraries of colleges and universities accredited by the Association to Advance Collegiate Schools of Business (AACSB), identifies such instruction as still "evolving," where collaboration between librarians and business faculty is described as "overwhelmingly moderate" and only a third of respondents report incorporating the ACRL's Information Literacy Competency Standards for Higher Education into their instruction efforts with business students.

Marketing information literacy as a job skill has three components. First, there is evidence that employers want information literacy skills from their new hires, even if they use different terminology. Organizations in the United States such as Alison Head's Project Information Literacy (2012) and the National Association of Colleges and Employers (2012) reveal in surveys with employers that the ability to find good information and to have skills beyond Google searching is very important from new hires.

Second, the research skills the librarian teaches, and the databases used for assignments are useful in the workforce (Klusek, 2006). This argument is especially direct for business or other professional programs since most of the databases libraries subscribe to are not exclusively academic. Students respond when told that familiarity with certain tools or methods of research can be mentioned in job interviews. Talking about subscription and fee-based resources used

in workplaces is important because students do not always realize they are not available on the open web.

Third, information literacy proficiency is a job skill because anyone can Google search. Unemployment is a major problem in most countries. Students are very interested in ways to distinguish themselves in the marketplace. If the only tool in their research toolbox is entering simple keywords into a Google search, why would an employer hire a business major? It is also important to reinforce the idea that discerning if the information is reliable or not is an acquired skill that a librarian can assist in honing.

Faculty members also respond to the framing of information literacy skills as job skills because of the resulting improvement in student performance. In the short term, student engagement with the librarian and exposure to more advanced research skills can lead to better assignment results. Taking this approach increases student engagement with information literacy

According to Maughan, 2000, Emmons & Martin, 2002 and Lombardo & Miree, 2003, although students in this contemporary era have increasing facility with computers and electronic media, they still need to develop the skills to locate authoritative information and to "effectively analyse the quality, quantity, and source of the information they retrieve" (Majka, 2001) and Fister (2002) corroborating (Majka, 2001) enlightens that though undergraduate students may be smart people, they still have fears anytime they have to do a research project. He (Fister) attributes this to the fact that students do not learn the basic information skills and that they only end up using the trial and error methods of research. This restrains their capabilities to satisfy their information needs adequately.

Salisbury and Ellis (2003) report that information literacy interventions in different subjects substantially improved information skills of undergraduate students. Similarly, Secker and Macrae-Gibson (2011) in their study on the impact of IL programmes point out that student

confidence on finding published literature was 2.9 per cent before attending the programme and after the programme became 4.3 per cent. Information literacy programmes no doubt to equip students with the skills to find, evaluate and manage the information they need for their academic work. Kuh and Goyea (2003) also report on the effect of information literacy programmes on attracting and retaining students.

Farmer (2001) emphasizes that there is an urgent need for students, especially those in tertiary institutions to be information literate, to access authentic and useful resources, as well as interpret those findings in this digital and information age since most information crowding cyberspace is often unfiltered.

Scrutiny by Todd (1995) of students with IL capacity in Australian schools was that they notched better on assessment criteria and in examinations. In a comparable vein, Limberg (2002) also found out that in Swedish schools, students who tackled information seeking and use in more sophisticated ways achieved more scholarly learning outcomes. The information literates know techniques and skills for utilizing the wide range of information tools as well as primary sources in moulding information solutions to their problems.

Julien, Detlor, & Serenko (2013) in their study of Information Literacy Instruction (ILI) in business schools, alert that learning outcomes received significant emphasis due to certification requirements, and that information literacy outcomes are increasingly being recognized as critical to graduates' success in the workplace. They examined ILI practices and program components against the background of student demographics and factors in the learning environment. Data was collected using student skills testing; interviews with students, teaching faculty, librarians, and school administrators; and a web survey of students including psychological, behavioural and benefit outcomes.

Generally, the results persuasively demonstrate that ILI is a complex undertaking with diverse perceived outcomes. Several successes were chalked, and verifiable outcomes include increased student self-efficacy; positive perceptions of libraries, librarians, and online library resources; improved and increased use of librarians and online library resources; and increased efficiency and effectiveness of conducting information research. The results validate the worth of pedagogical approaches such as active learning, just-in-time instruction, and integration of information literacy instruction with course curricula, as well as the importance of marketing efforts to manage students' expectations of instructional benefits. Although instruction remains uneven and complex due to divergent expectations and assumptions by different stakeholders (students, librarians, and administrators), successful learning outcomes are possible.

**Information Literacy and Lifelong Learning**

Information literacy forms the basis for lifelong learning. It is common to all disciplines, to all learning environments, and all levels of education. It enables learners to master content and extend their investigations, become more self-directed, and assume greater control over their learning (ACRL, 2000). Literature has established that there is almost always an effective and maximum use of information resources as a result of the acquisition of information literacy skills by patrons. Doyle (2003) echoes that students are expected to discover things for themselves look for information they require and use the data to support their coursework and projects. He states that it is obligatory for higher education institutions to ensure that all students acquire competencies in knowing how to learn, to frame questions, to access prospective sources of information, to evaluate what is found for accuracy, to organize information and finally use the information to meet a need or solve a problem. This mission is undoubtedly shared by information literacy as developing lifelong learners.

Developing lifelong learners is central to the mission of higher education institutions. By ensuring that individuals have the intellectual abilities of reasoning and critical thinking, and by helping them construct a framework for learning to learn, colleges and universities provide the foundation for continued growth throughout their careers, as well as in their role as informed citizens and members of communities. It has become more and more apparent that students cannot learn everything they need to know in their field of study in a few years in universities. It is Information literacy (IL) that furnishes them with the critical skills necessary to become independent lifelong learners. The American Library Association (ALA) Presidential Committee on Information Literacy states that "information literate people are those who have learned how to learn" (ACRL, 2013). "They know how to learn because they know how knowledge is organized, how to find information and how to use information in such a way that others can learn from them. They are people prepared for lifelong learning in that they can always find the information needed for any task or decision at hand" (Ojedokun 2007). Information literacy is significant particularly in this age because it allows us to cope by giving us the skills to know when we need information and where to locate it effectively and efficiently. "It includes the technological skills needed to use the modern library as a gateway to information. It enables us to analyse and evaluate the information we find, thus giving us confidence in using that information to make a decision or create a product" (ACRL 2013).

Lifelong learning is a key theory in library practice and states that one should be able to evaluate and interpret information retrieved from various sources and resources. Information literacy has been redefined to take account of the demands of the knowledge society conceptualized within lifelong learning. The focus broadened from just acquiring the skills and understandings for success in academic settings to developing those required across the lifespan, including both professional and citizenship dimensions (George et al., 2001).

The origins of the notion of lifelong learning can be traced back to writers such as Basil Yeaxlee and Edward Lindermann in England in the 1990's. Faris (2004) asserts that these authors perceive education as an on-going process, affecting mostly grown-ups and without a doubt not restricted to formal education. Lifelong learning is a continuous engagement in acquiring knowledge and skills in the context of self-directed problems. The then Dean of the Library at San Jose State University (California), Patricia Breivik, in a speech delivered at the International Lifelong Learning Conference held in Australia in 2000, content that "within today's information society, the most important learning outcome for all students is their being able to function as independent lifelong learners. The essential enabler to reaching that goal is information literacy". Horton (2006) asserts that Information Literacy and Lifelong Learning have a tactical, communally fortifying relationship with each and that it is fundamental to the success of every individual, organization, institution, and country in the Global Information Society. He (Horton) stresses that these two contemporary paradigms should be perfectly yoked together to work symbiotically and synergistically with one another as a team if people and institutions are to successfully survive and compete in the 21st century and beyond. He sees information literacy as a "set of skills" that can be learned and intimates that this skill includes a positive attitude towards learning itself, the use of tools such as online tutorials, the use of techniques such as working with groups, and the use of methods such as reliance on mentors, coaches and ombudspersons. Contrariwise, lifelong learning is a good habit that must be embraced and a positive frame of mind that needs to be adopted. Having a helpful disposition towards change and curiosity or craving for knowledge is a necessary precondition to lifelong learning (Horton, 2006).

Breivik (1999) records, for instance, that "there is growing acceptance of the need to have more active learning environments that prepare students for lifelong learning." and, according to Christine Bruce, the recognition of the necessity of developing lifelong learning skills in

students has been a large factor in the growth of interest in IL. Information literacy is a key component of, and contributor to, lifelong learning (Association of College and Research Libraries, 2000). Crick, Broadfoot & Claxton (2004) simply delineates lifelong learning as the acquisition of skills and training beyond school. Lifelong learning relates to learning that takes place throughout one's lifetime. It includes the main types of learning that take place in informal and formal education, as well as self-directed learning.

**Models of Information Literacy**

Some models of IL such as the Big6 by Eisenberg/Berkowitz (1987); The PLUS model-Herring; Information Seeking-Kuhlthau (1993); Australian School Library Association (1993) and NILIS (2004) have been identified by Prasanna (2008). Seven Pillars Model and Empowering 8 Problem-Solving Model are explained below.

**The Seven Pillars Model**

In 1999, the Standing Conference of National and University Libraries in the United Kingdom (SCONUL) Working Group on Information Literacy published "Information skills in higher education: a SCONUL position paper" (SCONUL, 1999), introducing the Seven Pillars of Information Skills model. Since then, the model has been adopted by librarians and teachers around the world as a means of helping them to deliver information skills to their learners. In 2012 the model was updated and expanded to reflect more clearly the range of different terminologies and concepts which we now understand as "Information Literacy". For the model to be relevant to different user communities and ages, the new model is presented as a generic "core" model for Higher Education, to which a series of "lenses", representing the different groups of learners, can be applied.

a. Recognise information need: - this denotes knowing what is known, knowing what is not known and identifying the gap.
b. Distinguish ways of addressing gap: - this refers to knowing which information sources are likely to satisfy the information need.
c. Construct strategies for locating information: - this implies knowing how to develop and refine an effective search strategy.
d. Locate and access: - this refers to knowing how to access information sources and search tools to access and retrieve information.
e. Compare and evaluate: - this speaks of knowing how to assess the relevance and quality of information retrieved.
f. Organise, apply and communicate: - refers to knowing how to associate new information with the old, to take actions or make decisions, and ultimately how to share the outcomes of these actions or decisions with others.
g. Synthesise and create: - this refers to knowing how to assimilate information from a variety of sources to create new knowledge.

According to Sayers (2006), the Seven Pillars model can be likened to a ladder of progression, i.e. from the path of a novice to that of the expert: where the first four pillars (1-4) comprise the basic skills required and the remaining three (5-7) consist of the more advan0ced skills needed to understand and use information. The expectations of levels reached on each pillar may be different in different contexts and for different ages and levels of learners and are also dependent on experience and information need. Any information literacy development must therefore also be considered in the context of the broad information landscape in which an individual operates and their personal information literacy landscape (Bent, 2008).

**The Empowering 8 or Problem-Solving Model**

This model was developed by Wijetunge and Alahakoon, (2005) and is called Empowering Eight or "E8" because it identifies eight phases or components termed problem-solving model with corresponding learning outcomes for each component. The eight components are the

ability to do a range of activities including the following: identity, explore, select, organise, create, present, access and apply information. The authors intimate that this model was developed in 2004 to suit generally developing countries and specifically for South and Southeast Asian countries.

## METHODOLOGY

The research design used for the study was the survey methodology. From a population of 2579 respondents (students) and by employing the stratified random sampling, a sample size of 202, that is, 86 UGBS and 116 GIMPABS were selected for the study. The questionnaire was used to collect data whilst SPSS was used to analyse data. The population and sample size are shown in Table A below.

**Table A: Population and Sample Size**

| **Level** | **Institution/Population** | | **Sample Size** | | **Total Sample** |
|---|---|---|---|---|---|
| | **UGBS** | **GIMPABS** | **UGBS** | **GIMPABS** | |
| **300** | 457 | 978 | 55 | 79 | **134** |
| **400** | 280 | 864 | 31 | 37 | **68** |
| **TOTAL** | **737** | **1,842** | **86** | **116** | **202** |

## FINDINGS

The first objective of the study was to determine how students defined their information needs during various sources of information. The researcher, therefore, asked students to state the kinds of information they needed from the library in a multiple-response and their responses are displayed in Table 1.

**Table 1: Information Needs of Students**

| Sources of information | Institution | | Total | Percent |
|---|---|---|---|---|
| | UGBS | GIMPABS | | |
| **Book** | 79 | 100 | 179 | 89 |
| **Journal** | 46 | 50 | 96 | 48 |
| **Thesis** | 35 | 49 | 84 | 42 |
| **Electronic** | 44 | 55 | 99 | 49 |
| **Newspaper** | 51 | 49 | 100 | 50 |
| **Handbook** | 20 | 30 | 50 | 25 |
| **Abstract** | 20 | 20 | 40 | 20 |
| **Dictionaries** | 34 | 54 | 88 | 44 |
| **Conference proceeding** | 14 | 20 | 34 | 17 |
| **Map** | 19 | 23 | 42 | 21 |
| **None** | 1 | 4 | 5 | 3 |

A majority indicated that the information they needed from the library was book materials. Thus 89% of the responses indicated that they went to the library in search of books to support their studies. Those that visited the library to read newspapers were 50% while 49% stated that they visited the library to make use of other electronic resources. Thus, they went to the library to use Internet resources. Forty-eight per cent (48%) visited the library in search of journal

articles whereas 42% visited the library to use thesis and other dissertations. Only 44% went to the library to make use of dictionaries they do not have, and 20% responses indicated they went to the library to refer from abstracts of people's work while 17% visited the library to consult conference proceedings.

**Access and use of information in libraries**

The second objective of the study has been to analyse students' access and use of library information. This section is therefore structured into two main parts where the first part seeks to analyse students' access to information and the second part is devoted to students' use of information. In line with this goal, students were asked to state whether they get access to the information they need from their libraries and their responses are displayed in Table 2.

**Table 2: Access to information in libraries**

| Access to information in the library | Institution | | Total | Per cent |
|---|---|---|---|---|
| | UGBS | GIMPABS | | |
| **Yes** | 44 | 51 | 95 | **47** |
| **No** | 10 | 24 | 34 | **17** |
| **Sometimes** | 32 | 41 | 73 | **36** |
| **TOTAL** | 86 | 116 | 202 | **100** |

Less than half the number of total responses representing 47% answered in the affirmative that they had access to information in the library while 17% answered in the negative. Thirty-six per cent (36%) responses indicated that they sometimes got access to information they needed whiles at other times they did not get the information needed. By institutional analysis, the results showed that 51% of UGBS got access (44 of 86), 12% did not get access to information needed (10 of 86) and 37% (32 of 86) sometimes got access to the information

they needed. On the part of GIMPABS, the results showed that 44% got access, 21% did not get access and 35% sometimes had access.

In a related question on how they access library information respondents were asked to specify this and their responses are shown in Table 3.

**Table 3: How students access information**

| How students access information | Institution | | Total | Per cent |
|---|---|---|---|---|
| | UGBS | GIMPABS | | |
| **Assistance by library staff** | 31 | 29 | 60 | 63 |
| **From friends** | 6 | 5 | 11 | 12 |
| **Usually, find what I want but with frustration** | 7 | 17 | 24 | 25 |
| **TOTAL** | **44** | **51** | **95** | **100** |

Library staff are a great help to students in finding the information they needed from the library. As high as 63% responses indicated that they got access to the information they needed through the assistance of library staff. This was the case in both universities as well whereas 25% responses comprising 7 students from UGBS and 17 GIMPABS students indicated that they usually found information themselves but with some sort of frustration and 12% also indicated that they found information through the help of their friends.

**Reasons why students cannot access information in the Library**

To identify why students did not get access to information in the library the researcher asked respondents to provide reasons. Their responses are shown in Table 4.

**Table 4: Inaccessibility of information**

| Reasons | Institution | | Total | Per cent |
|---|---|---|---|---|
| | UGBS | GIMPABS | | |
| **Difficulty in locating information** | 8 | 8 | 16 | 47 |
| **Don't know how to search** | 1 | 3 | 4 | 12 |
| **Non-availability of information** | 1 | 11 | 12 | 35 |
| **Others** | 0 | 2 | 2 | 6 |
| **TOTAL** | **10** | **24** | **34** | **100** |

Forty-seven per cent (47%) responses stated that they had difficulty in finding the information they needed from the libraries. For instance, a student from UGBS explained that Balme Library was very big and sometimes, it became practically impossible for him and his friends to locate a book their lecturers referred them to since they did not have any orientation on how to search for materials at the Balme Library. Thirty-five per cent (35%) added that the materials they mostly needed were not available at the libraries while 12% stated that they did not know how to search for the materials they needed from the libraries. Six per cent (6%) also cited other reasons such as the length of time involved to search for materials from the library.

The researcher in a follow-up question asked respondents to state any other reasons apart from that which had already been adduced for inaccessibility of information from their libraries. Table 5 displays the responses.

**Table 5: Additional Reasons for Inaccessibility of Information**

| REASONS | Institution | | Total | Per cent |
|---|---|---|---|---|
| | UGBS | GIMPABS | | |
| **It was borrowed** | 12 | 14 | 26 | 35 |
| **Not on the shelf** | 9 | 14 | 23 | 32 |
| **The Internet was down** | 8 | 11 | 19 | 26 |
| **Others** | 3 | 2 | 5 | 7 |
| **TOTAL** | **32** | **41** | **73** | **100** |

Thirty-five per cent (35%) responses indicated that the reason they did not get access to specific information from particular materials was that they were borrowed by other users from the library and in a related vein 32% responses also added that the materials they were looking for were sometimes not on the shelves. Network challenges and failures were cited by 26% responses as additional reasons that impeded their access to information.

**Use of Library Resources by Students**

As part of the second objective of the study, which was access to and use of library resources, respondents were requested to state how often they used the library and their responses are displayed in Table 6.

**Table 6: Period used in the library**

| The time you use the library | Institution | | Total | Per cent |
|---|---|---|---|---|
| | UGBS | GIMPABS | | |
| **Daily** | 27 | 40 | 67 | **33** |
| **Once a week** | 16 | 41 | 57 | **28** |
| **Twice a month** | 10 | 15 | 25 | **12** |
| **Once per semester** | 13 | 4 | 17 | **9** |
| **I don't use the library** | 4 | 7 | 11 | **6** |
| **Others** | 16 | 9 | 25 | **12** |
| **TOTAL** | **86** | **116** | **202** | **100** |

Use of library resources daily or anytime the library was open was indicated by 33% responses while 28% responses also indicated that they use the library once a week. Majority of the students in UGBS used the library daily while the majority of the GIMPABS used the library once a week. Six per cent (6%) responses did not use the library at all.

**Purpose of using the library**

In a related or follow up question, respondents were asked to indicate the purpose of using the library and their responses are portrayed in Table 7.

**Table 7. Purpose of using the library**

| Purpose of library use | Institution | | Total | Per cent |
|---|---|---|---|---|
| | UGBS | GIMPABS | | |
| **Personal reading** | 57 | 76 | 133 | 66 |
| **Assignment** | 51 | 62 | 113 | 56 |
| **Reference/research purpose** | 48 | 56 | 104 | 52 |
| **Meeting place** | 1 | 3 | 4 | 2 |
| **Study group** | 2 | 5 | 7 | 4 |
| **Reading newspaper** | 11 | 18 | 29 | 14 |

Table 13 showed that the foremost motive respondents went to the libraries was to do a personal reading as indicated by the 66% responses comprising 57 and 76 students from UGBS and GIMPABS respectively. The second reason why respondents visited the libraries was to source for information to help them do their assignments and this was reflected in the responses from the two institutions by 56%. Fifty-two (52%) responses also indicated that they used the library is looking for books, journals and other reference materials in completing their research works. Reading of newspapers was indicated by 14% responses as the reason why they went to the library, 4% responses used the library for group studies and 2% used it for other meetings. Hence, it could be said that the major reasons students visited the library was for their readings, to look for materials to do their assignments as well as research works.

**Databases students have used in the library**

Students were asked to indicate in multiple response questions the databases they have used, and Table 8 shows their responses.

**Table 8: Databases used by Respondents**

| DATABASES | Institution | | Total | Per cent |
|---|---|---|---|---|
| | UGBS | GIMPABS | | |
| **Ebscohost** | 22 | 5 | 27 | 13 |
| **Emerald** | 26 | 7 | 33 | 16 |
| **JSTOR** | 8 | 4 | 12 | 6 |
| **Science Direct** | 3 | 10 | 13 | 6 |
| **Others** | 3 | 5 | 8 | 4 |

The results showed that only a small number of students had used databases. For instance, 16% responses indicated that they had used Emerald database before and out of this number, 26 were from UGBS and only 7 were from GIMPABS. Similarly, 13% responses also indicated that they had used Ebscohost database before and here too, 22 were from UGBS and 5 were from GIMPABS. Like the others, 8 of UGBS respondents indicated that they had used JSTOR before whiles only 4 of GIMPABS respondents had used that before. For the Science Direct database, only 6% responses had used it before and of this, 3 were from UGBS and 10 were from GIMPABS. Thus, students from UGBS were more likely to use Ebscohost, Emerald and JSTOR databases while those from GIMPABS were more likely to use Science Direct.

**Use of libraries of other institutions**

Respondents were requested to state any other type of libraries they had used before apart from their institution's library and Table 9 shows the results.

**Table 9: Other libraries used by students**

| OTHER LIBRARIES | Institution | | Total no. of responses | % of responses |
|---|---|---|---|---|
| | UGBS | GIMPABS | | |
| **American Embassy Library** | 3 | 7 | 10 | 29% |
| **Balme Library** | 17 | 2 | 19 | 56% |
| **British Council Library** | 0 | 2 | 2 | 6% |
| **Church Library** | 1 | 0 | 1 | 3% |
| **Bank of Ghana Library** | 2 | 0 | 2 | 6% |

As per the use of other libraries apart from respondents' institution libraries, 56% responses indicated that they had used Balme Library, out of which 17 were from UGBS and only 2 were from GIMPABS. The American Embassy Library was used by 29% responses. Out of the responses, 3 were from UGBS while 7 were from GIMPABS. Two students from GIMPABS had used the British Council library before. In the same vein, 6% responses representing 2 students from UGBS used the Bank of Ghana Library. Only one student representing 3% response indicated that she had used a church library before.

**Ethical and legal use of information**

The third objective of the study was to test respondents' knowledge about the ethical or legal use of information and in line with this goal; students were asked to indicate whether they were aware of plagiarism. Figure 1 displays their 'Yes' and 'No' responses.

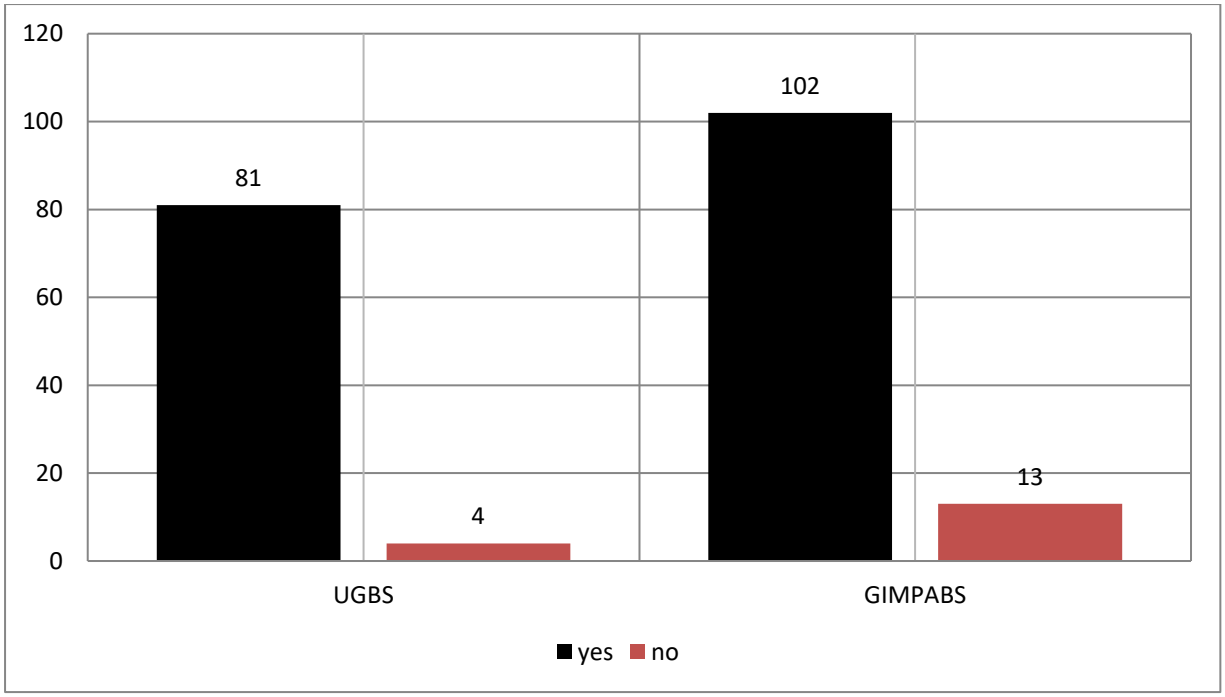


Fig 1: **Knowledge about Plagiarism**

As high as 92% responses stated that they knew about plagiarism. Out of this number, 102 were from GIMPABS and 81 from UGBS. Most of them are aware of plagiarism. It was, therefore, necessary to probe further by finding out the detection of plagiarism.

**Awareness that plagiarism is easily detectable**

In a follow-up, question student was requested to state if they were aware that plagiarism was easily detectable, and Table 10 shows the responses by the students.

**Table 10: Easy detection of plagiarism**

| RESPONSE | Institution | | TOTAL | PER CENT |
|---|---|---|---|---|
| | UGBS | GIMPABS | | |
| **Yes** | 42 | 74 | 116 | 59 |
| **No** | 44 | 37 | 81 | 41 |
| **TOTAL** | **86** | **111** | **197** | **100** |

More than half the number of respondents signified by 59% responses indicated that they were much more aware that it was easy to detect a plagiarized work while 41% noted that they were not aware. In the case of UGBS, those who did not know that plagiarism was detectable were more than those who knew it was detectable. On the other hand, for GIMPABS, those who knew that plagiarism was detectable were more than those who did not know.

**Awareness that Plagiarism is an offence**

The respondents were further asked to indicate if they knew it was an offence to plagiarize someone's work and their responses are shown in Figure 2.

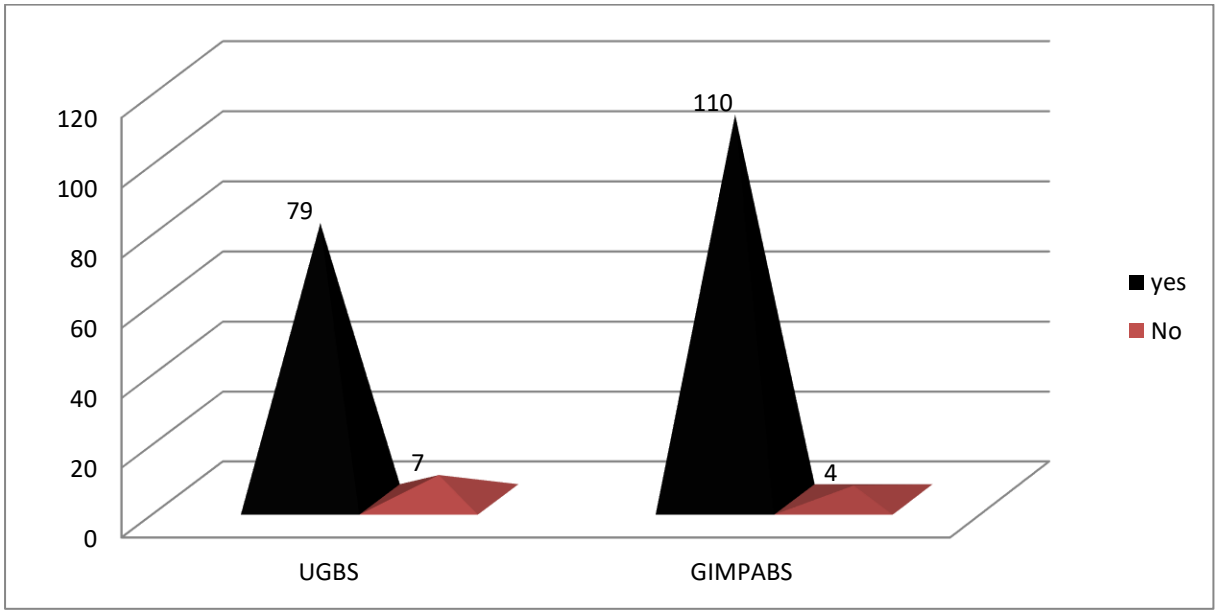


**Figure 2: Plagiarism is an offence**

Ninety-five per cent (95%) of the total responses (189 of the 200 respondents) who answered the question answered in the affirmative while 11 respondents answered otherwise. In both

institutions, the proportion of those who knew it was an offence to plagiarize was more than those who did not know it was an offence.

**Photocopying of works**

As part of determining adherence to the ethical use of information in terms of fair use or fair trade-in photocopying, respondents were asked to state if they have ever photocopied entire materials. Their 'Yes' and 'No' responses are shown in Table 11.

**Table 11: Photocopying of entire works.**

| RESPONSE | Institution | | TOTAL | PER CENT |
|---|---|---|---|---|
| | UGBS | GIMPABS | | |
| **Yes** | 49 | 59 | 108 | 54 |
| **No** | 37 | 57 | 94 | 46 |
| **TOTAL** | **86** | **116** | **202** | **100** |

The results showed that generally majority of respondents (54%) had photocopied someone's entire work before while 46% noted that they had not photocopied an entire book before. This was also reflected in the responses in the two institutions. Thus, in the case of UGBS, out of the 86 respondents representing 43%, 49 had photocopied an entire book before while 37 had not and for GIMPABS, out of the 116 respondents representing 57%, 59 had photocopied an entire book before whereas 57 had not. Majority of respondents had violated on ethics of information.

In a follow-up question on the reasons for photocopying entire works without permission or authorization from the appropriate quarter's respondents were asked to indicate their responses. Table 12 displays the results.

**Table 12: Reasons for photocopying entire works**

| REASONS | Institution | | Total | Per cent |
|---|---|---|---|---|
| | UGBS | GIMPABS | | |
| **Could not find a copy to buy** | 12 | 28 | 40 | 37 |
| **Could not afford it** | 23 | 13 | 36 | 34 |
| **Too busy to search for a copy** | 5 | 4 | 9 | 8 |
| **Normal practice of student** | 9 | 14 | 23 | 21 |
| **TOTAL** | **49** | **59** | **108** | **100** |

Thirty-seven per cent (37%) responses indicated that they could not find a copy to buy at the bookshop and so they were left with no option than to photocopy it. Majority of the proponents of this reason were from GIMPABS (28 respondents). The high cost of a recommended book or text was cited by 34% responses as the reason why they found it most convenient to photocopy. Majority of UGBS students held this position as compared to GIMPABS. It is a normal practice by students to photocopy books and other academic materials of interest were the reason adduced by 21% of the respondents. And here too, most of this argument was made by GIMPABS students. Nine respondents who represented 8% indicated that they were too busy to get time off their schedule to search for a copy of the book to buy and hence they resorted to photocopying. Thus, photocopying materials saved time and efforts.

**Evaluation of information resources**

The fourth objective of the study was to determine how students evaluated information in terms of currency, accuracy, scholarliness. **Access to current information**

As part of testing students' knowledge about the evaluation of information resources, respondents were asked to state whether they got current or up to date information. Their responses are shown in Figure 3.

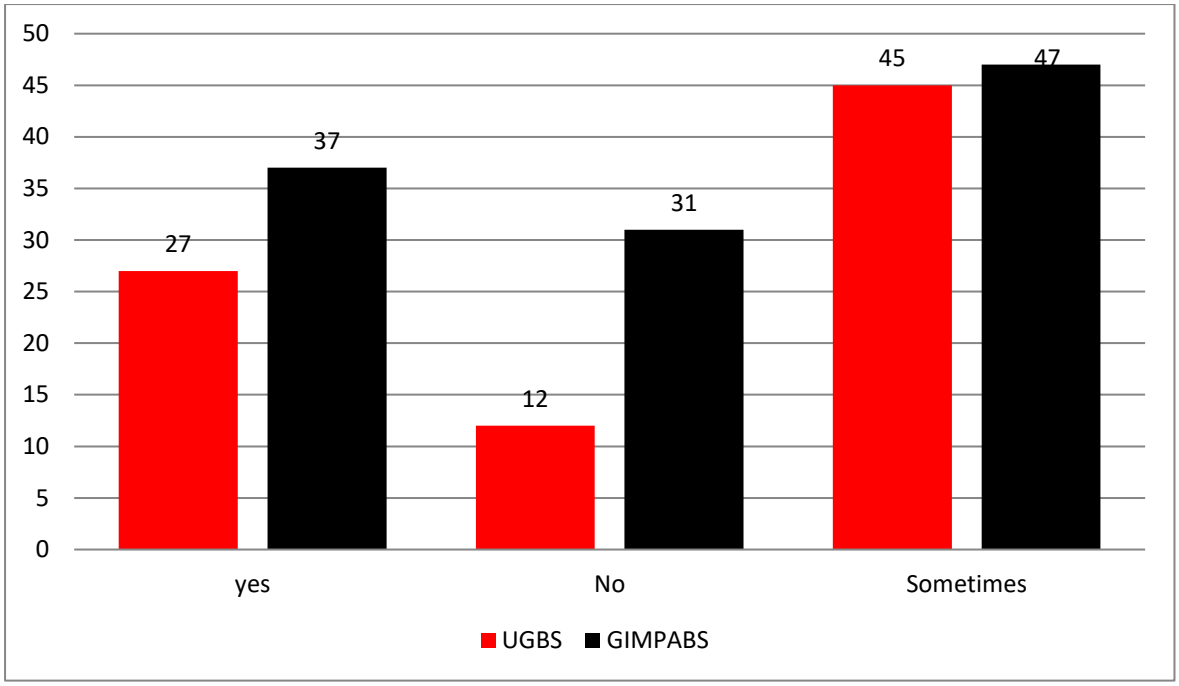


**Figure 3: Access to current information**

From the institutional analysis, for UGBS; out of the 84 students who answered the question, 32% responses noted that they got access to updated information, 14% did not get and 54% response intimated they sometimes got access to up to date information. Of the 115 respondents of GIMPABS who answered the question, 41% responses noted that they sometimes got access to current or up to date information, while 27% indicated that they did not and 32% responses indicated that they got access to updated information. Thus, overall, students did not always get access to current or up to date information they wanted for their studies.

**Determination of currency of information**

Students were asked to indicate how they determined current or up to date information. Table 13 displays the responses.

**Table 13: Determination of currency of information**

| Currency of information | Institution | | Total | Per cent |
|---|---|---|---|---|
| | UGBS | GIMPABS | | |
| **Date of creation of a document stated** | 18 | 25 | 43 | 67 |
| **When the source was last updated, revised or edited** | 14 | 25 | 39 | 61 |
| **The material is updated frequently or consistently** | 10 | 12 | 22 | 34 |
| **Other** | 3 | 4 | 7 | 11 |

As to what indicators respondents used to determine whether the information is up-to-date or not, 67% responses stated that they used the date the document was created while 61% responses said that they used the last time the source was revised or updated (mostly in the case of electronic information) as an indicator for determining currency of an information source. These among other reasons are the indices they used in assessing whether the information is up-to-date or otherwise.

**Accuracy of Information**

The researcher asked the respondents to state the indicators they used to determine accurate information and their responses are shown in Table 14.

**Table 14: Indicators of Accurate Information**

| Accurate Information | Responses | | Total | Per cent |
|---|---|---|---|---|
| | UGBS | GIMPABS | | |
| **The source is part of edited work** | 28 | 37 | 65 | 36 % |
| **Information is verified via references to other credible sources** | 61 | 61 | 122 | 68% |
| **Already know about this source** | 22 | 42 | 64 | 35% |
| **Responsibility for accuracy is stated** | 37 | 46 | 83 | 46% |
| **Source of data is presented** | 14 | 25 | 39 | 22% |
| **Lecture notes** | 9 | 21 | 30 | 17% |
| **Other** | 5 | 8 | 13 | 7% |

Many issues were raised as part of respondents' assessment in the evaluation of the accuracy of the information they obtained were 68% responses comprising 61 students each from the two institutions noted that they considered information to be accurate or factual if it could be verified with other credible sources or references. Forty-six per cent (46%) response which consisted of 37 UGBS and 46 GIMPABS students indicated that they reckoned information to be accurate when responsibility for the work was started, while 36% indicated that they judged information to be accurate when it was peer-reviewed or edited. In a similar vein, 22% of the total responses consisting of 14 and 25 students from UGBS and GIMPABS respectively intimated they considered information accurate when the source of data or information was given or stated while 17% of the total respondents made up of 9 UGBS students and 21 GIMPABS students stated they considered lecture notes to be accurate information. Other means used of assessing the accuracy of the information source was cited by 7% of total the respondents.

**Determinants of Scholarly information**

Respondents were asked to state the indices they used to determine scholarly information and their responses are displayed in Table 15.

**Table 15: Determinants of Scholarly article**

| Scholarly information | Institution | | Total | Per cent |
|---|---|---|---|---|
| | UGBS | GIMPABS | | |
| **Work is written by expert** | 60 | 71 | 131 | 74 |
| **Written for a scholarly/academic** | 52 | 49 | 101 | 57 |
| **Written by one of our lecturers** | 10 | 9 | 19 | 11 |
| **On the Internet** | 5 | 8 | 13 | 7 |
| **Cannot tell** | 5 | 10 | 15 | 8 |
| **Others** | 3 | 1 | 4 | 2 |
| **TOTAL** | 79 | 99 | 178 | |

If a work of interest was written by an expert, then this could be considered a scholarly source. This assertion was stated by 74% responses representing the majority of the respondents from both institutions which used this indicator as to their way of identifying a scholarly article. More than half of total respondents (57%) also enumerated that if the work was written for a scholarly or academic purpose, then it could be considered a scholarly article. Eleven per cent (11%) responses believed that if the work was written by one of their lecturers, it could be considered a scholarly article but 8% could not tell what constituted a scholarly article while 7% believed that any article on the Internet is a scholarly article.

It could, therefore, be inferred that there were two major characteristics students from both institutions considered as components of a scholarly article, namely if it was written by an expert or it was written for an academic purpose.

**Determining Quality Online resources**

As part of an evaluation of information resources, especially the Internet as an information source, the researcher asked respondents to state the characteristics they used in assessing the quality of an Internet resource and their responses are displayed in Table 16.

**Table 16: Quality of Internet sites**

| Characteristics of a quality Internet site | Institution | | Total | Per cent |
|---|---|---|---|---|
| | UGBS | GIMPABS | | |
| **Date of publication** | 46 | 47 | 93 | 52 |
| **Author** | 47 | 37 | 84 | 47 |
| **Responsibility** | 43 | 35 | 78 | 44 |
| **Site rapidly accessible** | 46 | 48 | 94 | 53 |
| **None of the above** | 4 | 3 | 7 | 4 |
| **Don't know** | 9 | 10 | 19 | 11 |

The rapidity in accessing an Internet site was cited by 53% responses as an indication that it was a good site while 52% ticked the date of publication as one of the characteristics. It was only 47% responses that considered the author of the site as a characteristic they used to identify a good site. Surprisingly, 11% of respondents were ignorant of what constituted a good or quality site on the Internet whereas 4% responses stated that none of the characteristics told anything about a good Internet site.

**Inhibitions to Using Information**

The fifth objective of the study was to identify problems students faced in their use of information and line with this aim; respondents were therefore asked to state their challenges in using information sources. Table 17 displays the responses.

**Table 17: Inhibitions to using information sources.**

| Problems | Institution | | Total | Per cent |
|---|---|---|---|---|
| | UGBS | GIMPABS | | |
| **Slow Internet** | 71 | 87 | 158 | 87 |
| **Don't know how to access information** | 7 | 7 | 14 | 8 |
| **Have been denied access** | 12 | 27 | 39 | 21 |
| **Don't have the password** | 14 | 19 | 33 | 18 |
| **The library does not have it** | 34 | 38 | 72 | 40 |
| **Owe library dues** | 4 | 4 | 8 | 4 |
| **Lost my library card** | 7 | 5 | 12 | 7 |
| **Material has been borrowed** | 34 | 26 | 60 | 33 |
| **Material is defaced/mutilated** | 11 | 11 | 22 | 12 |
| **Library staff are not helpful** | 7 | 16 | 23 | 13 |
| **Library space is too small** | 8 | 43 | 51 | 28 |
| **Material is not on the shelf** | 39 | 27 | 66 | 36 |
| **Page cannot be displayed** | 28 | 39 | 67 | 37 |
| **Have to pay a subscription fee** | 18 | 9 | 27 | 15 |
| **None of the above** | 4 | 3 | 7 | 4 |
| **Other** | 0 | 3 | 3 | 2 |
| **TOTAL** | 81 | 101 | 182 | |

In accessing information from the Internet, the results showed that 87% responses considered the slow link of the Internet as a major problem they faced in accessing information. This deficiency most of the times negatively affected them as the sites they wished to access information from did not display. Some also noted that they at times had been denied access to some sites (21%) and some sites were even password protected and 18% responses representing those who did not know this password indicated they were not able to access

information from the sites while 15% also noted that for some of the sites and online libraries, they required students to pay subscription fees before they could access materials.

In the libraries, the problems that were listed were that sometimes the materials they were looking for were not on the shelf (36%) or they might have been borrowed by someone (33%) while 28% responses also complained about the small library spaces taking into consideration a large number of students in the two institutions. Students acknowledged that sometimes it became barely impossible for them to locate the materials they needed and hence sought the assistance of the Library Assistants. But there were many instances where some of the library staff refused to offer them help but rather asked them to search for information themselves (13%) and where they even found the material, it might either be defaced or torn (12%). Seven per cent (7%) also noted that they had lost their library cards, and this affected their ability to borrow materials from the library and 4% owed library dues and until they paid, they could not assess library information.

Interestingly, 4% responses noted that they did not face any of the above-listed challenges and 14 students representing 8% of the respondents surprisingly noted that they did not know how to access information either from the Internet or from the library.

**Recommendation on access to information resources**

Respondents were asked to outline some possible solutions they consider can help remedy the problems they face in accessing information and their recommendations are shown in Table 18.

**Table 18: Suggestions on how to Access Information**

| Recommendation | Institution | | Total | Per cent |
|---|---|---|---|---|
| | UGBS | GIMPABS | | |
| **Available and easy access** | 11 | 7 | 18 | 17 |
| **Space should be enlarged** | 1 | 4 | 5 | 5 |
| **Internet link should be enlarged** | 3 | 7 | 10 | 9 |
| **Faster Internet access** | 16 | 20 | 36 | 33 |
| **More Internet facilities** | 3 | 3 | 6 | 5 |
| **Available relevant books** | 16 | 4 | 20 | 18 |
| **Provide people who can assist** | 2 | 4 | 6 | 5 |
| **No restriction from the staff at all time** | 3 | 2 | 5 | 5 |
| **Updated literature** | 3 | 0 | 3 | 3 |
| **TOTAL** | **58** | **51** | **109** | **100** |

Sixteen students from UGBS and twenty from GIMPABS representing 33% responses asked for a much faster Internet link to help them access information faster than what obtained as at now. On the issue of restricted Internet sites, students implored their universities to pay and gain access for the students to those online libraries. Looking at the increasing number of students' enrolment every year, they pleaded for the creation of more Internet facilities and Internet space for students.

To help solve the problems students face in the libraries, 18% suggested that the libraries should do away with the irrelevant archaic books and furnish the libraries with relevant materials that meet the needs of the students while 5% suggested that the universities should hire people who would dedicate themselves to assisting students at all times and in the same

way 5% also advised the staff not to restrict them in accessing information from their libraries at all times.

## DISCUSSIONS OF FINDINGS

Students access information from many sources. However, regarding accessing information from libraries, the findings of the study showed that less than half of the respondents got access even though sometimes some of the students seldom get the information they need from the library. Those who get access to the information they need normally get the information through library staff assistance or they usually find what they want but with frustration while some also get the information they need through friends. Those who do not get the information they need find it difficult to locate the information in the library and the reason for this state of affairs is either the library does not have the information or the students do not know how to search for the information from the library. Sometimes, it becomes difficult for students to get access to information they need from the library because the material may have been borrowed or the material is not on the shelf at all.

Indeed, access to information sources has been identified as a major problem facing scholars in academia. Seth and Parida (2006), and Ugwu (2008) have cautioned that the availability of information resources and services does not spontaneously translate to information accessibility and use. Many reasons have been identified in the literature to explain this and Ugah (2007) has noted that a library's success depends upon the availability of information resources. Thus, having information such as books, articles, journals, dictionaries, or even bibliographies etc. in a library is not enough but that such information sources must be physically accessible to those who need them. Ugah explained further that the inability/difficulty to locate information students need can be explained from two main angles namely, bibliographical and physical. The bibliographical aspect involves the reader's inability

to find the item sought in the library catalogue. The physical aspect is the failure to locate the materials housed in the library. However, four major reasons for inaccessibility have been identified by Aguolu and Aguolu (2002) as listed below:

- Users do not know precisely what they want; if they do, they cannot articulate their needs accurately to the library staff.
- The bibliographic or intellectual access to the content of the library is inadequate owing to poor indexing system in the library catalogue or of the library collection itself.
- The circulation policy of the library is inefficient, shelving methods are inadvertent, and guides to the library arrangement are lacking.
- Unnecessary physical and administrative barriers are imposed upon the use of the library material by the library management.

Failure to locate on the shelves what has been bibliographically identified in the library catalogue is a common frustration and a challenge to library management. This can be because there is usually no indication on the library catalogue that an item is lost, sent to the bindery for repairs, weeded, or stolen. Items may be misshelved. Library staff may have removed materials for their private use or that of their relatives, friends, and associates (Ugah, 2008). All these factors explain the inability of students to locate materials they need in the library. It is the recognition of these challenges in accessing information that Fidzani (2000) recommended an effective training session to be organized for information users in their expressed areas of difficulty in accessing information.

On the issue of regularity of the use of libraries, the results show that the majority of the students use the library daily or once a week. This is encouraging and shows that students make use of the information from the library which is very necessary to their needs. Only a few of them use the library twice a month or once per semester. It was however surprising to note that

some people do not use the library at all. Students use the library for personal reading, assignment and to refer for journals or books which are cardinal to their research works. Quite a few also use the library as a meeting place for study groups or they go to the library to read newspapers

Regarding the use of electronic information, it was found from the study that students from both institutions use information from online databases such as Emerald, Ebscohost, JSTOR and Science Direct. However, whiles students of UGBS were more likely to use to the first three online databases, GIMPABS students were more comfortable using the latter.

The dominant use of electronic and Internet-based information by students is not surprising at all because of the ever-increasing demand for information in the 21st century. There has been a strong call from people to access information even from remote areas without necessarily coming to the origin of the information. It is an undeniable fact that the Internet provides the largest reservoir of vital information in all kinds of disciplines all over the world. Hence, its universal acceptability in the world of research is synonymous with university education. It is now a feasible option to embark on even postgraduate studies even online. Therefore, students offering online correspondence courses all over Africa have the benefit of the use of email and the World Wide Web (www) to obtain advice and reading material from their tutors. Studies conducted in Nigeria have shown that university students depend much on electronic and the Internet for their Information (Oduwole et al., 2003). However, the challenges they found in using Internet-based information are not different from those found in this work. Okiki (2011) noted that despite the availability of Internet resources and their benefits to university education, their effective uses in Africa are being hampered by varying factors such as high cost of IT equipment, which prevents universities from purchasing logistics that can speed up students' access on the Internet.

**Ethical and legal use of information**

Just like any item that is right protected, information also has the right protection which demands authorization before usage. In our part of the world where the level of enforcement of laws is quite low as compared to many advanced nations, people often use the information without giving any due cognizance to the legalities involved. The study revealed that majority of the students either know or have heard about plagiarism and they are also aware that it is easily detectable. It was also revealed that the students were aware it is a crime to plagiarize.

On the other hand, even though a majority of the students are aware it is a crime to photocopy someone's entire book or section(s) of the book without the author's permission, majority of them have done that because they feel it is a normal practice for students in our part of the world. Other reasons too were that there is no copy available for sale at the bookshop and even where there were copies, the price is sometimes too high that students cannot afford. Others also stated that they do not have the time to go around searching other bookshops in time in search of a copy when they can save time by photocopying the book.

Often, students use the information without taking cognizance of the legal consequences of abuse of information. Agbenyo (2011) advised that after recognizing useful information, the user should evaluate it critically before using it. Webber & Johnston (2002) suggested that users of information in their quest to use information, they should never undermine information ethics. To them, these ethics are critical and cardinal to people who are authorities in the areas of jurisdiction.

However, in our part of the world, these ethical and legal considerations in the use of information are mostly not given much priority and are therefore not adhered to. Students copy and paste materials and even use other people's work without due recognition of the authority.

Brody (2008) noted that these actions have trivial consequences; in some contexts, it can be fatal.

**The extent to which students evaluate information**

Much information is available for students to use. While some of this information is accurate for their use, others are not and in the same way, whilst some are scholarly information, others are not. Similarly, some of the information is up to date while others are outdated. It is, therefore, the responsibility of the student to be able to determine which information is accurate or scholar or even up to date. There are many characteristics of what constitute accurate data.

Two main characteristics were cited by students as the indications they use to differentiate outdated information from current or up to date information. These were the date when the document was created and when the source was last updated. Regarding the accuracy of the information, characteristics such as factuality of the information, pre-knowledge about the information, responsibility for the accuracy and the source of data, were cited as some of the characteristics. Students also considered lecture notes as accurate information. On the issue of how to identify a scholarly article, the students noted that if the work is written by an expert, or if it was written for a scholarly/academic purpose or by a lecturer, then it can be considered scholarly.

An Internet material can contain a whole body of junk data and as such students are always careful in the use of information from any site they might find. The factors that were enumerated as indicators for a good Internet resource were how rapidly the site is accessible, the date of publication, the author and the responsibility of the publishers.

Various scholars have highlighted the importance of evaluating information before use (Spitzer et al., 1998; Riley et al., 2000; Koch, 2001; Muir & Oppenheim, 2001). The common premises of all these writers is that information can be manipulated and contextualized for one's use and due to the large volume of this information, the basic skills users need to the ability to do critically assessment and evaluation of the necessary needed information. Hawes (1994) for instance has noted that the foundation to effective problem solving and decision-making lies in our ability to effectively and efficiently access and evaluate information.

However, many students lack the skills to critically evaluate information before use. Due to the nature of all sort of information available to users, Secker and Macrae-Gibson (2011) have advocated for students to take much interest in information literacy programmes which can equip them with the skills they need to find, evaluate and manage the information for their academic work.

**Problems encountered by students in using information resources**

Students encounter diverse problems in their use of information. So far, the analysis of the data shows that student assesses information from two major sources namely the library and internet. Therefore, problems that students encounter are more likely to centre on these main sources.

At the library, many are the challenges that students face which impact negatively on their information needs. They identified that there are many materials they need which the library in question do not have especially the departmental libraries. In most cases, where the database of the library shows the class or call number of the book, it is normally not at its location and where it is there, it is either torn or defaced. There are also times when many books have been borrowed for a long time and due to loss of library cards or overdue fines, it becomes difficult

to borrow from the library. Above all, students complained that looking at the increasing population of the universities and the capacities of the libraries, the spaces are far below the enrolment of students in the universities. And in most cases, library staffs refuse to offer help to students in times of need or are reluctant to help.

On the Internet, the major problems student face is slow Internet, denial of access to information and password protection. Due to the slow nature of the Internet, it makes it difficult for some of the pages to be displayed and even when it eventually loads, it takes so long time that students are normally frustrated. Also due to the password protection of certain pages, one needs to pay a subscription fee before he/she can access any information from such sites.

The findings in this study are contrary to the challenges outlined by The World Bank Group (2003). They outlined three main challenges facing developing countries like Ghana namely low literacy rate, low level of publishing and the traditional nature of our educational system. The small space in the libraries and the computer laboratories, however, support Dadzie's work (Dadzie, 2007). He found two major problems in his study which were the fast ageing of library staff and deteriorating nature of the physical facilities used in accessing information such as materials, computers etc.

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