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# A Comparative Study of use of the Library and the Internet as Sources of Information by Graduate Students in the University Of Ghana

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## **Abstract**

This study was conducted to compare Internet use and library use among graduate students. It was based on the assumption that graduate students use the Internet more than the library. Literature on library and the Internet were reviewed. The researcher adopted convenient sampling technique to select the sample for the study. Data was collected using questionnaires. Collected data was statistically analyzed and interpreted using the Statistical Package for the Social Sciences. Findings of the study indicated students do not bypass the library in satisfying their information need. They use both the library and the Internet, although Internet usage was more than the library, hence the Internet was the most preferred source of information. It was recommended that the library should be upgraded to meet recent advancement in research.

## **1.0 INTRODUCTION**

Information is a vital and an indispensable component of any academic environment. It makes for effectiveness in any academic system. Both faculty and students need to use information daily in their various academic endeavors. For decades, faculty and students have actively used the library and its resources as their main information source. Alemna, (2000) states that for centuries libraries have served as repositories of information and knowledge that have provided the vital underpinnings for socio- economic, political and cultural development in any civilization. Their relationship with cultural progress has been so interdependent that it is needless to argue whether man's cultural advancement merely produces libraries as by product.

According to Robinson (2006) simplistically, libraries and archives came into being to provide a central location for hard-to-find, scarce, expensive or unique material. Scarcity of information is the basis for the modern library. In countries where information continues to be scarce, a library's role is still unambiguous. In some countries where access to information is now akin to access to electricity or water, the reason to have freestanding storehouses of a subset of all information is harder to articulate. Libraries in such countries can provide access to more information than any user could want or need. Rangathan's rule "for every reader, his or her book," might be now redefined as "for every reader, huge amounts of free-floating content, anywhere, anytime.

We now live in the information age where access to many Internet resources is just a few clicks away. The Internet is a technology, which has gained more popularity in many countries across the world and Ghana, is no exception. The Internet as a medium of communication and source of information has enabled students, researchers, business information seekers and information professionals to access information to enhance their work and communicate effectively.

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Robinson (2006) states that in 2004, seventy million American adults logged onto the Internet in a typical day. Over 95 percent of U.S. public libraries provided Internet access. Students, many faculty, and laypeople turn to online information sources before print or the library. As a result, library use, especially for walk-in reference questions and preparation for school and college reports has declined.

## **1.1 Statement of the Problem**

The University of Ghana has a number of libraries on its campus. The Balme library is the biggest and the central library of the University. In addition to the Balme library there are various departmental, school, institution and hall libraries on campus. The collections of these libraries are subject specific. Almost all the departments under the faculties and schools of the university have their own libraries.

The University gained full Internet connectivity in the early part of 1998 to enhance the opportunities available to the academic community Alemna and Adanu, (2005). The Internet was not meant to do away with research in the library. Although the Internet has a lot of advantages, it cannot be compared with that of the traditional sources.

Graduate students have adopted and continue to use the online information retrieval for their academic and research work at the expense of or without considering the importance and the quality of the traditional information centers as observed by the researcher. However, merely using the Internet was not guarantee quality and good information. Even though the Internet has large amount of information, the relevance, quality, and authenticity should not be neglected. The question to ask then is why do the graduate students continue or preferred using the Internet to the library as sources of information? Should the importance, quality, and authentic information derived from the library be relegated in place of the Internet?

The researcher had observed that graduate students spent a lot of time at the Graduate Center searching the Internet than in libraries. The Graduate School computer laboratory looked like it was taking over from the libraries on campus. It was observed that graduate students attributed research for a paper to searching for information online. The main purpose of the study was to compare graduate students use of the library and the Internet as sources of information. This paper is an extraction from Kumah (2007).

## **1.3 Objectives**

The study seeks to accomplish the following objectives:

1. To determine the factors that encourage or discourage the students from using libraries.
2. To investigate the frequency and purpose of Internet use.
3. To find out the extent to which the Internet helps graduate students in their academic work.
4. To determine the extent to which graduate student use the Internet more than the library.

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5. To find out what type of need influence the selection of one information source over the other.
6. To determine problems students face when using the Internet and the library.
7. To make recommendations for effective use of these sources.

#### **1.4 Significance of the Study**

This study brought to bear the services found in the library and the services available on the Internet. It is hoped that results of the study will help to improve service delivery to graduate students in the University of Ghana. In addition, the study adds to existing literature on students' information behavior patterns and information needs.

The rest of the paper is organized as follows; related literature, methodology, results, discussions and conclusions.

### **2.0 Related literature**

#### **2.1 Framework**

This study is based in the broader field of information behavior. More specifically in the context of information seeking behavior as defined by Willson (2000) as “ the purposive seeking for information as a consequence of a need to satisfy some goal. In the course of seeking, the individual may interact with manual information systems (such as a newspaper or a library), or with computer-based systems (such as the World Wide Web)”. The study therefore focuses on how students interact with both manual and computer based systems. It also investigated which system they prefer using and the motivation to select one system to the other.

#### **2.2 The library and library use**

Reding (2005) indicates that from a social, cultural and economic point of view libraries play a fundamental role in our society. They are the collectors and stewards of our heritage; they are organizers of the knowledge in the books they collect – adding value by cataloguing, classifying and describing them; and, as public institutions, they assure equality of access for all citizens. They take the knowledge of the past and present, and lay it down for the future.

Adele and Milheim (1995), argue that “Libraries are not simply storehouses of books but provide proactive services to their users both from within the library's stock and from a wide range of external sources.” Some of the services according to them are enquiry services, bibliographic assistance, library instruction, interlibrary loans, photocopying, and computer facilities.

According to Boakye (1998), university libraries like those of the University of Ghana library system, play very important roles in supporting the university's academic work. Without a library the university's academic work will not be successful, because the libraries provide services that help in teaching, research and learning.

### **2.3 Use of libraries and Internet among students**

A research conducted by Niels (2006) found that students do not bypass the physical libraries and it is also evident that the use of physical libraries and digital resources complement each other. The place of google in the students' information is prominent and positively correlated to use of traditional library resources.

In a multi-disciplinary study conducted by (George et al, 2006) which explored the information seeking behavior of graduate students found that students rely heavily on the Internet as well as the university libraries' online resources for information, though still using the physical library for hard copy materials such as books, journals and papers. Few graduate students in the study mentioned influences such as difficulty in locating information or the need for convenience and speed when using the Internet.

Friedlander (2002) indicated that library directors, college and university administrators face an increasingly complex institutional and informational environment. Faculty and graduate students, in particular, seem to be omnivorous in their appetite for information, creative in their strategies for seeking and acquiring information in all forms, and very independent. Most faculty, graduate and undergraduate students seem to prefer a hybrid information environment in which information in electronic form does not supplant information in print but adds to the range of equipment, resources, and services available to teachers and students.

Liew et al. (2000) study of graduate student end-users' current use and perception of e-journals compared with their print counterparts indicated a growing interest in e-journals. There was a strong acceptance of and high expectation and enthusiasm for future e-journals, although with some reservations

Bao (2002) surveyed 1998 and 2001 findings showing that the Internet continues to be an important component of library services in today and tomorrow's library. The majority of the respondents used the Internet on a daily basis in 2001 as opposed to less than half the respondents in 1998. The data showed the librarian's major challenge in the new century remains that of how to help library users find what they are looking for through the Internet.

In another study Baruchson- Arbib and Schor, (2002) found that students prefer general search engines and it seems that they have difficulties distinguishing between internet resources and library resources. Teachers' recommendations and how they put forward requirements and demands are very important for the students use of information.

When high-quality electronic collections are made available, people use them. Use of electronic journals increases every year. Among faculty members, graduate students, and other professionals, higher use of electronic journals is accompanied by a decrease in visits to the physical library Tenopir (2003).

Research has confirmed that in terms of information seeking, today's researcher seems to be comfortable with using a wide variety of sources for information. Internet search engines, e-print servers, author websites, full-text databases, electronic journals, and print resources are all used to some degree by most users. The relative amounts of use and enthusiasm for use vary as described above, but today's users are mostly flexible and adaptable.

#### **2.4 Internet use by Students in the University of Ghana**

In a study conducted by Markwei (2001) with the aim of finding out the extent of awareness and use of the Internet and its services by academics staff and postgraduate students of the University of Ghana, it was found that both staff and students are fully aware of the Internet and most of its services. Academic staffs in general use the Internet and its services more than students. However, both staff and students from the Science faculties use the Internet and its services more than those from the Arts and Social Science faculties.

A similar study conducted by Atiso (2002) revealed the level of Internet awareness was quite high with respondents. This, he said, was obvious because the Internet being a new technology must be popular especially with people in the academic world. Also, respondents used the Internet quite often, especially final year students who use them mostly for academic searches.

#### **2.5 Library use by students in Ghana**

Boakye (1998), writing on the awareness and use of library collections in Ghana's universities, found out that 24.9% of the student respondents were not aware of the collections at the libraries relevant to their studies. The results of the study confirmed the study hypothesis that maximum use is not made of the science and technology collections at the Kwame Nkrumah University of Science and Technology Libraries by students, lecturers and research fellows due to lack of awareness of some of the available collection.

Hardi (2004) found that students were aware of libraries and recognize the important roles they play in the education process. The students were motivated largely to use the libraries to catch up with their studies, to do their assignments and to read newspapers. He said the factors that hampered the effective use of the libraries by students were inadequate books in the library.

#### **2.6 Use of libraries and Internet among Ghanaian students**

The widespread use of the Internet on college and university campuses worldwide has contributed to an increased curiosity about what types of online activities the users engage in. It can be seen from the findings of a study conducted on users of the Internet at the University of Ghana library that they concentrated mainly on e-mail, research and browsing Alemna and Adanu (2005).

Other, Sulemani and Katsekor (2007) concluded that the access to the Internet by faculty has had an impact on their information seeking behavior. They prefer the use of electronic databases and full text journals to the traditional print indexes and abstracts and hardcopy publications.

#### **2.7 Trends in Libraries and the Internet**

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According to Rodkewich and DeVries (2001) the library world was stable for hundreds of years and librarians were content doing their job building collections and assisting people in using them. Along came the 1960s and things began to change in our society and the library world as well. By the early 1970s the computer had become the main tool used to organize collections in many libraries in the United States and elsewhere.

## **3.0 Methodology**

This study adopted the comparative research method to compare library and Internet use. Spata (2003), states that comparative research may examine differences and similarities between the variables of the study. It examines differences between people who may belong to the same dominant culture. The researcher collected data on graduate students. The data measured their Internet use and library use.

### **3.1 Population**

The target population of this study was graduate students of the University of Ghana whose total was 1,686 at the time of the study. According to Peil (1995) the elements that make up the population should be identical, either by living together in a defined territory or having a common nationality. Graduate Students of the University belong to a common group of students pursuing postgraduate studies.

### **3.2 Sampling Technique**

Using convenience sampling, the researcher adhering to the objectives of the study, selected respondents who were conveniently available. Alreck and Settle (1985) state that it is seldom necessary to sample more than 10% of the population to obtain adequate confidence in your generalization. In line with this, the researcher considered the entire graduate student population at the time of the study and took a sample of 10% of the 1,686 population. This derived 168 students from different disciplines. Participants were therefore sampled based on their availability and willingness to complete the questionnaire.

### **3.3 Data Collection Instrument and Procedure**

The study involved a questionnaire. Data was collected from both primary and secondary sources. The secondary sources include textbooks, journals, magazines and the Internet. The primary source was the questionnaire. The researcher distributed questionnaires to respondents personally. The questionnaire had a cover letter stating the researcher's affiliation with the Department of Information Studies with a brief description of the project, a statement of the voluntary nature of the project, and a statement of anonymity of the subject's data.

The questionnaire consisted of both closed ended and open-ended questions. The questionnaire was divided into four sections. Section A was on social background; Section B library patronage; Section C focused on Internet use; Section D which source is most preferred and why it is so. Finally Section E what other sources are consulted for information. The open-ended questions allowed the respondents to express themselves freely by providing their own answers. The closed ended questions on the other hand,

required specific answers from respondents. Some of the questions were ranked, while in others options were made available to respondents.

### **3.4 Administration of Questionnaires**

A total of 180 printed-paper questionnaires were distributed to graduate students. Questionnaires were directly given to respondents by the researcher. This allowed the researcher to clarify issues where necessary. Another reason was that, students were reluctant to fill the questionnaire if another person other than the researcher gave it to them during the pilot study, as most of them were at various stages of their own research work. In all 165 valid questionnaires were received for analysis.

### **3.7 Data Analysis and Presentation**

Responses from the collected data were statistically analyzed and interpreted using the Statistical Package for the Social Sciences (SPSS) into frequencies with the corresponding percentages and tables to illustrate the results of the study. Quantitative programs like the SPSS enable the data entry of mainly quantitative data. The researcher adopted direct entry of data into the system and not by using software such as a database management software or spreadsheet package, where the resultant files could have been imported into SPSS. The researcher also defined the data types, the variable labels, and the values etc, using SPSS interface. SPSS offered an easy graphic user interface that made coding data very simple.

## **4.0 Results**

This section describes the results. The results are presented in tables and charts according to the various following sections.

- Background of the Graduate Students
- Library Use by Graduate Students
- Internet Use by Graduate Students
- Other Sources of Information Used by Graduate Students

### **4.1 Background of the Graduate Students**

In order to ascertain the background information of the graduates, the respondents were required to state their gender, age, year of study, as well as their course of study.

#### **4.1.1 Gender of Respondents**

The results show that most (122) of the respondents representing 73.9% were males. The females were only 26.1% (43). This means that the majority of the graduate

students sampled were males. This is a true reflection of the situation on University of Ghana campus as the male graduate students outnumber the female students.

#### **4.1.2 Age of Respondents**

The raw data for the study revealed that the age of the respondents ranged between 18 and 59 years. It was observed that 57.0% (94) were between the age brackets of 26-33 years. About 24.8% (41) were between the ages 34-41 years. Those within the age group of 18-25, were (16) representing 9.7% of the respondents. The older adults, thus, those between 51 and 59 were very few, (4) representing 2.4% of the 165 respondents. Generally, the majority of the respondents were between 26-33 years.

#### **4.1.3 Course Year of Study**

When the respondents were asked to indicate their course year, the results show that 50.3% (83) of the respondents who were in the first year. Those in the second year accounted for 49.7% (82) of the total respondents. This shows almost equal proportions of first year and second year graduate students.

#### **4.1.4 Course of Study of Respondents**

For their courses of study, 39.9% (55) of the respondents indicated that they were pursuing graduate degree in social science and humanities whilst 31.5% representing (52) of the respondents indicated they were pursuing graduate studies in the faculty of science. Few were from the business school. Others did not indicate their course of study

**Table 4.1: Degree type**

Degree type	Frequency	Percent
MA	55	39.9
MSC	49	29.7
MBA	10	6.1
MPA	10	6.1
MPhil	41	18.8
<b>Total</b>	<b>165</b>	<b>100.6</b>

From Table 4.1, it can be observed that the majority 39.9 (55) of the respondents were pursuing courses for Master of Arts degrees. Some 29.7% (49) were pursuing courses for Master of Science degrees. Whiles a number 18.8% (41) of them were pursuing courses leading the award of Master of Philosophy. A few 6.1% (10) were pursuing courses for

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Master of Business Administration and Master of Public Administration.

## 4.2

### Sources of Information

The results in Table 4.2 show the sources from which respondents obtained their information for academic work.

**Table 4.2: Sources of Information**

Sources of Information	Frequency	Percent
Library and Internet	119	72.1
Internet only	18	10.9
Library, Internet, others	13	7.9
Library only	11	6.7
Library, books	2	1.2
Total	163	100.0

The results in Table 4.2 show that 10.9% (18) of the respondents' used the Internet only while 6.7% (11) used libraries only. 119 (72.1%) of the respondents indicated that they used both libraries and the Internet. The most effective means of obtaining useful information was by using the Internet. However 7.9% (13) and 1.2% (2) of the respondents respectively, indicated that they use libraries, and or Internet and other available sources of information. Generally, libraries and the Internet were the two main sources by which graduate students obtained information.

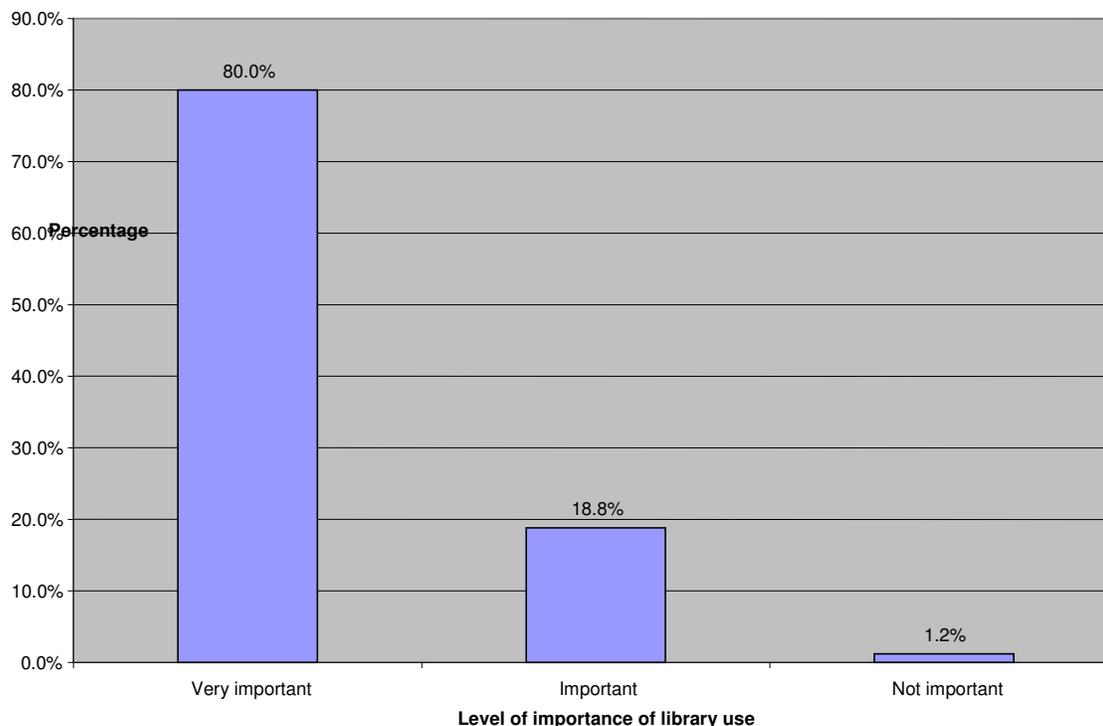
#### 4.2.1 Library use by Students

In response to whether the respondents used libraries, about 93.9% (155) of the respondents answered in the affirmative. Thus, only 2.4% (4) of the respondents indicated that they do not use the library. This is an indication that majority of the graduate students used the library for academic work.

The researcher also sought the opinion of the respondents on the importance of library use. (Fig 4.1)

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Fig 4.1: Level of Importance of library use



The results in Fig. 4.1 show that 18.8% (31) of the respondents indicated that the use of the library is important. And a few of them stated that it is not important. Also, about 80.0% (132) rated the use of the library as very important. This means that the majority acknowledged the importance of libraries.

When the respondents were asked to indicate the purpose of library use, some 17.0% (28) mentioned among other things, the provision of literature to supplement lecture notes, others 6.7% (6) stated that they wanted to keep abreast with studies, to read notes 7.3% (7) and to borrow books 0.6% (1). Also, others 33.9% (56) used the library for two, 29.7% (49) for three or 18 (10.9%) for all four purposes mentioned earlier. This indicates graduate students use the library for various academic activities.

In response to whether libraries play any role in their education, majority 97.0% (160) of the respondents answered in the affirmative. Thus, only 3.0% (5) disagreed. This means that majority of the respondents had a positive regard for the role libraries play in their academic life.

The respondents who could not rule out the fact that libraries play a role in their education gave various reasons as shown in Table 4.3.

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**Table 4.3: Role of libraries in education**

Role of libraries in education	Frequency	Percent
Provides authentic reference materials	13	8.4
Provides materials that students cannot afford to buy	9	5.8
Provides relevant and realistic information for research	44	28.6
Provides a conducive environment for studies	15	9.7
It is a repository of centuries of knowledge	17	11.0
Provides supplementary material	31	20.
Serves as a major source of information	25	16.2
Total	154	100.0

The results in Table 4.3 show that quite a number 28.6% (44) of the respondents indicated that libraries provide relevant and realistic information for research while a few 5.8% (9) stated that the library provides materials that students cannot afford to buy. This shows that most of the graduate students sampled had high regard for the role of libraries in education.

On the other hand, the few who did not agree that library plays a role in education indicated that they obtain all the information they need from the Internet 0.6% (1), rarely visit the library 1.2% (2) and that most of the reference books were outmoded 0.6% (1).

The results in Table 4.4 show the frequency of use of the library by graduate students.

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**Table 4.4: Frequency of library use**

Frequency of library use	Frequency	Percent
Often	69	41.8
Occasionally	53	32.1
Very often	41	24.8
Never	2	1.2
Total	165	100.0

It can be observed from Table 4.4 that 32.1% (53) of the respondents use the library occasionally, 41.8% (69) use the library often and only 1.2% (2) had never used the library. This is quite encouraging to note that graduate students patronize the libraries for the purposes of studies or sourcing for information to supplement lecture notes. The library services patronized by others include database search, reserve collection and photocopy services.

In patronizing the library, students encounter some difficulties. The major problems encountered by graduate students in accessing information in the library included the working hours. The opening and closing hours for the libraries was inconvenient. Some of the graduate students indicated that the library staffs were either not friendly or/and helpful, not familiar with search processes at the library and inability to borrow books from the library.

#### **4.2 .2 Internet use**

It was quite evident that the use of Internet was popular among graduate students. As much as 98.8% (163) of the respondents use the Internet, whilst only 1.2 % (2) indicated they do not use the Internet. This means that majority of the respondents use the Internet.

Asked how they were introduced to the use of the Internet, most of the respondents indicated that they were introduced to the Internet by friends 50 (30.3%) or learnt it themselves 43.0% (71). But a few 12.1% (20) indicated it was by formal training (Table 4.5)

**Table 4.5: Introduction to Internet use**

<b>Introduction to Internet use</b>	<b>Frequency</b>	<b>Percent (%)</b>
Learned by themselves	71	50.4
Introduced to Internet by friends	50	35.5
Formal training	20	14.2
Total	141	100.0

The results in Table 4.5 show that quite a number learned the use of the Internet by themselves and only few had formal training.

Regarding the purpose for using the Internet. In response, they indicated that they use the Internet to either conduct research or search for information. Others however use it to communicate with colleagues and friends via email.

It was interesting to note that although most of the respondents use the Internet, the majority 60% (99) confirmed they do not always get the information they need. Only 40% (66) confirm they always get the information they search for on the Internet.

The respondents however agree that the Internet provides them with information to supplement lecture notes and obtain up to date information relating to their field of study.

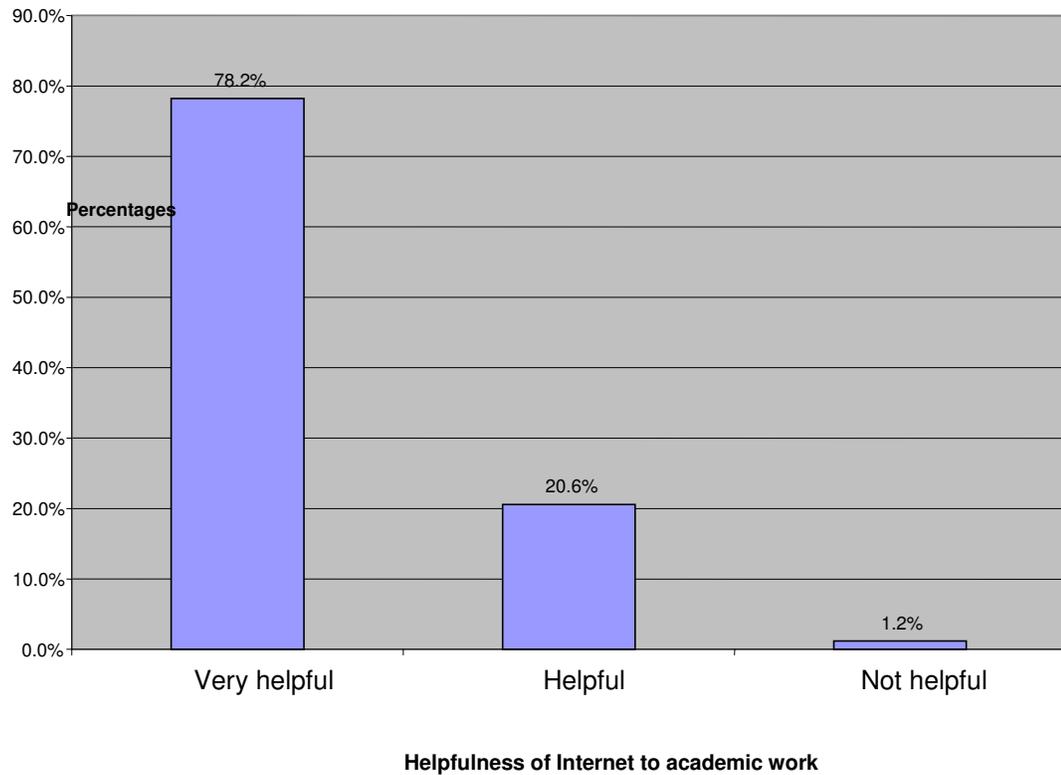
From the results most 53.9% (89) of the respondents use the Internet often whilst the remaining 46.1% (76) use the Internet most often. This confirms the popularity and use of Internet by graduate students.

It was observed that the majority 87.3% (144) were of the view that the Internet was very useful and the remaining 12.7% (21) accounted for those who indicated that the Internet was useful. This means that the Internet was an important tool for studies among graduate students.

The top rated Internet services patronized by most respondents were electronic mail (e-mail), chatting and the World Wide Web. Most use the email and the World Wide Web daily. However, the use of net newsgroup multimedia streaming, video conferencing and rich site summary was not popular among respondents. They hardly patronize these services. Occasionally some use the File Transfer Protocol (FTP).

The results in Fig. 4.2 below show the usefulness of Internet to academic work.

Fig. 4.2: Helpfulness of Internet to academic work



From the results in Fig. 4.2, it can be observed that most 78.2% (129) of the respondents were of the view that the Internet was very helpful to their academic work. About 20.6% (34) however said it was helpful. Only 1.2% (2) said it had not been helpful to their academic work. On the whole, the majority of the respondents had a positive regard for the usefulness of the Internet to academic work.

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Majority (113) of the respondents 68.5% affirmed that they use the Internet more than the library. Thus, only a few 31.5% (52) indicated that they used the library than the Internet.

The results in Table 4.6 below show the extent of use of the Internet in comparison to the library.

**Table 4.6: Extent of Internet use**

<b>Extent of Internet use</b>	<b>Frequency</b>	<b>Percent (%)</b>
To a large extent	90	61.6
To a medium extent	36	24.7
To a less extent	20	13.7
Total	146	100.0

A further response to the extent to which they use the Internet more than the library, indicated that majority 61.6% (90) of the respondents used the Internet to a large extent (Table 4.6).

Although most of the respondents use the Internet to a large extent, some said they encountered problems. Some of the difficulties are the use of the Internet include information overload, difficulty in locating relevant information, slow data transmission rate.

The major reasons for the preference included readily availability of information, accurate relevant information and variety of views on the same subject, faster access to information. They also indicated that they are able to work in a more conducive environment and easy to coop with flash drives. Some also considered the large amount of information they get at a time. For these reasons, majority indicated that the Internet was the most preferred source of information for them.

The following were suggestions given by respondents on how to improve on the library as a source of information. They were updated information, current, and relevant

information should be made available. Others were the organization of information for easy search; working hours should be made convenient to serve needs to students.

### **4.3 Other Sources of Information Used by Graduate Students**

The researcher further gathered that the media, interaction with experts and colleagues and research paper were other means by which they obtain information. The type of information they seek were current and relevant information for academic work, news and current affairs, research work, technical/statistical information and diversified views on economic, social and political issues.

## **5.0 Discussions**

The findings of the study indicate that the major source of information for graduate students is both the Internet and the library, which consist of 72.1% (119) of the total respondents. This is consistent with Friedlander's results (2002). The majority of the respondents indicated using both sources. However some respondents 10.9% (18) use only the Internet while a few 6.7% (11) indicated using only the library. Still some indicated using both sources in addition to other sources of information.

The data for the study revealed that almost all the respondents 93.9% (155) out of 165 admitted using the library as a source of information. This is inconsistent with Badu (1991) in reviewing information seeking habits of graduate students in the University of Ghana observed that there is a low level of understanding of the library and little use is made of bibliographic tools. Only a few indicated that they do not use it at all. This might be so because now student seem to understand bibliographic tools more than before. This has influenced their library use.

The majority of the respondents had a positive view on the use of the library. They indicated using the library for various purposes. Most used it very often, often and occasionally, only a few never use it at all. Respondents affirmed that libraries play very important role in their academic endeavors. This is consistent with Hardi's findings (2004). It is however inconsistent with Wilson (1997), who in reviewing students information behavior stated that university student's attitude towards libraries and their staff is very unfavorable.

The findings of the study also show that there is a high Internet usage among graduate students. The majority of respondents had positive regard for the usefulness of the Internet in academic work. This is consistent with Markwei (2001) and Bao (2002) whose study stated that the Internet continues to be an important source of information for academic studies.

The study indicated the top rated Internet services patronized by most respondents were electronic mail (e-mail) and World Wide Web. This affirms previous studies on Internet use, such as Lazinger et al (1997), Liebscher et al (1996), Adele et al (1995), Markwei (2001), Atiso (2002), all of whom reported of the high usage of these services.

The findings affirmed that the Internet is used more than the library. The findings of the data indicate high Internet use among graduate students. 98.8% of respondent answered affirmative in the use of the Internet. While 93.9% also answered affirmative to library use. The difference is not quite significant. The result is inconsistent with

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Markwei (2001), whose findings indicated rather high usage of the library for information more than the Internet.

Although the Internet is highly patronized by students, some problems are encountered while using it as identified by this study. Some of these problems are information overload, difficulty in locating relevant information and slow data transmission. This is supported by Markwei (2002) who identified similar problems as some of the difficulties encountered while using the Internet.

The study also identified the media, interaction with experts and colleagues; and research papers as the other means by which graduate students obtained information.

**5.1 Summary of findings**

- The analysis of the data revealed that student do recognize the important role of libraries in education.
- Student see the library as a conducive environment for studies, provides relevant and realistic information for research, provides supplementary material for their education and many more; as the factors that encourage them to use the library.
- The study confirmed the popularity and use of Internet among graduate students.
- The main motivation for using the Internet was to conduct research or search for information as well as to communicate.
- Students see the Internet as very helpful in academic work.
- Majority of students indicated that they use the Internet more than the library
- The main reasons for the preference include readily availability of information, faster access to information and the large amount of information available on the Internet.
- The organization of information for easy search, updated, current and relevant information were factors that will make them prefer the library to the Internet.
- The main difficulties to effective use of the Internet by student include information overload, difficulty in locating relevant information and slow data transmission rate.
- The major problems encountered in accessing information in the library include, inadequate opening and closing hours, not familiar with search processes at the library, unfriendly or not helpful staffs and inability to borrow books.

**5.2 Limitations of the Study**

The study was limited to the use of libraries and Internet facilities located on the University of Ghana campus. The study covered graduate students in the sciences and humanities. Since data was collected on a particular campus and facilities available on that campus it will be unfair to generalize the findings to other campuses with different facilities. Also data presented in this paper was collected in summer 2007. Therefore the findings might be outdated since facilities on the Internet have changed enormously since then.

### **5.3 Conclusions**

This study was conducted to compare graduate students Internet use and library use. It was based on the assumption that graduate students used the Internet more than the library. The findings of the study indicate that students do not bypass the library in satisfying their information needs. They use both the library and the Internet, although the Internet is used more than the library and it is also the most preferred source of information. Students also make use of sources such as the media, lecture notes and interaction with their lecturers and experts in their research areas. Most library services are well patronized, while most Internet services are much underutilized.

It is difficult to generalize the results of this study since it was the first of its kind in a Ghanaian university. Furthermore, no study was found that examined all of the parameters addressed in this study. There has been enormous advancement in technology since this study was conducted, especially in the area of access to the Internet. Several current studies including Niu, Hemminger, and Lown (2010) and Niu and Hemminger (2012) have found high dependency of faculty and graduate students on electronic resources online. With Internet access currently available on mobile devices owned by almost every student in Ghana, it is recommended that a similar study is conducted focusing on how students use current advancement in technology available to them to satisfy their information needs.

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