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UNIVERSITY OF GHANA, LEGON

DEPARTMENT OF INFORMATION STUDIES

THE IMPACT OF LIBRARY USAGE ON THE PRODUCTIVITY OF THE FACULTY OF THE UNIVERSITY OF GHANA

BY

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THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF M.PHIL INFORMATION STUDIES DEGREE.

JUNE, 2013

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DECLARATION

I, hereby declare that except for references to other people's work, which I have duly acknowledged, this thesis is the result of my own research work, and that it has neither in part nor wholly been presented elsewhere for another degree.

Sign. …...…….....

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(Co-Supervisor)

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DEDICATION

This thesis is dedicated to my parents, my siblings, my wife and children, and also to all my friends, for their love, support, and sacrifices that has enabled me to complete this work.

MAY GOD BLESS YOU ALL …

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I thank the Lord my God, for the opportunity to pursue this course, and also for bringing me this far.

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MAY GOD BLESS YOU ALL

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LIST OF ABBREVIATIONS

AFUF	-	Academic Facility User fees
ALIS	-	Academic libraries Impact Study
CBUC	-	Consortium of Academic Libraries of Catalonia
CD-ROM	-	Compact Disc Read Only Memory
DANIDA	-	Danish Agency for Development Assistance
DATAD	-	Database of African Theses and Dissertations
EMX	-	Emerald Management Xtra
ETD	-	Electronic Theses and Dissertations
GETFUND	-	Ghana Educational Trust Fund
ICT	-	Information Communication Technology
IFLA	-	International Federation of Library Associations
ILL/DD	-	Interlibrary Lending and Document Delivery
IT	-	Information Technology
KC	-	Knowledge Commons
KNUST	-	Kwame Nkrumah University of Science and Technology
OPAC	-	Online Public Access Catalogue
RC	-	Research Commons
TEEAL	-	The Essential Electronic Agricultural Database
UGCat	-	University of Ghana Catalogue
UGLS	-	University of Ghana Library System

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ABSTRACT

The University of Ghana, like any other public university in Ghana, is prone to financial challenges. These have therefore affected the provision of infrastructure, resources and services to its libraries. The financial constraints of the university have influenced a shift in library service activities, making it difficult for some of the libraries in the University of Ghana Library system (UGLS), to provide some of the services that faculty members need for their teaching, research and publishing activities. This situation has however created a negative perception of the libraries for some faculty members. There are few or no scientific study to determine the level of use of library resources and services, and their impact on teaching, research, and productivity. The study therefore investigates the usage of library resources and services and, the impact such usage have on teaching, research and productivity of faculty members. The study will fill a gap in knowledge, and provide the basis for future investigations into service provision and quality issues in the University of Ghana Library System. A multistage sampling approach was used which involved the selection of 189 faculty members who represent respondents in the survey. They were administered with questionnaires, which were later on collected and analysed using the SPSS software. Results indicate that majority of lecturers were more aware of the university library journal collection, and the electronic databases (e-resources), than the other information sources in the UGLS. This result is buttressed by the fact that one does not need to enter the library to see these resources. This could mean that faculty members hardly visit the university's libraries. Some lecturers also do not use the library because materials available are not relevant to their work. However, they are satisfied with the standard of academic facilities that have been provided, and are of the view that materials and referrals were helpful to their courses and research work. University library facilities have been productive to lecturers when using the services for their research, public lectures and thesis works. It is therefore, recommended that the UGLS be supported to upgrade facilities in the departmental libraries, as these are closer to faculty members, and therefore easily accessible. The libraries should also organize periodic review of the relevance of their stock, and also solicit suggestions, from readers and faculty on the type of literature, resources or facilities needed to improve academic work.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The University of Ghana, Legon, is the premier University of Ghana. It was founded by Ordinance on August 11, 1948. It is situated about thirteen kilometers north-east of Accra, the capital city. There is a student population of 41,964, and senior members group that engage in research and teaching, numbering 1,095 (University of Ghana, 2010). Being a public university, the university receives a major portion of its financial support from the government, and therefore prone to the financial challenges that confront most public universities in Ghana, and so this has affected the provision of infrastructure and other resources needed for teaching and research. As a result of this, Academic Facility User Fees (AFUF) and Residential Facility User Fees have been instituted to supplement the running cost of the University (Kpodoe, 2008). Other sources of support also come from the Ghana Educational Trust Fund (GETFUND), alumni, as well as local and foreign institutions (University of Ghana Special Reporter, 2004).

In spite of these financial challenges facing the University of Ghana, the Vice Chancellor of the University, Professor C.N.B. Tagoe, in his 2005 annual Report indicated that the University continues to encourage and promote research efforts and advocacy for the development of the country. He also noted the various activities that faculty members engage themselves in, some of which include research activities, from which they produce scholarly and extension publications which are presented for publications and promotion. Many Senior Members of the University also serve on Boards and

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Committees of public and private organisations, which benefit from their experiences, (University of Ghana, 2005).

Faculty members also prepare lecture notes, and also locate materials for their students and publish scholarly articles in journals. By these activities, they use the libraries and various means and methods to gather, obtain or acquire data that they need for teaching, research and other social responsibilities. The financial scarcity mentioned earlier on, and expanding technologies have influenced a shift in library service activities in the past two decades therefore making it difficult for some academic libraries to provide some of the services that faculty members need. This situation has therefore necessitated the need for members to, not only depend on their institutional libraries alone, but on other libraries both in and outside their various countries as well as consulting organizations and institution within their environment and the usage of the Internet for their information needs. These competitive pressures from different information providers; widely available information resources; rising costs of books, serials, and electronic resources; and emerging new technologies and services providing information to potential library users raise questions about the role of academic libraries in present times. There has been some deliberations about the necessity to better understand and define the needs and expectations of library users to provide the appropriate kind and levels of service to provide satisfaction and service quality (Simmonds and Andaleeb, 2001).

In the past, academic libraries may have enjoyed a monopoly in providing information resources, and services to students and faculty. However, the same cannot be said today as users have a variety of options available to meet their research needs. It is also a fact

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that, academic libraries, and librarians experience an increasingly complex higher education environment. For this reason, it is essential to market library resources and services effectively. One component of a library's marketing plan for distance learners can be an assessment of the needs of distance faculty. Teaching faculty are influential in affecting student perceptions and their use of the library. They are also using electronic technology to deliver courses to distance learners. Many higher education institution offer full degree programmes over the Internet and World Wide Web. Not infrequently, students and even faculty believe that the Web can effectively take the place of the academic library. With changing user expectations, academic libraries must move beyond the traditional model to remain viable (Adam, and Cassner, 2001). The continued success of a service organisation such as an academic library depends upon the organisation's ability to adjust its products and services to correspond to user needs. Academic librarians need to realize that student and faculty needs do change. The change may not be radical or monumental. However, even in the case of subtle or evolutionary change, it remains incumbent for librarians to be aware that needs are changing, and also understand the nature of the changes (Millson-Martula and Menon, 1995).

Assessment of library service quality therefore, has been a questionable agenda as traditional measures of collection size, counts of use, number of staff and size of budget are no longer applicable, and societal concern for quality and accountability in information services of higher education has increased (Kennel, 1995 in Nitecki, 1996). Related to service quality is the concept of customer satisfaction. Practitioners and writers tend to use the term satisfaction and quality interchangeably, but researchers have attempted to be more precise about the meanings and measurements of the two concepts

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resulting in considerable debate. Although the two concepts have certain things in common, satisfaction is generally viewed as a broader concept, whereas service quality focuses specifically on dimensions of service (Zeithaml, Bitner, and Gremler, 2006).

1.1.1 The University of Ghana Library System (UGLS)

The University of Ghana Library System (UGLS), consist of the Balme Library, which is the main library, Accra City Campus library, the Business School library, the Law library, libraries of Institutes, Schools, Halls and other departmental libraries of the University of Ghana. The system has in all, about 500,000 volumes of print resources. Its products, are made up of text-books, reference materials, electronic journals, electronic books, and a number of electronic databases. Whilst the Balme Library stocks materials that cut across all the disciplines within the university, the other libraries restrict themselves to their respective disciplines.

The UGLS also provides excellent facilities, that enable it render efficient services to the university community. Some of these are; Research Commons (RC), Knowledge Commons (KC), a Twenty–four (24) hour Reading Room, Conference Hall, Seminar Rooms, Discussion Rooms, a networked environment, printing and binding services, among others.

1.1.2 Recent Development in the University of Ghana Library System University of Ghana Catalouge (UGCat)

This is the Online Public Access Catalogue (OPAC) of the University of Ghana. It provides a web interface to the University of Ghana libraries' catalog, and enables

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anybody with internet connectivity (including cell phones, to access the University of Ghana Library System's collections.

Carnegie Project

This project is to empower research; especially for graduate students, faculty and researchers to access the library's resources, especially, electronic resources (e-resources), e-journals, e-books, internet and computers, and also to empower professional librarians to manage these resources. The project has taken off, and would last for three years.

Research Commons

As part of the arrangements to support the Carnegie Project, a special research commons, with a congenial environment, has been set up on the first floor of the new East wing extension. It is a centre where faculty members and graduate students can conduct their research, by accessing the library's electronic resources (E-resources), access the Internet for other online resources, use the computers provided for their work, or use the place for their studies.

Knowledge Commons

The Knowledge Commons is also the centre where undergraduate students, and other members of the university can also access the Internet for the library's electronic resources, (E-resources), access the Internet, and also use the computers provided for their work.

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Ghana - South Korea Information Access Centre

An Information Access Centre, set up with the help of the South Korean government is located on the second floor of the new West wing extension. The centre is equipped with an Internet lounge, computer laboratories, and a video conferencing equipment. The purpose for setting up this centre was to help raise Information Technology literacy and awareness in Ghana, as well as promote cooperation in the field of Information Technology between the two countries

Twenty-four Hour Reading Rooms

Reading rooms that are opened to the University of Ghana community for twenty-four (24) hours, every day in the week, with adequate security and comfort has been opened on the last floor of the new East wing extension. This service therefore allows the university community to use some of the library's facilities, even after the library is closed.

1.2 Definition of Terms

Faculty refers to a person with an academic appointment of teaching, research or both within a higher educational institution. This would be used interchangeably with **Lecturers**.

Library Usage is the use of library materials, operations, services, and facilities for dependable, and authoritative knowledge, to support learning, teaching, and research endeavours of students, and staff (users) in institutions of higher education (Campbell, 2006). Library material includes all resources or format, including but not limited to books, journals, papers, audio-visuals and electronic resources.

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Library Services are those services provided to users by Library staff, e.g., reference, loans, photocopying, bindery, and document delivery.

Library Facilities include all the accommodation, furniture and equipment, including but not limited to computing equipment, provided at or by the library.

Productivity is defined by Steindel and Stiroh (2001:1) as the real output per hour of work. They continue that, "We then deal with the more difficult concept of total factor productivity – defined as real output per unit of all inputs. This reflects, in part, the overall efficiency with which inputs are transformed into outputs, and is often associated with technology, but it more accurately reflects the impact of a host of other factors like economies of scale, any unaccounted inputs, resource reallocation, and others".

Research Productivity is a tangible evidence of research achieved by the faculty which leads to a concrete product like a journal article, report, monograph, book chapter, book, a grant proposal, and the like (Blackburrn and Lawrence, 1995; Bean, 1982). For the purpose of this study, the productivity of faculty members would be measured by their authorship of books, publication in refereed journals, and supervision of Ph.D Programmes (Kotrlik et al., 2002).

Satisfaction is defined as a measure of how products or services supplied by an organisation meet or surpass customer expectations. Organisations need to retain existing customers while targeting non customers. Measuring customer satisfaction provides an indication of how successful the organization is at providing products and / or services to the public (Gitman and Carl, 2005).

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1.3 Problem Statement

The importance of library services to faculty members across the world cannot be over emphasized. They aid faculty members in their job performance, and delivery. Studies by Bunyan and Lutz (1991), Spath and Buttlar (1996), showed that faculty members in Saudi universities seldom visited their libraries. Contrary to this observation, Kassim (1999) observed that majority of faculty members in a Malaysian law faculty visited the library at least once a week. This situation has caused many to think that, with the emergence of Information Communication Technology (ICT), the library as a place, would no longer be a critical component of an academic institution (Freeman, 2005).

In the developing world, however, most university libraries, due to cuts in their budgets, cannot boast of adequate collection of books, periodicals and electronic resources to meet with the needs of library users (Markwei, 2001), and (Oyewusi and Oyeboade, 2009). In the university libraries in Ghana, it is the perception of faculty members that, most of them lack current materials (Adika, 2003). According to Badu and Loughridge (1997), in the global context, the cost of books, periodicals, and other library materials and equipment had arisen steeply, but economic conditions had effectively prevented Ghanaian university libraries from developing such services at the required level for their users. Some teaching staff had even developed a very low opinion of the library (Badu,1999).

Markwei (2001:2) also observed that, "A researcher has to depend on Inter-Library loan and other sources for a good literature review". She continues further that, because of this situation, some lecturers hardly visited the library, but rather depended on their personal books, journal subscriptions and other sources for their information needs. She

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also opines that, “With the advent of the Internet, therefore, academics in Ghana and other Sub-Saharan African can now gain access to much needed current and timely information for their various activities”.

According to Ogunkoya (2002:37), “The advancement of an academic staff depends largely, if not entirely on his research output, which depends critically on the availability of suitable facilities including library services”. In the same vein, Obiozor and Ogbonna (2007), also observed that the resources of a library are put in place for the purpose of providing effective services to the library user.

Finally, the emergence of information literacy in libraries, are seen as the foundation of lifelong learning, and the application of technology is leading to rapid changes in higher education. The learning-how-to- learn approach, promoted by information literacy, has increased the confidence of library staff, building their capacity to help academics (Andretta, 2005). According to Asmus (2007), faculty and students are disadvantaged by the absence of appropriate academic support materials at the time of need.

Considering the fact that faculty members of the University of Ghana would always need the resources and services of the libraries for their work, and their academic advancement, the questions that one would ask are: Do faculty members use the University of Ghana libraries? Have the usage of the libraries impacted on their work? Are they satisfied with the resources, services and facilities in the libraries? What are the alternative sources of information of faculty members? Are they aware of the Internet-based resources? It is the aim of this study to find out whether faculty library usage has impacted positively or otherwise on their teaching, research, and publishing, hence this comprehensive research.

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1.4 Purpose Statement

The purpose of the study has been to investigate the impact of library usage on productivity in the University of Ghana. Library usage is the use of library materials, operations, services, and facilities for dependable, and authoritative knowledge, to support learning, teaching, and research endeavours of students, and staff (users) in institutions of higher education (Campbell, 2006).

For the purpose of this study, the research productivity of faculty members of the University of Ghana, was considered. Research productivity is a tangible evidence of research achieved by the faculty which leads to a concrete product like a journal article, report, monograph, book chapter, book, a grant proposal, and the like (Blackburn and Lawrence, 1995; Bean, 1982). Other scholars also confirm that, the productivity of faculty members could be measured by their authorship of books, publication in refereed journals, and supervision of Ph.D Programmes (Kotrlik et al. 2002).

1.5 Objectives of the study

The objectives of the study are:

a) To find out if faculty use the university's libraries or other sources.
b) To determine the extent to which it has impacted negatively or positively.
c) Assess faculty satisfaction with library services.
d) Determine faculty satisfaction with the resources and facilities in the university's libraries.
e) Determine alternative sources of information of faculty members.
f) Evaluate the electronic resources in the library faculty use for their research activities.

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1.6 Theoretical Framework

A theory is a set of statements or principles devised to explain a group of facts or phenomena, especially one that has been repeatedly tested or widely accepted and can be used to make predictions about natural phenomena. According to Creswell (2003), the theory for a study guides the entire study, an organizing model for the research questions and for the data collection procedure. It is therefore a guide for the research process.

The theoretical framework for this study will be the Theory of Human Attitude. The theory was developed by Alreck and Settle (1985). The theory stipulates that attitudes are psychological "predispositions", because they predispose people to act in a certain way towards the object of the attitude. The attitude comes before behaviour and affects the way the person will act. Alreck and Settle (1985) continue to explain further that, attitudes are fairly enduring and will usually last for days, weeks, months or even years. When people receive additional information or experience or even perceive the object of the attitude differently, they change their minds and act differently towards it. These attitudes that people possess are always focused on some objects. These objects could be a physical or material thing, a person, or group, or an idea or issue.

The theory was deemed appropriate for the study because the use of libraries by faculty members is greatly affected by their perception of them, as well as their past experiences. A positive perception of the library or even a good experience of it results in an effective use of it and vice-versa. According to the theory, attitudes are made up of three components, namely; knowledge, feeling, and action.

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The knowledge component indicates that, the feelings and actions of people, are based on their knowledge of a particular object. What people know or perceive about a particular subject is very important because it affects how they behave or act towards it. The feelings and actions of faculty members towards the library would be evaluated based on their knowledge of the role of libraries in tertiary education. Faculty members' knowledge on the importance of the library in their research and teaching processes would be evaluated to get an insight into what factors information play in their use or otherwise of the library.

Alreck and Settle (1995) posit that, when people are aware of anything, seldom would they remain neutral about it. An attitude receives its feeling component in one or two ways: through reward or though evaluation (experience). People will therefore either like or dislike an object or thing because of their experience with it. They automatically and often unconsciously compare what they know or believe about a topic with their own, personal values. If their knowledge fits their values, they develop positive feelings, and if it is contrary to their values, their feelings are negative towards the topic (object). The experience of faulty members in their encounter with libraries will be investigated to find out how they felt about them in order to find out why they liked or disliked them.

The third component of the Theory of Human Attitude states that, human behaviour is unpredictable. Two or more people having about the same knowledge of an object may behave in totally different ways towards it. This is so because their attitudinal action components differ. The best way to measure action component therefore, is by measuring their past, present, and intended future behaivour towards the object. This

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study therefore focuses on the past, present, and intended future behaviour of faculty members towards library usage for their teaching and research activities.

The theory was used by Labinjo (2009) to examine the use of libraries by basic school teachers in some selected schools in the Ga East Municipality of Accra, Ghana. The study provides a platform for assessing the utilization of library and other information provision facilities by faculty members.

The theory is further identified in some other studies in the literature, where the merits and demerits of the theory are further explored. Kumar et al. (2010); Manda (2005); and the Carnegie Report (2004), identified factors that inhibited faculty library usage, whilst other studies by Starkweather and Wallin (1999); Egberongbe (2011); Oduwole and Sowole (2006) and Korobili, Tilikidou and Delistravrou (2006) indicated factors that promoted faculty library usage.

In the context of this study, one would expect that the training given to librarians, and the supply of equipments and resources for example, should result in better service provision for its clientele. The researcher is aware of developments that have already been put in place to improve on library services and resources in the University of Ghana. The present study would therefore want to discover whether faculty members are using such services or otherwise, and its resultant impact on their teaching, research and productivity.

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1.7 Significance of the Study

There is very little studies done on the topic, therefore it is hoped that this study would help kindle interest for further work in this areas. The study also fills a gap in knowledge and provide basis for future investigations into service quality issues in academic libraries and also contribute to the growing body of knowledge in the field.

The study is also helpful to libraries and librarians of the University of Ghana Library System. It will help them to know the conditions of their libraries, since it unearths the weaknesses that exist in the various libraries in the University of Ghana Library System, and therefore help to improve their services, especially in assisting academic staff in their teaching and research, in the acquisitions processes, as well as in the planning of the various library infrastructures.

Also, policy makers will be well informed on the importance of library services to the academic community. The findings and recommendations will go a long way in providing the appropriate strategic direction for the smooth and efficient administration of university libraries in Ghana and elsewhere.

Finally, it is hoped that the results and recommendations of this study would go a long way to help address the concerns of faculty, researchers, students, and the general public, therefore establishing firmly, the importance of library services to the university community.

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1.8 The Scope

In achieving the objectives and purposes of this study, and to ensure that findings of the study represent the case for the entire University of Ghana community, the study covered only faculty members of the University of Ghana main campus. The decision was arrived at, taking into consideration, time and financial constraints that are likely to pose challenges. Secondly, because of the nature of the work and the tight schedule of faculty members at the Medical School at Korle-Bu Hospital, the study will not cover them.

1.9 Description of Chapters

The study is organised into six main chapters. Chapter One contains the background information, problem statement, purpose statement, specific objectives, significance of the study, scope, definition of terms, theoretical framework, description of chapters. Chapter Two consists of the review of literature related to the study. This will look at Library usage and faculty productivity.

Chapter Three highlights the methodology and procedures adopted for the data collection and Chapter Four focuses on data analysis and findings.

Chapter Five presents the discussions of findings.

Chapter six is the concluding chapter, and addresses the summary, conclusions and recommendations.

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CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Humanity is now living in a modern "Information era". Information has therefore become a very important element for the progress of society. To thrive in this modern era, one needs a variety of information, no matter how well versed one is, in a field or profession (Psacharopoulous, 1982, in Tahir, Mahmood and Shafique, 2008). This chapter reviews the literature that exist in the field of the study, and attempts to fit the research, in the "big picture" of what is already known (Mertens, 2009:90). Literature reviews are also conducted to demonstrate that the researcher has a thorough comprehension of the field, and therefore capable of doing an intelligent critique of others' work (University of Arizona Libraries, 2011).

According to Okoli and Schabram (2010), literature reviews are conducted to provide a theoretical background for subsequent research, or answering practical questions by understanding what existing research has to say on the matter. He states further that, the theoretical foundation helps to bring the research questions into focus. Finally, researchers conduct literature reviews to demonstrate that the proposed research contributes something new to the overall body of knowledge or advances the research field's knowledge-base (Levy and Ellis, 2006).

Okunoye, Bada, and Florick (2008:243) acknowledging the role information technology is playing in higher education, states that, "The influence of information technology (IT) in higher education cannot be over-emphasised. The recent advances in IT and particularly the pervasiveness of the World Wide Web (WWW) and the widely

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availability of the Internet is revolutionizing the application of technology in higher education." The Internet and the WWW, according to Walker (2004), Cain (2000), Helford and Lee (2001), Pedroni (1996) in Okunoye, Bada, and Florik (2008), are reforming classroom from hitherto passive to interactive learning environment. IT are changing the teacher's role from information giver to facilitator, adviser, guide, coach, co-learner, mentor, resource and technology manager, and mediator to the students (Shamoail, 2005 in Okunoye, Bada, and Florik, 2008). Libraries and other information systems are therefore used to achieve these objectives. Readers use library facilities primarily to get to know it as a general purpose resource they can use over time, find a specific type of resource to solve a current problem, achieve a goal or meet an interest, and to develop personally, professionally or organizationally (Free Management Library, 2006).

Considering the role and importance of the library, Bennett et al., (2005:3), state that, "the library is the only centralized location where new and emerging information technologies can be confined with traditional knowledge resources in a user-focused, service-rich environment that supports today's social and educational patterns of learning, teaching, and research". Academic libraries today are complex institutions with multiple roles and a host of related operation and services developed over the years. Yet their fundamental purpose has remained the same: To provide access to trustworthy, authoritative knowledge. Consequently, academic libraries, along with their private and government counterparts, have long stood unchallenged throughout the world as the primary providers of recorded knowledge and historical records. Within the context of high education especially, when users wanted dependable information, they turned to academic libraries (Campbell, 2006).

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In studies conducted by Shill and Shawn (2003, 2004), it was shown that many functions traditionally considered "nonlibrary" were included in 182 surveyed academic libraries built or renovated between 1995 and 2002. Some of these functions included; Art galleries (25%) Cafes (32%), Auditoriums (20%), Seminar rooms (53%), Conference rooms (83%) and writing labs (17%).

The purpose of offering what are now quaintly termed "nonlibrary" or non-academic services is to qualitatively enhance the library as a resource and to create an atmosphere conducive to sustained, serious academic work (Bennett et al., 2005).

With emphasis being placed on electronic resources, and the learning community being more interested in virtual information service on the internet, academic libraries urgently need to assess the quality of their services and how user satisfaction can be improved (Kiran, 2010). This chapter therefore reviews literature related to library use by faculty, faculty use of electronic resources, determinants of faculty productivity, library use and faculty productivity, quality of library resources, quality of library services and faculty satisfaction.

2.2 Library Use by Faculty

Library usage is how the facilities, and resources of a library are accessed and utilized for teaching, and research purposes (Ovadia, 2009). Earlier studies by Al-Shambari and Meadows (1995), Strother (1986), Bunyan (1991), Spath and Buttlar (1996) as stated in, Majid, Eisesnschitz and Anwar (1999), had observed that professionals from different discplines in some Saudi universities seldom visited their libraries. They further stated that a contrary observation was obtained by Kassim (1999), when he observed that 59

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percent (%) of faculty members of a Malaysian law faculty visited the library at least once a week. This observation is confirmed by Kannappanavar and Manjunatha (2010), and Majid, Anwar, and Eisenschitz (2000).

Much as most university libraries, like Harvard University's Widener Library (Harvard University, 2009) are centrally located, or have distinct physical locations (Baylor University, 2012), and play a central role in academic work, it beholds on faculty members, being key stakeholders in universities to be aware of the resources provided, and also be seen to be utilizing them. In his study on information needs of faculty and research scholars, Kumar (2009) observed that most users visited the library to borrow, study, search for information, or to read, and that the purpose of their visits depended on time available and needs. Some studies, according to Washington-Hoagland and Clougherty (2002:629), show that, faculty prefer personal contacts, whilst others also found that, some faculty groups most often use journals, books and personal information files. They state further that, "Faculty will use interlibrary loan and commercial document delivery services and are willing to pay for such services, if it speeds up access to needed information".

Popoola (2008a:100) undertook a study titled, 'Faculty awareness and use of library Information Products and Services in Nigerian Universities'. The main purpose of the study was to find out if there is any significant difference in faculty members' awareness of library information products, and services, and also to determine the sources used by faculty members to inform themselves about available information products and services in the library. The study observed that, Colleagues, personal experience, signs/notice in the library, library correspondence and librarians were the major sources used by the

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members to inform themselves about the availability of library information products and services in the studied universities.

Popoola (2008b), in another study on the Use of Information Sources and Services in Social Science Research in Nigerian Universities, observed an upward trend in the mean awareness scores of the respondents using the information services and products and membership of library-related committees and significant positive relationship with faculty awareness of available library information products and services. It therefore recommended that library management in Nigerian universities, specifically the south-west zone, should create faculty awareness about the available information products and services. This could be done through planned public relations programmes, library weeks, study tours, user education programmes, library exhibitions, organisation of seminars, symposia and workshops, library awards night, librarian making contact with the faculty, staff and improve communication links with the latter.

Dickenson (2006), in an Academic Library Impact Study (ALIS), of academic library usage and outcomes, involving nine (9) colleges and universities, indicated that faculty members use libraries, because of the resources they provide. Faculty members use libraries to fulfill a need, that fulfillment which would enable them perform their duties or achieve various set objectives, and goals. The survey also showed that, the majority of faculty members indicated that, at least some of the time, they included, bibliographic instruction or information literacy sessions in their undergraduate courses. The majority of them also indicated that, they frequently or sometimes placed print materials on the traditional reserve services at their institution's library for their students, and also recommended print resources. Again, in the ALIS study, some faculty members said that

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they have frequently, or sometimes used electronic reserve services through their college or university library. The survey also revealed that, the majority of them search library catalogues other than their own, by utilizing links from their library's website.

Foster and Gibbons (2005), looking at how faculty interact with digital tools, and how they organize their work in physical and virtual work places, stated that, what faculty members and university researchers want was, to do their research, read and write about it, share it with others, and keep up in their fields. They continue that many faculty members are outstanding teachers, and some are skilled administrators.

2.2.1 Library Use and Research

Creswell (2008) defines research as a process of steps used to collect and analyze information to increase our understanding of a topic or issue. It consists of three steps: Pose a question, collect data to answer the question, and present an answer to the question.

Information plays a significant role in the professional and personal lives of faculty members. They need information to enhance their professional career, promote their research activities, to keep up with the current developments in their fields of study, as well as to develop competence in their teaching skills, among others. Information seeking behaviour, according to Majid, Anwar and Eisenschitz (2000), has been a popular area of research for information scientists. Line, Hopkins, Blazek and Challener, in Tahir, Mahmood, and Shafique (2008), are among authors who have pointed out that information seeking behaviour and needs of social scientists are fewer than those involving in the natural science, whilst the information needs of humanist are fewer still.

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Scholarly productions, coupled with research and teaching has affected scholarly communication and publishing. According to Mason (2011), scholars are required to spend forty percent of their time doing research, and producing important, original work. Overall academic research, and scholarly publication, according to Gilbert (1995), as seen in Mason (2011), have exploded in the last two decades, with more than 140,000 journals being published each year. He claims that what Vannevar Bush described as a 'mountain of research', has now grown into a chain of mountains with ever increasing academic specialization.

Library facilities and resources are utilized for teaching and research purposes. Ovadia (2009), in a study to explore how faculty use library resources at the LaGuardia Community College, observed that most faculty members were interested in document access, and skill development. These two, are relatively broad findings, given the scope of research skills, and the myriad of documents available in various forms.

Mason (2011), reports that the academic reward system that acts as the engine for keeping this 'publish or perish' mentality alive is something that needs to be seriously considered, as it has made serials to become the central force in the publication of scholarly communication, since they are the preferred methods for publishing results, and for retrospective scholarly review. Promotions and tenure committees judge professors' worth by how much and where they publish. According to Burch (1991), as seen in Mason (2011), it is seen as a necessity for post-secondary institutions to show that their staff can produce a sizable volume of good quality research.

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Housewright and Schonfeld (2010:4), in an Ithaka S+R faculty Surveys, which examined faculty attitudes, found that, "Faculty members' research practices and teaching methods have both shifted, most often at a disciplinary level … Traditional research practices relied heavily on the library itself, and on locally implemented library-provided tools for discovery of book, journal articles, and other materials".

Wisneski (2005), in a study on Kent State University Faculty, seeking to explore in detail, the different research practices, and use of library services of the English faculty, based on rank and status, stated that, the majority of all faculty – except Assistant Professors – stated at least some use of library assistance, and that due to lack of time, many faculty believe they have to do much research and learn fully about library resources and services available to them.

In conclusion, Wisneski (2005:128) states that, "Many faculty, from tenured to part-time, indicated that they do research, have specific types of research they do, and goals for their research that go beyond being only personal or teaching related. Even for those whose jobs do not require publication or scholarly work, many nonetheless did such work". He also indicated that librarians can learn from the survey, what skills faculty is not as proficient in, when it comes to online searching, and offer workshops, specifically on such skills.

2.2.2 Faculty Use of Electronic Resources

Electronic resources (E-resources), are defined as those electronic information resources, and service that users access electronically via computing network from inside the library or remote to the library (Shim *et al*., 2001). Electronic resources (e-resources) are

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invaluable research tools that complement the print-based resources in a traditional library. E-resources include online databases, electronic (e-) journals, Electronic (e-) books, full text articles and websites. Electronic services (e-services) include online catalogue, electronic mail (e-mail) (Ask a Librarian), the online Inter-library loan form, and online reference books (e.g. dictionaries, encyclopedias, etc.).

In a survey conducted by Sharma (2009), to analyse the dependency of teachers and research scholars on e-resources, the perceived impact of the e-resources on their academic efficiency, and problems faced by them whilst using the e-resource, also identified e-resources to include journals, data archives, manuscripts, maps, books, magazines, theses, newspapers, e-mail, research reports, and bibliographic databases. The results showed that the use of e-resource was very common among teachers, and research scholars at the Guru Gobind Singh Indraprastha University in India, and that the majority of the teachers, and research scholars were dependent on e-resources to get the desired and relevant information.

University academics are a unique population, and rely on recent and timely information. Electronic resources are now used more than print resources (Morse and Clintworth, 2000). Their advantages include access to information that might be restricted to the user due to geographical location or finance, access to more current information, and provision of extensive links to additional resources or related content (Dadzie, 2005). According to Shuling (2007), in Okello-Obura (2008), electronic information has gradually become a major resource in every university library in recent years, and this has led many to predict the extinction of the printed journal.

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The major objectives of the adoption of Electronic-resources (e-resources), are to facilitate access to Internet-based information resources, as well as the timely determination of both local and international research output. This, according to Okello-Obura (2008), should result in more timely access to current issues of international research journals and improve user satisfaction with library. Franklin and Plum (2004), also agree with this situation, and observe that, digital information environment, has dramatically changed the way that faculty and students access information offered by academic libraries. They noted that remote users of electronic information, outnumbered in-house users, and that, faculty members, staff and fellows now realized that, virtually all of their information needs could now be addressed from outside the library. Faculty members, according to Dickenson (2006), now take greater advantage of remote library access.

Recent advances in information communication technologies (ICT), and scholarly use of information services, has changed how faculty utilizes library resources for research practices, and teaching methods. Housewright and Schonfeld (2010), have, however, observed that since 2000, faculty members have steadily been shifting towards reliance on network-level electronic resources, and a corresponding decline in interest in using locally provided tools for discovery of books, journals, and other materials. The study concluded that, while print journals may continue to play a limited role for faculty with specific needs that are otherwise poorly met, digital versions are clearly the medium of choice for most faculty members.

Tahir, Mahmood, and Shafique (2008) studied the information needs and information-seeking behaviour of Arts and Humanities teachers at the University of the Punjab,

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Lahore, Pakistan, to investigate the methods, and sources used by humanities teachers to acquire required information, and also to study their information gathering activities.

The results of the study revealed that most humanists prefer information in print, especially older books, while they least prefer audio-visual materials. The study also showed that, they did their information seeking activities at home, meeting personally, as well as using the e-mail for communications.

Meho and Tibbo (2003) researched into the information seeking behaviour of Social Scientists. They revised David Ellis's information seeking behaviour model for this group, which features: Starting, Chaining, Browsing, Differentiating, Monitoring, and Extracting. They study observed that since Ellis' time there has been a radical change in information seeking with the introduction of the Internet. It was therefore the intent of their study to undertake an update on the information seeking behaviour of social scientists. The findings of the study revealed that very often, literature searches are conducted using the university's online catalogue, indexing and abstracting services or browsing. Some also customized databases that often served as the first place to consult.

A study to determine the information-seeking behaviour of health sciences faculty at the University of Illinois at Chicago, showed that, faculty members relied on the traditional methods of asking a colleague, scanning a personal copy of a journal, perusing material in a departmental collection, and, of course, going to the library. The options available within the library were considerable: browsing the latest journals, searching manually through a printed index, asking for a mediated literature search or personally conducting a literature search on a CD-ROM system or mainframe (an option often also available

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from home or office). Many faculty, conducted searches of the literature themselves through user friendly systems that have been marketed directly to them by numerous vendors (Curtis and Weller, 1993).

Makri, Blandford, and Cox (2008) studied academic lawyers who have access to dedicated resources, at a large London university, and a nearby vocational Law College, in order to determine the type of electronic resources they regularly use for their work. The results showed that, the academic lawyers mainly used a core set of electronic resources, most commonly the digital law libraries LexisNexis Professional and Westlaw, the search engine Google, and the academic search engine Google scholar.

Washington-Hoagland and Cloughherty, (2002) have also reported that Faculty access to computer and network connections (allowing use of e-mail, the internet, and local online resources such as library catalogues), became universal in the 1990s at large research institutions. Versions of the Ithaka S+R Faculty Survey (2003-2009), had asked faculty for the starting point of their research from a list of four broad categories:

(a) The library building.

(b) Your online library catalogue.

(c) A general-purpose search engine on the internet or World Wide Web such as Google or Yahoo.

(d) A specific electronic resource/computer database.

The Ithaka S+R Faculty Survey indicated that, the library's physical edifice, and catalogue has declined steadily as starting point for research. The research process is no longer likely to begin with a face-to-face consultation with a librarian, a visit to the

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library's special collections service points, or a search of the online library catalogue. Rather, faculty, most often turn to network level services, including both general purpose search engines, and services targeted specifically to academia. These services have steadily grown in importance to a growing share of faculty members, and there is every reason to expect this pattern to continue. Again, it is the view of some scholars that the library is relinquishing its place as the source of inquiry. The reason why the library is losing its supremacy according to Campbell (2006:16), is due to the advent, and impact of digital technology, which have changed our information-seeking behaviours and habits. He states that, "As digital technology has pervaded every aspect of our civilization, it has set forth a revolution not only in how we store and transmit recorded knowledge, historical records, and a host of other kinds of communication but also in how we seek and gain access to these materials".

Commenting on the accessibility to library resources, Bashorun, Isa and Adisa (2011:554) stated that, "Library users are no longer obliged to visit the library at regular open hours to meet all their information needs. They may search the library online catalogue; use a subject guide or database to access a citation from the Internet or access a full text article from Web-based journals; they may browse an electronic journal; e-mail a reference question via the ask-a-librarian service or borrow an e-book all by remote access".

Savery (2002), in his study on faculty and students perception of technology interaction in teaching, observed that ninety percent (90%) of faculty members used the e-mail more for instructional use. However in another study by Russel et al. (2003), they observed

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that teachers used the technology (email), more for preparation, and work-related communication, and less often for instructional purposes.

Reporting on the findings of the Nua Internet Survey (1999), based on 43,000 faculty members, Jankowska (2004), stated that 86 percent of college professors used computers to send e-mail, and 85 percent used them to write memos or letters. Only 38 percent used computers to create classroom presentations, and 35 percent of faculty used the Internet to conduct research.

Cochenour and Moothart (2003), in a survey of faculty, administrative professional and graduate students at Colorado State University to determine the cancelling of print subscription, when they are duplicated by electronic equivalents, observed that majority of the respondents supported the move electronic- only subscription under the condition that the publisher guarantees perpetual access.

Appleton (2006), in his research on the Perception of electronic library resources in further education, observed that, in the United Kingdom, higher education sector appears to have made very thorough use of electronic library resources, and that this had impacted positively on their teaching and learning activities. Also, Beard, Dale and Hutchins (2007), in their study on The impact of e-resources at Bournemouth University (UK), between 2004 and 2006, indicated the popularity, and enthusiasm for electronic resources amongst staff and students.

Borrego et al. (2007), in a survey on the use of electronic journals by the academic staff of the universities belonging to the Consortium of Academic Libraries of Catalonia

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(CBUC), have revealed that, electronic journals were consulted for both research, and teaching by 53% (percent) of the respondents to a survey. They were consulted only for research by 37.4% (percent) and only for teaching by 2.7%. Respondents in the Exact and Natural Science and Engineering mainly use journals to research, whereas those in Bio-medicine use them for both teaching and research. When the result are disaggregated by use, respondents under the age 30 mainly use them for research, respondents in the 41-50 age group use them for both teaching and research , and respondents over 51 use them for teaching, and research or only for teaching.

Korobili, Tilikidou, and Delistavrou (2006), studying factors that influence library resources usage, observed that, majority of the faculty of Technical Educational Institute, in Thessaloniki, Greece, used e-sources quite frequently. The study further showed that, the use of e-sources was higher among Ph.D degree holders in the School of Business Administration and Economics. Dilek-Kayaoglu (2008), also surveyed the use of electronic journals at the Instanbul University Faculty. The results indicated that the majority supported the transition from print to e-only. The study also showed that e-journals continue to attract usage, and acceptance at the expense of their printed equivalents.

Studying the usage frequencies of electronic and printed journals and changes in behaviour and perceptions towards these formats in 2003, at the Hebrew University of Jerusalem, Bar-llan (2005), reported that 20.9% (percent) of the respondents were frequent users of e-journals. The respondents generally preferred electronic format over the printed one.

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A study by Applebee (2000), in the University of Camberra, Australia to identify the frequency, and type of use that academic staff were making of the Internet within specific disciplines, observed that, academics were making varied use of the Internet, especially for participating in discussion groups, accessing library catalogues and to a lesser extent, contact with students, and also accessing library catalogues.

Bavakutty and Salih (1999) and Kaur (2000), conducted studies at Calicut University, and Nanak Dev University respectively. The results showed that students, research scholars, and faculty members used the Internet for educational, and research purposes. In other related studies by Panda and Sahu (2003), Kumar and Kaur (2006) and Agarwal and Dave (2009), on the Internet use by scientists, research fellows and academics, results showed that, majority of the scholars and colleges use the Internet to provide information, and provide online demonstrations.

Madhusudhan (2007 and 2008), in a study on Internet use, and the use of e-journals in the University of Delhi, indicated that 67.64% (percent) of the research scholars of the faculty of science, and 69.23% (percent) of research scholars of engineering use e-journals for research work. The studies also found out that, they used e-journals to study and, also to update their knowledge. Swain and Panda (2009) in a study of the use of e-services by faculty members of business schools in an Indian state, also observed that faculty members preferred using e-articles over electronic theses and dissertations (ETDs). Some online databases like Emerald Management Xtra (EMX), EBSCO, and PROQUEST were fairly in use, while other online databases were not of high demand. The study observed that, the majority of faculty members were in favour of commercial e-services.

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Eqbar and Khan (2007), in their study on the use of electronic journals by the research scholars of faculty of science and faculty of engineering, found that, speed of availability, and the ease of accessibility of information causes the users to use electronic resources more frequently. In Bangladesh, where Internet services are not well developed, a study by Nasir Uddin (2003), on their usage of the facility, indicated that it had contributed significantly in meeting two principal needs (of academics); communication needs, and also information needs.

2.2.3 Quality of Library Services

A study carried out by the University of Illinois at Urbana-Champaign, identified the quality of the collection, general service skills of staff, and users' knowledge of resources as some of the indicators for the assessment of the quality of library resources (Cullen, 2001). Other issues identified in the literature also included : the effectiveness of information storage and retrieval tools, menus and search engines, systems for structuring, and cataloguing digital resources alongside print resources, security and authentication issues, archiving of electronic material, user assistance, and instruction (Mandel and Millman, 1997 in Cullen, 2001).

In another study on the quality of library resources, Thakuria (2007), stated that the library is an organization that offers reference and information services, and that it is a combination of services – process and its delivery. He continues that, quality should begin from the acquisition section, and then carried on uniformly to the circulation. Again, on how to improve the quality of services, he states that a user must be educated with proper technology to use the library effectively, and that he or she should have

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knowledge of the facilities, and services that are available in the library, and should be able to access them effectively.

2.2.4 Quality of Library Services and Faculty Satisfaction

According to Cooper and Dempsey (1998), satisfaction is the state that results after a library user has favourably or positively experienced a service or product. It can be quantified and basically represent the degree to which a library has met a user's needs and expectations. They continue further that, faculty of all ages perceive online resources as a 'luxury' that eliminates the need for travelling from library to library in search of pertinent material, and that permits awareness of a wider range of valuable sources.

Major problems in libraries affect the satisfaction of users. In a case study of the faculty members at Sardar Vallabhbhai Patel University of Agriculture and Technology in India, it was found that faculty members and research scholars were not satisfied with the library staff, space, materials and equipment. Some members reported that books were old, damaged or mutilated (Kumar et al., 2010).

In a study at the University of Illinois, faculty members expressing their views on new automated library technologies, observed that these technologies had 'boosted" or "elevated" their expectations of what the library should provide – more full texts of journals and journal article, and also the expanded application of the integrated library system (Starkweather and Wallin, 1999:649).

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2.3 Library Use by University Faculty in Africa

Faculty members in Africa have embraced the use of the Internet, as a facility for teaching and research. Nwezeh (2010), in a study on the use of ICT in Nigerian Universities, to determine the awareness of Internet resources, and their usage, observed that, the Internet was used by faculty, staff, and students in sourcing information. The e-mail was most popular. The study concluded that, once these technologies were used effectively, the teaching, learning and research activities in the university would be made easier for the university community.

In her study on electronic resources usage, and impact on the productivity at the University of Lagos, Egberongbe (2011), observed that, the uses of e-resources were very common among lecturers and researchers at the university, and that the majority of them were dependent on them to get desired and relevant information.

Musoke and Kinengyere (2008) conducted a study at the Makerere University Library, Uganda, on several formal and informal studies carried out on the use of e-resources in selected medical schools. The results indicated the first e-resource as being the CD-ROM. The e-mail was the key method of on-line information delivery. Other reports compiled from the evaluation forms from information literacy sessions showed that Makerere University students, academics and researchers had indicated their need to be able to continuously access the latest research articles, scientific breakthrough, and other new knowledge, which can only be obtained electronically.

Omotayo (2010), in a study on the Use and Attitude of Academics towards Electronic Journals, in order to determine if academic staff of the Obafemi Awolowo University at

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Ile-Ife use electronic journals, and also to determine the purpose for which they use the, among others. The findings showed that all the respondents were aware of e-journals, and have embraced it, but have not been publishing them. The study also revealed that, literature search, professional development, and publishing articles, were the main purpose for using e-library journals. Manda (2005) had found usage of e-journals to be low as a results of inadequate end-user training, slow connectivity, limited access to Personal Computers (PCs), poor search skills, and budget cuts.

In a research to investigate the impact the Internet is having on the use of up-to-date information by university faculty in state-owned universities in Ghana, and also provide basic information on issues such as level of Internet use, and access to the Internet among faculty members, Adika (2003), observed that in spite of the benefits that the Internet offer, its usage among university faculty in Ghana was very low, because of lack of access, and high cost of connectivity. She indicated also that usage was likely to increase when users had access, and also received training.

Dadzie (2005) studied the use of electronic resources by students and faculty at Ashesi University, Ghana, in order to determine the level of use, the type of information accessed, and the effectiveness of the library's communication tools for information research. The study showed that 85% (percent) of the respondents used the Internent to access information. This high percentage was the result of the state-of-the art Information Technology (IT) infrastructure. Usages of Internet-based resources were also very high. The usage of scholarly databases was found to be quite low due to inadequate information on their existence.

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Badu and Markwei (2005) also studied, to explore the awareness, and use of the Internet and its resources by the academic staff, and students of the University of Ghana. The results revealed that, virtually all the academic staff who participated in the study were aware of the resources of the Internet especially the e-mail, which was used to contact international colleagues, and also the Usenet news which was mainly used to update research issues, and for social reasons.

Sulemani and Katsekpor (2007), in a study to determine the awareness, access and use of the Internet and online resources, including bibliographic databases, and full text journals by the Faculty of the College of Health Sciences of the University of Ghana, observed that, the majority of faculty members used the Internet, and out of this, about half of them specifically used the library's Internet facilities. The study also revealed that, more than half of faculty members preferred using online, and CD-ROM databases to printed indexes and abstracts.

2.4 Productivity of Faculty

Every profession has a system that is used to evaluate its members. According to Light (1974:14), "If the core activity of the scholarly and academic professions is the advancement of knowledge, the criterion for determining who does and who does not belong to these professions is professional publications, or sometimes scholarly reputation". Although Light goes on to allow that several other criteria could also be used, he returns to publication as the primary measure of professionalism within academe. Again, Massey and Wilger (1995) and Sharobeam and Howard (2002), have also stated that, the number of publications has often been used by the administration in institutions to judge faculty productivity.

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In higher education, past and recent studies have shown that research productivity plays a major role in attaining success in academia as it relates to promotion and tenure, salary, and the fringe benefits of the profession. Studies have also shown that research productivity varies widely from institution to institution depending on the emphasis that is placed on three key aspects of higher education, namely, teaching, research, and service (Kotrlik et al., 2002).

Research and publication is an inherent value at all institutions of higher education. Regardless of the motivation, faculty research fulfills a vital need for new knowledge generation. Faculty publish books and journals at research institutions, comprehensive colleges, liberal arts colleges, and community colleges; however the emphasis on research varies by type of institution. Where required, faculty research and publication productivity can range from one to two articles every three years at liberal arts and comprehensive colleges respectively to about six articles every two years at major research universities (Fairweather, 2002). Publication rates vary by discipline, with the medical and hard sciences having the highest rates to fine arts with the lowest rates (Madsen, Hammond, and Fenton 2004). If publication is the *sine qua non* of membership in the scholarly community, administrators and others responsible for managing a university's resources should be intensely interested in gaining a better understanding of the factors that support faculty in their efforts to perform and publish research (Hughes, 1998).

Hayes (1983:152), in a study on faculty research productivity, stated that, the traditional academic disciplines tend to use the number of publications, and the quality of them as the primary measure, as is reflected in the classic expression "publish or perish". He stated further that, at least, they feel the need for benchmarks against which to make

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comparisons, against which to measure individual faculty when the number of publications involved is significantly less than they would ordinarily have expected.

Dundar and Lewis (1998), wrote on determinants of faculty productivity, and observed that, it had obvious multi-dimensional character as it relates to both knowledge production and knowledge dissemination through its various forms of research, teaching, and outreach activities; research productivity in particular has received a great amount of attention and concern. According to them, research effort, and output form a very distinguishing part of the definitional character of American research universities and, as a consequence, the public rankings of academic programmes have become increasingly important. Further on in the study, they reveal that, research productivity fall under two main attributes; (a) Individual attributes and, (b) Institutional and Departmental attributes.

Individual attributes of research productivity

(1) Innate abilities (i.e., IQ, personality, gender, and age).

(2) Personal environment influences (i.e., quality, and culture of graduate training, and culture of employing department).

Olson (1994), in his work on constraints on faculty gross productivity, observed that, research productivity is conventionally measured as the ratio of total publication to number of programme faculty. Publication analysis of journal articles and books is clearly the most common measure of such research performance

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Institutional and departmental attributes of research productivity

(1) Size of programme and faculty.

(2) Availability of technology, and computing facilities.

(3) Number of books, and journals in library.

(4) Work load policies.

(5) Availability of leaves, travel, and institutional funds for research.

(6) Number of students on research support.

According to Betsey (2007:53), "Faculty productivity, usually measured by the number of publications in refereed journals, books, and / or the number of citations by discipline, by type of educational institution, and at various stages of the life cycle". He continues further that, a number of generalisations can be made that are applicable across a wide range of studies:

1) A small share of scholars account for the great majority of publications;
2) Publication productivity differs across disciplines and types of institutions;
3) Personal characteristics such as gender and race matter;
4) Institutional characteristics matter;
5) Publication productivity varies over the life cycle.

Focusing their study on economics and finance faculty over three decades, Kim, Morse and Zingales (2008), identified the four most commonly used measures of academic productivity. They are; counts of articles written, raw count of publications pages, citation to published articles, and impact-weighted counts of pages where impact is gauged by the citations to the journal in which the publication occurs.

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Budd and Seavey (1996), in their work on faculty productivity, of Library and Information Science faculty in the United States (US), observed that, an Assistant Professor spends his time in rank by producing a body of citable papers, and that he or she stays at that rank for a finite period of time, usually about six years. At that time, the individual may be promoted to Associate Professor (if the individual is productive), or may not be included in the population any longer. They further stated that, the Hayes (1983) study observed that, "Citation counting" is a rather tenious basis for evaluating faculty and school.

Jacobs (2001), in a bibliometric study of the publications patterns of a selected group of academic and research scientists in ten South African universities, observed that, the productivity of the scientist, was estimated by their publication output, presentation of papers at conferences, and workshops, as well as the training and supervision of postgraduate students.

2.5 Library Use and Faculty Productivity

The 1990s was a decade of increased productivity of published research in higher education. There was a considerable increase in the research productivity of faculty with regards to articles in academic or professional journals (Sax et al., 1999). The number of publications has often been used by the administration in institutions to judge faculty productivity.

According to Hughes (1998:4), "Behaviours are meditated by Social Contigencies. This construct is comprised of events, and crises that happen within the personal environment of the individual faculty member, such as birth of a child or illness of a spouse, that

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affect the behaviour, and the quality of performance / outcomes. Behaviours may have outcomes. The outcome of primary interest in this study is scholarly publishing output, especially the publication of scholarly journal articles or books". She continues that, educational researchers have also tended to overlook variables in the work environment related to the campus information environment (1. Enjoyment/Use of Technology, 2. Access to Research Resources, 3. Computer/Software Support, 4. Personal Information Environment, 5. Telecommunication environment, 6. Help from Librarians), that might have relevance to scholarly publishing productivity.

Green and Gilbert (1995:3), in an article on the role of information technology in higher education, noted that, "midway through the '90s, however, colleges and universities confront a second major phase of this "revolution" – a shift in emphasis from the computer as a desktop tool to the computer as the communications gateway to colleagues and "content" (databases, image and text libraries, video and more) made increasingly accessible via computer networks". They also stated that, 'Clearly, technology has brought both enhanced productivity and reduced cost to some parts of higher education'.

Bryd (1999), studied faculty members in departments of biochemistry and medicine in 126 U.S. schools of medicine in 1990 and 1991, in faculty use of journal literature, and faculty publishing productivity. The study revealed that, the traditional view that the size of an academic health science library journal collection, is a good measure of how well that is positioned to support faculty research, may not be accurate.

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2.6 The Effect of Library Use on the Productivity of University Faculty in Africa

The Internet provides several opportunities for the academic. It has changed the way information is published and disseminated, and opened a huge opportunity to scholars from the developing world. It also serves as a medium of collaborative interaction between individuals and their computers without regard for geographic limitation of space (Idowu, Idowu and Adagunodo, 2004). In Nigeria, Mosuro (1996) described CD-ROM services in its premier university, the University of Ibadan, and observed that library patronage had increased, as a result of the availability of a variety of databases.

Oduwole (2004), in a study to investigate access and use of Internet facilities by agricultural researchers at the University of Agriculture, Abeokuta, Nigeria, observed that, scientists at the university are motivated to report research outputs completely as they are used in evaluation for salary increases, promotions as well as extension services to rural communities. The author states further that, the use of the Internet had greatly impacted on the research output of the scientists, as it affords them fast communication with colleagues within and outside the country, and grants them the opportunity to publish their papers on the Internet.

Ani, Edem and Otong (2010) investigated the analysis of Internet access and use by the academic staff in Nigerian universities, with special focus on the University of Calabar. The findings indicated a high level of skills and use by respondents. It was observed that respondents used the Internet to communicate with their peers / colleagues through e-mail, to enhance teaching and research activities, as well as look for information to make up lecture notes.

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In another study, also by Oduwole and Sowole (2006:164), on the use of the The Essential Electronic Agricultural Database (TEEAL), it was observed that the various users (including faculty) were satisfied with their search results, and that the technology, "has enabled researchers locate relevant information at a fast rate, with less effort, and at less cost if compared with hard- copy journals".

Jimba and Atinmo (2000), studied the inter-relatedness between the use of electronic information resources in a library setting, and the effects of such use on research publications amongst a specialized user group. The authors also acknowledged the importance of information resources for productivity, and also for national development, and how their usage could be beneficial to a developing country. The study observed that, there was a low publication output , but noted also that, most other studies that reported low publications levels in Africa, were done at periods when electronic information resources had not made information easily accessible to the researcher.

Kusure et al., (2006), in their study to determine the status of publishing among lecturers in teachers' colleges in Zimbabwe, observed that, the availability of university funding, technology, Internet facilities, books and current journals in the libraries, are more directly associated with research productivity. With these conditions present, the lecturers stated that they were keen and confident to carry out research.

2.7 The Effect of Library Use on the Productivity of University Faculty in Ghana

University libraries in Ghana suffered major setbacks in the 1990's, when due to economic conditions in the country, most university libraries could not obtain the necessary resources and logistics to acquire library materials and provide the services for

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which they were established. According to Badu and Loughridge (1997), amongst the many reasons for this unfortunate development has been government instability, particularly during the period 1966 and 1983, when the ruling military governments showed little regard for higher education, and universities were consequently inadequately funded. These developments eventually led to a situation whereby, the universities, and their libraries could not purchase computers, books, and other information products.

A study by the Carnegie Corporation of New York, observed that, "Most of the prints materials in libraries were from the 1970s and 1980s. Books were old and most current journals received were free or sent as gift or exchanges. Many of the materials were also in need of preservation. The ratio of books to students was far less than it should be, and students could hardly afford to purchase books of their own. Because materials were often outdated, they were not as useful for students in their studies and faculty in their research" (Carnegie Africa Report, 2004: 10).

In spite of all these predicaments that the libraries in Ghana faced, the Carnegie report again stated that, "Students and faculty had increasing expectations, at times unrealistic for technology- enhanced library services, partly because they use Internet cafes to access resources and may have been exposed to the resources as they have studied in other countries. Just as in other parts of the world, young people wanted to use computer and online resources. These resources provide opportunities to bridge the digital divide and students know this. It was interesting to note that in some institutions, the libraries would provide separate computer facilities for students and faculty members". Asamoah-Hassan and Bannerman (2000:4) state that, an electronic library is a self-educator

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because, "through the Internet and its multimedia resources users get educated without necessarily confining themselves to sitting over several books before getting specific information". They state further that the electronic library, through the Internet makes available easily to students, faculty, and researchers, external resources (remote access) as well as inform faculty on Workshops and Conferences, which in the long run help them update their knowledge in their specific fields.

With this background, of students and faculty members wanting to use computers and Internet resources, Hinson (2006:543) writes that, "In Ghana for example, it is a matter of empirical record that some young scholars are willing to invest in purchasing a personal computer (and eventually access an Internet connection), because they believe that the use of personal computer and the Internet would increase their research productivity". Adika (2003:37) earlier on concurred to this view, when she indicated that, "it is only then that faculty will gain the benefit of obtaining relevant and up-to-date information from the Internet to perform their duty. Improved access to relevant information will reflect in an increase in productivity in universities".

Alemna (1999), studying the impact made by new IT in Africa, observed that, it has brought massive amounts of information easily, and that, it was cost effective to users of university libraries in Ghana. The provision of Electronic mail (e-mail), and Internet facilities on campuses, and in the library, and the installation of campus-wide networks, and wireless links had facilitated access to electronic resources, and databases on the web. He also noted the popularity of the CD-ROM in academic libraries in Ghana, especially the Kwame Nkrumah University of Science and Technology in Kumasi, and

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the Balme Library of the University of Ghana, Legon, as the result of widespread publicity.

In a similar study by Agyen-Gyasi (2009), to evaluate the photocopying services at the Kwame Nkrumah University of Science and Technology (KNUST) Library in Kumasi, the author observed that the supply of laptop computers to faculty members, and the establishment of the e-library, had enabled faculty, and students to access resources from remote locations, and at times when the library is closed (remote access). He also noted that the usage of electronic resources at the KNUST library had significantly reduced the demand for photocopying of journal articles.

Armah (2003:140) in a study on the use of information technology in Ghanaian university libraries, noted the impact which has been created. According to her, the survey report "indicated a high level of positive effect of the use of information technology (IT) on users' teaching, learning, and research activities". Majority of respondents indicated that information technology had had favourable effect on their teaching, learning, and research activities. They also stated that, IT had helped them to have more current lecture notes, design better research programmes, extended their academic and professional contacts, and also helped them to publish more papers.

Again, Armah (2009:80) studied the use of Internet service in Ghanaian university libraries and observed that, the use of Internet facilities had enabled links to the online public access catalogues (OPACs) of other libraries, and therefore creating access to remote electronic databases. She also observes that, the e-mail, "has enhanced the exchange of ideas and collaboration between researchers, faculty and students". She opined that Internet access had improved the satisfaction of users needs.

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Cobblah (1999) in Armah (2003:47) assessed the state of affairs of the IFLA/DANIDA Interlibrary Lending and Document Delivery (ILL/DD) project in Ghana. "His investigation revealed 'a commendable progress' and some implementation problems. His assessment showed that ILL/DD has had an impact on research work".

Osei-Bonsu (2000:254) found that, electronic communication has undoubtedly made a great impact on the academic community in Ghana. He states that, "teaching and research staff now assess new ways in which the new communication technologies can either assist them in their present work or improve upon new research opportunities". He observed that the Internet service and the e-mail has allowed efficient and economical access to information to promote their research and enhance their teaching. He states further that, "computer networks has greatly facilitated communication between educational researchers in the developed world and their counterpart in Ghana, in a manner that has strengthened and enhanced collaborative work in research in Ghanaian universities".

Ahenkorah-Marfo (2006:12) writing on recent trends in information delivery at the Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, observed that, there is a general acceptance among members of the academic community, and that electronic information delivery services had had considerable impact on their work. He indicated the popularity of the CD-ROM facilities, as they have enabled patrons (mostly lecturers and graduate students) of many academic libraries, including KNUST library to search from available CD-ROM databases for information they need for teaching and research purposes. The author observes further that the KNUST library in general offers a good technological environment, and is therefore able to provide better, and efficient

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document delivery services to help faculty members and postgraduate students obtain required information and materials for their research work. According to him, the use of the "Internet has virtually affected every sphere of life. It offers access to a good number of library catalogues and online services. It is a unique tool for getting articles or information electronically (by downloading) instead of ordering hard copies". The author also observed the effect of library usage on publishing. He states that, "Most research of late are published only electronically and not in print format".

Agyemang and Badu (2008) also undertook a study on the use of library and information services by nuclear scientist in Ghana. The study involved scientists from the Universities and other research institutions in Ghana. The results showed that the nuclear scientists use libraries mainly to fulfill their research, publication and teaching needs.

It is therefore in the light of these positive impacts of information technology in academia and society that Nwezeh (2010) noted the tremendous contributions of Information Communication Technology (ICT) to societal development, and the removal of the major sources of poverty and tyranny in developing countries like Ghana.

2.8 The Effect of Library Use on the Productivity of the Faculty of the University of Ghana

Markwei (2001:102), studied the awareness and use of the Internet in the University of Ghana, and observed that, apart from the Internet, academic staff (faculty members), "get the bulk of their information from other sources, for example, the library".

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Badu and Markwei (2005) and Markwei (2001), again in their studies indicated that the academic staff were very familiar with the Electronic mail (e-mail), probably because they used it for travelling abroad for conferences, courses, international seminars, contacting international colleagues involved in research, and also looking for information. Respondents generally perceived the Internet to be useful for their academic work, and also provided information in the subject fields.

Armah (1996) in her study of the application of CD-ROM in the University of Ghana's main library, Balme Library, observed that, the service provided a lot more literature for research work, and users found it essential, for their teaching and research work.

Hinson *et al.*, (2007), studying the Internet use and legal practice in Ghana, interviewed lawyers from various backgrounds, including the faculty of the Faculty of Law of the University of Ghana. The study observed that, majority of the lawyers interviewed agreed that the Internet improves their productivity as it serves as a useful communication tool, and also a facility for getting information.

Darkey (2008:81), writing on the improvement of library services in law libraries, with special focus on the library of the Faculty of Law in University of Ghana, Legon, mentioned that, "no meaningful teaching, study or research in law could be carried on without making use of a law library", because the library is the centre of the law school, and that a good lawyer is one who knows where to look for the relevant law. He mentioned the important roles that law library services played in national socio-economic development and observed that lawyers used ICT, the Internet, and e-mail services to acquire the information they needed, transact their businesses, and also

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correspond with their colleagues. He noted that court decisions from other countries could be downloaded for "use as a persuasive authority for some legal principle they are seeking to establish, or as a guide for how a particular statutory provision may be interpreted". He opines that the usage of technology is a big help to users of law libraries, as it has enabled them to effectively perform their functions.

Addressing a media launch of the University of Ghana's 65th Anniversary celebrations, on 18th January, 2013, in Accra, the Vice Chancellor of the University of Ghana, Professor Ernest Aryeetey said that, it was important that the institution (University of Ghana) showcased some of its achievements over the past years. These included reforms aimed at the restructuring of all programmes, and also making courses responsive to current trends, to ensure the high output of its graduates. Some of the measures, the university had taken to achieve these goals, he stated, included the use of ICT in teaching and learning, and also, an enhanced library systems.

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CHAPTER THREE

METHODOLOGY

3.1 Introduction

This section describes and justifies the methodology and techniques employed in this study. It begins with the research design and an explanation of survey research. The sampling techniques and population description are explained. The data collection instruments used, have been explained and their benefits highlighted.

3.2 Research Design

The research methodology used was the survey research. A research design is used to structure the research, to show how all of the major parts of the research project – the samples or groups, measures, treatments or programs, and methods assignment – work together to address the central research questions. It provides the glue that holds the research together. The research design employed in this study is the quantitative research methodology.

A quantitative research is "a systematic process of obtaining formal objective data to describe the variables and their relationships. Quantitative research uses structured tools to generate numerical data and uses statistics to interpret, organize and represent the collected data" (Burns and Grove, 2001:30). In this study, the research design was quantitative as the researcher used a structured questionnaire format to collect data from the respondents. This method allowed the researcher to ask all the respondents the same questions, which allowed objective data to be collected throughout the study.

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A survey research is one of the most important types of quantitative, social science research methods. In this method, the researcher selects a sample of respondents from a population and administers a standardized questionnaire to them to determine the current status of that population with respect to one or more variables. According to Sapsford (2007), a survey describes a population; it counts and describes what is out there. Fraenkel and Wallen (2000) also continue to state that, survey research has the difficulties of:

(a) Ensuring that the questions to be answered are clear and not misleading. and;

(b) Getting a sufficient number of questionnaires completed and returned so that a meaningful analysis can be done.

Again, Sapsford (2007:10) states that "Most surveys are not just about describing populations, but are to be used to test some conclusion or at least to find out how one group differs from another. Thus a prime purpose of survey data is to make planned comparisons".

Some strengths of the survey method include the following:

(1) Surveys are relatively inexpensive (especially self-administered surveys).

(2) Surveys are useful in describing the characteristics of a large population. No other method of observation can provide this general capability.

(3) They can be administered from remote locations using mail, e-mail or telephone.

(4) Consequently, very large samples are feasible, making the results statistically significant even when analyzing multiple variables.

(5) Many questions can be asked about a given topic giving considerable flexibility to the analysis.

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(6) There is flexibility at the creation phase in deciding how the questions will be administered: as face-to-face interviews, by telephone, as group administered written or oral survey, or by electronic means.

(7) Standardized questions make measurement more precise by enforcing uniform definitions upon the participants.

(8) Standardization ensures that similar data can be collected from groups then interpreted comparatively (between - group studies).

(9) Usually, high reliability is easy to obtain, by presenting all subjecting with a standardized stimulus, observer subjectivity is greatly eliminated.

The weaknesses of this method are the following:

(1) A methodology relying on standardization forces the researcher to develop questions general enough to be minimally appropriate for all respondents, possibly missing what is most appropriate to many respondents.

(2) Surveys are inflexible in that they require the initial study design (the tool and administration of the tool) to remain unchanged throughout the data collection.

(3) The researcher must ensure that a large number of the selected sample will reply.

(4) It may be hard for participants to recall information or to tell the truth about a controversial question.

(5) As opposed to direct observation, survey research (excluding some interview approaches can seldom deal with “context” (Sapsford, 2007).

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3.3 Selection of the Case

The first important step to take is to define the population under study (Ary et al., 2010), Because that is essential for identifying the appropriate subjects to select and for knowing to whom the result can be generalized. A population is any set of persons or objects that possess one common characteristic. According to Burns (2000:459), "The case study is rather a 'portmanteau' term, but typically involves the observation of an individual unit, e.g. a student, a delinquent clique, a family group, a class, a school, community, an event, or even an entire culture". The population under study is the faculty (teaching staff) of the University of Ghana, on the main campus at Legon.

Earlier studies on the use of information and library resources by university faculty in their work in the University of Ghana include; Markwei (2001), Armah (2003), Sulemani and Katsekpor (2007), and Kpodoe (2008). This study, therefore sought to probe further, the effect of such usage on academic work and research.

3.4. Selection of Subjects.

The total population of the selected faculties is 947. The breakdown is shown in Table 3.1.

Table 3. 1: Number of Faculty by Gender

Faculty	Number of academic staff		Total
	male	female	
Business School	49	7	56
College of Agriculture & Consumer Sciences	64	22	86
College of Health Sciences	180	70	250
Faculty of Arts	114	55	169
Faculty of Engineering Science	24	3	27
Faculty of Law	15	3	18
Faculty of Science	113	24	137
Faculty of Social Studies	155	49	204
Total	**714**	**233**	**947**

Source: University of Ghana (2010), *Basic statistics.*

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Table 3. 2: Qualification of Faculty Members

Faculty	Number of academic staff		Total
	Doctorate	Masters	
Business School	23	33	56
College of Agriculture & Consumer Sciences	63	23	86
College of Health Sciences	183	67	250
Faculty of Arts	76	93	169
Faculty of Engineering Science	15	12	27
Faculty of Law	6	12	18
Faculty of Science	87	50	137
Faculty of Social Studies	122	82	204
Total	**714**	**233**	**947**

Source: University of Ghana (2010), *Basic statistics.*

Table 3. 3: Stratification Sample

Faculty	Rank	Male	Female	Total	Sample to be Selected (20%)
Business School	Professor Snr. Lecturer Lecturer	2 18 29	0 0 7	56	11 (11.2)
College of Agric & Consumer Sciences	Professor Snr. Lecturer Lecturer	21 17 26	7 3 12	86	17 (17.2)
College of Health Sciences	Professor Snr. Lecturer Lecturer	59 29 92	9 14 47	250	50 (50)
Faculty of Arts	Professor Snr. Lecturer Lecturer	19 24 71	8 11 36	169	34 (33.8)
Faculty of Engineering Sciences	Professor Snr. Lecturer Lecturer	2 4 18	0 1 2	27	5 (5.4)
Faculty of Law	Professor Snr. Lecturer Lecturer	3 4 8	1 1 1	18	4 (3.6)
Science	Professor Snr. Lecturer Lecturer	24 27 62	3 10 11	137	27 (27.4)
Social Studies	Professor Snr. Lecturer Lecturer	37 39 79	3 15 32	205	41 (41)
Total		**714**	**233**	**947**	**189**

Source: University of Ghana (2010), *Basic statistics.*

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3.4.1 Target Population

According to Polit and Beck (2006:258), a population is "the total number of people or elements that fit the specific set specifications of the study. This is also known as the target population. The criteria for inclusion or exclusion should be clearly stated." In this study, the target population is 947, and it included all the faculty members at post in the faculties of Arts, Science, Social Studies, Law, Business School and the various colleges and institutions of the University of Ghana, on Legon campus during the 2009/2010 academic year (University of Ghana, 2010).

3.4.2 Sampling

A sample is the collection of people who were selected for a given research study (Frankfort Nachmmias and Leon-Guerrero, 1997). The most accurate and desired sample in any given situation is the probability sample (Sudman, 1976). Probability samples employ random sampling in order to ensure equal probability of selection method (Frankfort-Nachmias and Leon-Guerrero, 1997).

3.4.3 Stratified Random Technique

The stratified random technique was used to generate the sample for this study. Stratified sampling is a probability sampling technique wherein the researcher divides the entire population into different subgroups or strata, then randomly selects the final subjects proportionally from the different strata. The various faculties were considered as the strata from which the sample was drawn. A simple random sample was drawn from each stratum. This ensured that every member of the target population had an equal chance of being included in the sample. This ensured that the researcher had adequate amounts of subjects from each faculty in the final sample.

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Stratification is usually preferred when the researcher seeks to highlight a specific subgroup within the sample. In this case, the researcher wanted to ensure the presence of adequate members of the various ranks in the various faculties of the University of Ghana.

Researchers also employ stratified random sampling when they want to observe existing relationships between two or more subgroups. This method aids in the study of the relationships between the use of the library services and other variables. It also yields a high statistical precision due to the fact that the variability within the subgroups is lower compared to the variations involved in dealing with the entire population.

This sampling method was chosen because administratively, it was more convenient to stratify the sample. It also provided a better coverage of the population giving the researcher some control over the subgroups that were included in the sample. With this technique, you have a higher statistical precision compared to simple random sampling. This is because the variability within the subgroups is lower compared to the variations when dealing with the entire population. Because this technique has high statistical precision, it also means that it requires a small sample size which can save a lot of time, money and effort of the researcher.

3.5 Instrumentation

For the purpose of this study, the questionnaire was used as a data collection instrument. It was designed to draw out differing responses from the respondents, ranging from gender, faculty, rank, and department, on their use of the services of the University library.

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Questionnaires are familiar to most people (Berdie, 1973). According to Walonick (1993), nearly everyone has had some experience completing questionnaires, and they generally do not make people apprehensive. Ideally, the questionnaire according to Martyn and Lancaster (1981) is brief, attractive, ask ambiguous questions, is interesting and easy to complete. In analyzing it, little effort, is needed. It should also be interpreted without difficultly, to provide clear and concise information on which to base decisions.

Advantages of Questionnaires

i) They permit respondents time to consider their responses carefully without interference from, for example, an interviewer.

ii) Cost. It is possible to provide questionnaires to large numbers of people simultaneously.

iii) Uniformity. Each respondent receives the identical set of questions. With closed-form questions, responses are standardised, which can assist in interpreting from large numbers of respondents.

iv) Can address a large number of issues and questions of concern in a relatively efficient way, with the possibility of a high response rate.

iv) Often, questionnaires are designed so that answers to questions are scored and scores summed to obtain an overall measure of the attitudes and opinions of the respondent.

v) They may be mailed to respondents (although this approach may lower the response rate).

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vi) They permit anonymity. It is usually argued that anonymity increases the rate of response and may increase the likelihood that responses reflect genuinely held opinions
(Miller, 2010).

Disadvantages of Questionnaires

- It may be difficult to obtain a good response rate. Often there is no strong motivation for respondents to respond.
- They are complex instruments and, if badly designed, can be misleading.
- They are an unsuitable method of evaluation if probing is required – there is usually no real possibility for follow-up on answers.
- Quality of data is probably not as high as with alternative methods of data collection, such as personal interviewing.
- They can be misused – a mistake is to try to read too much into questionnaire results (Miller, 2010).

The questionnaire that was used, was designed, based on survey instruments used by Dickenson (2006) in his work on, "How academic libraries help faculty to teach and students to learn", and a survey carried out by the Boston University, "Boston University 2010 Faculty Library Survey Report". Also, colleagues from the Balme Library of the University of Ghana, reviewed the instrument to assess whether the questions asked were enough to elicit the needed responses to achieve the research objectives. Consequently, minor modifications were made to the questionnaire before its final administration.

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The questionnaire sought to elicit among others, data on the following topics; biodata, perception of quality of library service, perceptions on impact of library service to academic work, overall perception of library service. It will also determine faculty satisfaction with library service.

To measure the impact of library usage, the three components of the Human Attitude Theory: knowledge, feelings, and action tendencies, was used. Focus was on the provision of information resources, electronic tools, and user support services.

3.6 Mode of Data Collection

The members of the faculty selected in the sample were contacted at their available times by the researcher and the questionnaires were administered. They were informed and assured of the confidentiality of their information and they all cooperated fully providing all the details required for the study. This ensured that the data collection process took a rather short time to complete and for its analysis to commence.

After collecting the data, there was editing, and appropriate codes were used for the various open and closed-ended questions. The softwares that were used for the analysis include Microsoft excel and the Statistical Package for the Social Sciences (SPSS) to process the data into usable formats (frequencies, cross-tabulations) for the purpose of presentations and discussions.

3.7 Method of Analysis of Data and Presentation of Results

The data collected was presented in the form of frequency distribution tables and bar graphs to provide a picturesque representation and presentation of the data.

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Also, since the study was designed in such a way that the measurement scale of the variables included is mostly ordinal and nominal in nature coupled with the relatively small sample size and the unavailability of prior knowledge about the distribution of the data set, the non-parametric statistical testing procedure was perceived to be the optimal method required for analyzing the various relationships and differences among the various groups. The chi-square test is one of the non-parametric tests of hypothesis.

The chi-square test is used to analyze categorical or nominal data.(Fraenkel and Wallen 2000). The chi-square test was described by Frankfort-Nachmias & Nachmias (1992) as a general test designed to find out if the differences between observed and expected frequencies under a set of theoretical assumptions is statistically significant. The focus of this test according to Siegel and Castellan (1988) is to check whether the differences in proportions exceeding those expected is as a result of chance or actual random deviations from proportionality. To assess the statistical significance of our findings, the chi-square test with a significance level of 0.05 was used.

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CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter presents the results of data which had been collected, with the aid of a questionnaire, and analyzed using tables and figures for their interpretation. One set of questionnaire measuring faculty library use, and productivity, was distributed to respondents.

One hundred and eighty-nine (189) copies of questionnaires were administered, and out of that, one hundred and thirty-six (136) were returned, thus giving a response rate of 71.95%. The researcher faced some challenges during the administration and retrieval of the questionnaires. Some of which included, either the respondent had travelled out of the country, or that they were indisposed. Several follow-ups were made by the researcher, but was not successful.

The chapter begins with the summary statistics of the social and economic characteristics of respondents used in the study. This is followed by followed by the results of the six objectives, arranged under major sub-themes namely, faculty use of the library, impact of library use, productivity of faculty members, faculty satisfaction with library services and resources, alternative sources of information, and electronic resources faculty use for their research.

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4.2 Social and Economic background of respondents

A total of 136 respondents made up of 103 (75.7%) males, and 33 (24.3%) females were sampled from different faculties in the University of Ghana. Table 4.1 shows the distribution of respondents from the various faculties.

Table 4. 1: Characteristics of Respondents

Gender	Frequency	Percentage
Male	103	75.7
Female	33	24.3
Faculty		
Faculty of Arts	30	22.1
Faculty of Science	32	23.5
Faculty of Social Science	43	31.6
Faculty of Law	6	4.4
College of Agric	10	7.4
Business School	7	5.1
Faculty of Engineering	8	5.9
Academic Rank		
Professor	2	1.5
Associate Professor	14	10.3
Senior Lecturer/Senior Research Fellow	32	23.5
Lecturer/Research Fellow	51	37.5
Assistant Lecturer/Assistant Research Fellow	35	25.7
Visiting Scholar	2	1.5
Total	136	100

Source: Field Data

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Table 4.1 also captures the frequency distribution of respondent's on their academic rank in the University of Ghana. The study revealed that, majority 103 (76%) of the respondents were male, as against females 33(24%). Also the majority 75 (55%) are from the Faculty of Social Science and the Sciences. The sciences are observed as courses that require some level of further research and understanding in the very vast pool of knowledge that can be found over the world. It was also evident from the survey that majority 118 (86.7%) of those interviewed were either Lecturers or Research Fellows, with only the minority 18 (13.2%) being Professors and Visiting Scholars.

4.3 Faculty use of the libraries

The use of libraries and other information sources, are vital in the work of faculty members. They need them for teaching, and research purposes (Ovadia, 2009). Mason (2011), also states that, faculty members use libraries to fulfill their publishing functions, as promotions, and tenure committees, judge professor's worth by how much they publish. The first objective of the study therefore, was to investigate the usage of University of Ghana libraries by faculty members. Respondents, answered questions on accessibility, helpfulness of directional signs, awareness of resources, sources of information, awareness of services, and the use of the various resources in the libraries, amongst others.

4.3.1 Accessibility to the libraries on the University of Ghana campus

The location of libraries play important roles in determining their patronage. Most academic libraries in the literature of this study, such as Harvard University's Widener Library (Harvard University, 2009), and also the Central Libraries of Baylor University(Baylor University, 2012), were centrally located, and therefore easily

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accessible. Table 4.2 represents the frequency and percentage of respondent's (Lecturers) perception on the location of the libraries on the University of Ghana campus.

Table 4. 2: Accessibility to libraries on University of Ghana

Response	Frequency	Percentage
Yes	127	93.4
No	2	1.5
Don't Know	7	5.1
Total	**136**	**100**

Source: Field Data

An overwhelming 127 (93%) of respondents indicated their likeness for the location of the libraries, while only 2 (2%) disagreed with the majority. Where the response was not favourable on the location of the library, some reasons were raised. Table 4.2 presents some responses of the latter concerning the reasons for their choice. They felt that even though the central location of the Balme Library, which is the main library in the system, is appropriate, the results indicated that, some departmental libraries are located in obscure places while others were observed to be in temporal structure accommodation.

The response here indicates the importance of the location of the libraries in universities, because it affects accessibility, and therefore usage. This observation confirms what obtains at the Widner Library of the Harvard University (Harvard University, 2009), and also at Baylor University Libraries (Baylor University, 2012). These libraries are centrally located just as the Balme Library.

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4.3.2 Helpfulness of directional signs

To determine the helpfulness of directional signs to the library, respondents were asked if they found the directional signs to the libraries to be clear and helpful. The responses obtained are displayed in Table 4.3.

Table 4. 3: Helpfulness of Directional Signs

Response	Frequency	Percentage
Strongly agree	24	17.9
Agree	74	55.2
I don't agree	20	14.9
I don't know	16	12.0
Total	**134**	**100**

Source: Field Data

It can be observed that the majority of respondents 98 (73%) agreed that, the directional signs were helpful and clear for them to locate the libraries on the University campus. Only a minority 20(15%) felt otherwise.

4.3.3 Awareness of various UGLS Information Resources

Creating awareness of a product, helps people to make informed judgments on them. According to Alreck and Settle (1985), when people receive information on an object, they make their minds, and act differently towards it. Awareness creation, allows the library to market its resources and services to users. To identify the particular library information resources that the faculty members are aware of, the respondents were asked to state which of the listed resources available in the UGLS that they were aware of. The results obtained are illustrated in Table 4.4.

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Table 4. 4: Awareness of Specific library resources

Response	Frequency	Percentage
Online Academic database	105	77.2
DATAD	51	37.5
Catalogue	84	61.8
Indexes	49	36.0
Abstract	55	40.4
Textbooks	100	73.5
Theses	79	58.1
Journals	112	82.4
Internet	107	78.7

Source: Field Data

Table 4.4 shows that majority of lecturers 112 (82%) were more aware of the University Library Journal collections which can be found in all faculty libraries. The next three resources most faculty members were aware of, in the order of responses are the Internet 107 (79%), the library's online academic database 105 (77%), and library text books 100 (74%). These resources are observed to be easily available to lecturers who want to utilize them. It can be noticed that the first three most popular resource, and facilities used by the lecturers are ones that can be accessed without necessarily visiting any library.

This observation confirms the view of Popoola (2008), when he observed a correlation between an upward trend in the mean awareness scores of respondents using the

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information services, and products, with faculty awareness of available information products and services. He also recommends planned public relations programmes, library weeks, study tours, user education programmes, library exhibitions, library exhibitions, organization of serminars, and workshops amongst others to further popularize the products and services offered by university libraries.

Library, which is the main Library of the University of Ghana Library System (UGLS).

4.3.4 Faculty use of resources

The resources that a library keeps, determines how effective and beneficial it is, to its users. Kusure et al., (2006) observed that, the Internet, books, and journals in a library are more associated to research productivity. The availability of various source of information, in a library, makes it indispensable for academic and research work. The resources in the libraries which were generally used by the various faculty members were ascertained by asking the respondents about the particular sources of information they used when they need them. The results are presented in Table 4.5

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Table 4. 5: Sources of information

Sources	Freq.	Percentage
Journal Articles	117	86.0
Reprints	10	7.4
Handbooks	23	16.9
Textbooks	102	75.0
Review	28	20.6
Conference Proceedings	39	28.7
Abstracts	57	41.9
Indexes and bibliographies	28	20.6
Card Catalogues	25	18.4
Selective dissemination of information service	7	5.1
Current Awareness services	9	6.6
Audiovisual media	5	3.7
Electronic Databases	74	54.4
The Internet	105	77.2
Network with colleague through private correspondence	31	22.8
Discussion Group which you are a member	16	11.8
Discussion with librarian	38	27.9

Source: Field Data

The use of sources of information in the library can be observed to conform to Table 4.4 (Awareness of specific library resources) which mentions journals as the most aware resource.

Table 4.4 shows that journal articles are also the most used services when seeking for information by the lecturers. The next three services mostly used by lecturers in the UGLS, are the Internet 105 (77%), textbooks 102 (75%) and Electronic databases 74 (54%). Surprisingly, some lecturers do not use any of the services of information provided by the UGLS when seeking for information. One of the reasons is that the materials in the library are not relevant to their work interest at that point in time.

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4.3.5 Awareness of services in Libraries

Respondents were asked about some of the services they knew the library provided in order to determine their awareness of the services offered by the library. The results obtained are presented in Table 4.6.

Table 4. 6: Awareness of services the library provides

Response	Freq.	Percentage
Preparation of brief bibliographies to help teaching and learning	38	27.9
User education facility to train users on how to access databases	91	66.9
Library Orientation	110	80.9
Selective Dissemination of Information	39	28.7
Profiles	8	5.9
Photocopying	110	80.9
Printing/Binding	61	45.6

Source: Field Data

Table 4.6 shows respondents (Lecturers) perception of their knowledge of the service the University library provides. It shows that Library orientation and photocopying 110 (81%) are the most known services known to be provided by the library to the public. The next three known services mostly known by lecturers in the UGLS are the user education facility to train users on how to access databases 91 (67%), printing and binding 61 (46%) and selective dissemination of information 39 (29%). Others include the preparation of brief bibliographies to help teaching and learning 38 (28%) and the creation of profiles.

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Table 4. 7: Awareness of UGLS resources and services

Response	Name of Faculty N=130							Total
	Arts	Science	Social Science	Law	Agric	Business school	Engineering science	
Yes	23 (85.2%)	23 (74.2%)	22 (52.4%)	5 (83.3%)	7 (70%)	5 (71.4%)	3 (42.9%)	88 (67.7%)
No	3 (11.1%)	8 (25.8%)	20 (47.6%)	1 (16.7%)	3 (30%)	2 (28.6%)	2 (28.6%)	39 (30%)
Don't know	1 (3.7%)	-	-	-	-	-	2 (28.6%)	3 (2.3%)
Total	27 (100)	31 (100)	42 (100)	6 (100)	10 (100)	7 (100)	7 (100)	130 (100)

Chi-Square=35.216, DF=12, P=0.000

From the Table, a majority of the respondents from all the various faculties indicated their awareness of the resources and services offered by the UGLS. Also, a chi-square test performed (Chi-Square=35.216, DF=12, P=0.000) revealed that there is a significant relationship between the individual faculties and their levels of awareness of the resources and services available in the UGLS libraries.

4.3.6 Use of the various UGLS resources and services

In order to determine the faculty members' usage of the resources and services of the University of Ghana Library system (UGLS), the respondents were asked to indicate if they used the various information, resources and services that the UGLS has. The results are shown in Table 4.8.

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Table 4. 8: Use of UGLS resources and services

Response	Frequency	Percentage
Yes	88	67.7
No	39	30
Don't know	3	2.3
Total	**130**	**100**

Source: Field Data

Table 4.8 captures the frequency distribution of the usage of the respondents of the information, resources and services available in the University of Ghana Library system (UGLS).

From the results of the survey, it is evident that majority 88 (68%) of the respondents use these information and resources in the UGLS. However, a sizable minority (30 percent) do not use them.

Table 4. 9: Usage of library resources and services across faculties

Response	Name of Faculty N=136							Total
	Arts	Science	Social Science	Law	Agric	Business school	Engineering science	
Yes	26 (86.7%)	28 (87.5%)	40 (93%)	6 (100%)	8 (80%)	6 (85.7%)	6 (75%)	120 (88.2%)
No	4 (13.3%)	4 (12.5%)	3 (7%)	-	2 (20%)	1 (14.3%)	2 (25%)	16 (11.8%)
Total	30 (100)	32 (100)	43 (100)	6 (100)	10 (100)	7 (100)	8 (100)	136 (100)

DF=6, Chi-Square=3.884, P=0.692

From the Table, it can be observed that the majority of the faculty members 120 (88%) utilize the library resources and services available at the UGLS libraries. A few 16 (12%) also indicated that they do not use these services. The chi-square test showed that there is no significant relationship between the level of usage of library resources and services, and the various faculties (DF=6, Chi-square=3.884, P=0.692).

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4.3.7 Perception of quality of library services

To determine the perception of faculty members on the quality of the services of the UGLS, respondents were asked how high they perceived the quality of the services offered at the library to be. The results are summarized in the Table 4.10.

Table 4. 10: Perception of quality of library services

Response	Freq.	Percentage
Very high	5	3.8
High	85	64
Not high	28	21.1
Not sure	15	11.3
Total	133	100

Source: Field Data

The results indicate that, majority of the lecturers 85 (64%) perceive the services provided by the UGLS to be of a high quality. A minority of 28 (21%) thought otherwise.

4.3.8 Reasons for Library usage

Table 4.11 shows the reasons respondents (Lecturers) seek the information from the university library.

Table 4. 11: Reasons for seeking information

Response	**Freq.**	**Percentage**
Career development	76	55.9
Prepare lecture notes	97	71.3
Update Knowledge	102	75.0
For Research work	108	79.4
Write a research paper	86	63.2
Guide researchers/students	60	44.1
Provide up-to-date reference on courses for students	71	52.2
Social/professional assignments	47	34.6
Confirmation and or refute of issues	28	20.6

Source: Field Data

The Table shows that majority of lecturers use the services for their research work 108 (79%) followed by the use to update their knowledge on issues relevant to their academic

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work 102 (75%). The next four known uses of library services of the University library are to prepare lecture notes 97 (71%), to write a research paper 86 (63%), for career development 76 (56%) and used to provide up-to-date reference on courses for students 71 (52%).

4.3.9 Barriers to effective use of library resources and services

Respondents' answers on the various issues preventing their use of the various resources and services offered by the library are illustrated in Table 4.12.

Table 4. 12: Factors preventing use of library services

Response	Freq.	Percentage
Inconvenient opening hours	7	5.1
Library staff unhelpful	2	1.5
Inadequate access skills	16	11.8
Rely on personal collections	14	10.3
Materials available are not relevant to my work	20	14.7
Access information online all by myself	5	3.7

Source: Field Data

From the Table, some lecturers seem to have inadequate skills in accessing the materials in the library 16 (11.8%). While others relied on their personal collection for information 14 (10.3%), and accessed information online by themselves at their own cost 5 (3.7 percent) for information, other lecturers mentioned the inconvenient open hours of the library for their non-patronage of the sources of information. The least response is that library staffs were not helpful in their search for information 2 (1.5 percent).

Table 4.13 also shows some of the problems respondents (Lecturers) reported that they encounter while seeking for information in the UGLS.

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Table 4. 13: Problems encountered while seeking information in the UGLS libraries

Response	Freq.	Percentage
Material not available	101	74.3
Material out of date	71	52.2
Library staff not willing to help	4	2.9
Lack of knowledge in the use of the library	13	9.6
Inconvenient reading space	35	25.7

Source: Field Data

An overwhelming majority mentioned that materials were not available 101 (74%) or materials were out of date 71 (52%). Some lecturers stated their lack of knowledge in the use of the library 13 (10%). This could make a case for recurrent trainings for lecturers on how to use the library. The next two problems stated by the lecturers in the University library are the inconvenient reading spaces 35 (26%), and that the library staffs were not willing to help 4 (3%).

4.4 Impact of library usage on academic work

The main purpose of this survey, was to determine the impact of library usage on faculty members, and being one of the objectives of this survey, respondents were asked to rate the statement that the standard of academic work would suffer without the internet and electronic resources. The results are presented in Table 4.14.

Table 4. 14: Impact of library service on academic work

Response	Freq.	Percentage
Strongly agree	75	56.4
Agree	49	36.8
I don't agree	8	6
I don't know	1	0.8
Total	133	100

Source: Field Data

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The majority of respondents 124 (93%) agreed that the standard of academic work would suffer without the Internet and electronic resources.

Starkweather and Wallin (1999), in a study at the University of Illinois also noted the views of faculty members on automated library technologies. They stated that these technologies had 'boosted' or 'elevated' their expectations of what the library should provide – more full text of journals, and journal articles, and also the expanded application of the integrated library system. This is what the UGLS is trying to provide for its users, hence the maximum approval of the faculty members of the university.

Furthermore, to determine the opinion of faculty members concerning the impact of the provision of library resources and services on their teaching and learning processes, respondents were asked how high they rate this impact. The results obtained are presented in Table 4.15.

Table 4. 15: Impact of the provision of library services and resources on teaching and publishing

Response	Freq.	Percentage
Very high	13	9.8
High	76	57.6
Not high	29	22
Not sure	14	10.6
Total	132	100

Source: Field Data

It is observed in Table 4.15 that the provision of library resources and services for the teaching and publishing has been high for the majority of lecturers 76 (58%). However a second high proportion of respondents mentioned that the library services have not been high. This observation confirms the views of Kobus van Wyke (2011), and Eqbar and Khan (2007). They are of the view that speed and ease of accessibility of information,

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are the reasons why faculty members use electronic resources. They indicated that the use of information communication technology (ICT), saves a lot of time in academic work.

Table 4. 16: Impact of usage of library services across faculties

Response	Name of Faculty N=132							Total
	Arts	Science	Social Science	Law	Agric	Business school	Engineering science	
Very high	3 (10%)	3 (10%)	4 (9.8%)	2 (33.3%)	1 (10%)	-	-	13 (9.8%)
High	20 (66.7%)	19 (63.3%)	21 (51.2%)	4 (66.7%)	4 (40%)	4 (57.1%)	4 (50%)	76 (57.6%)
Not high	2 (6.7%)	6 (20%)	11 (26.8%)	-	5 (50%)	2 (28.6%)	3 (37.5%)	29 (22%)
Not sure	5 (16.7%)	2 (6.7%)	5 (12.2%)	-	-	1 (14.3%)	1 (12.5%)	14 (10.6%)
Total	30 (100)	30 (100)	41 (100)	6 (100)	10 (100)	7 (100)	8 (100)	132 (100)

Chi-square=19.425, DF=18, P=0.366

The results show that the majority 89 (67.4%) of lecturers in the various faculties rated the impact of the use of library services and resources on their work highly, while a few of them 29 (22%) indicated that the impact is not so high. Also, 14 (10.6%) indicated that they were not sure of the amount of impact that the use of the library resources and services had on their work. Again, Chi-square tests (Chi-square=19.425, DF=18, P=0.366) showed that there is enough evidence to conclude that the relationship between the usage of library services and the individual faculty members is not significant.

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Furthermore, a correlational analysis performed revealed that a strong positive correlation (.708) exists between faculty publishing, teaching, and their usage of library services. In other words, there is a positive impact of the use of University of Ghana libraries' services on faculty productivity.

4.5 Productivity of faculty members

The majority of lecturers have published in refereed journals 101 (74%) while others have also given public lectures and involved in other social activities 95 (70%). Some have ever supervised MPhil and PhD theses 70 (52%), and published a book 39 (29%). This is presented in Table 4.17.

Table 4. 17: Measures of faculty productivity

Response	Freq.	Percentage
Have published a book (s)	39	28.7
Have published in a referred journal	101	74.3
Have ever supervised of MPhil and PhD	70	51.5
Give public lectures/other social activities	95	69.9

Source: Field Data

Respondents were asked whether they have ever referred their students to their course material that is available in the library. The responses are summarized in Table 4.18.

Table 4. 18: Responses on whether respondents have referred students to course materials that are available in the library

Response	Freq.	Percentage
Yes	121	92
No	8	6
Don't know	3	2
Total	132	100

Source: Field Data

Table 4.18 shows respondents (Lecturers) response on their referral to student to use the available material in the library in their specific subject area. An overwhelming 121 (92%) of respondents indicated their referral of students to the materials in the library

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under the specific subject area. While only 8 (6%) percent did not refer their students to the library materials.

Dickenson (2006), in the ALIS study, also observed that faculty members, like their counterparts in the University of Ghana, placed print resources on reserve or referred their students to materials on their subject areas. He states that, 'A great majority (85%) of surveyed college and university faculty reported that they recommend traditional print resources available at their institution library to their students at least some of the time'.

4.6 Faculty satisfaction with library services

Another objective of this survey sought to assess faculty satisfaction of library services. In establishing a measure of the level of satisfaction of the faculty members concerning the quality of the library's services, respondents were asked how satisfied they were with the quality of library services. The results obtained are summarized in Table 4.19.

Table 4. 19: Satisfaction with the quality of library services

Response	Freq.	Percentage
Highly satisfied	6	4.7
Satisfied	66	52
Satisfactory	47	37
Not satisfied	8	6.3
Total	127	100

Source: Field Data

From Table 4.19, majority 72 (57%) of lecturers are satisfied with the quality of library services. However the second highest group of the respondents 47 (37%) mentioned that the library services have been on a satisfactory level.

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Table 4. 20: Faculty satisfaction with quality of library services

Response	Name of Faculty N=127							Total
	Arts	Science	Social Science	Law	Agric	Business school	Engineering science	
Highly satisfied	2 (7.1%)	1 (3.3%)	3 (7.9%)	-	-	-	-	6 (4.7%)
Satisfied	16 (57.1%)	15 (50%)	17 (44.7%)	5 (83.3%)	6 (60%)	2 (28.6%)	5 (62.5%)	66 (52%)
Satisfactory	10 (35.7%)	13 (43.3%)	14 (36.8%)	1 (16.7%)	4 (40%)	3 (42.9%)	2 (25%)	47 (37%)
Not satisfied	-	1 (3.3%)	4 (10.5%)	-	-	2 (28.6%)	1 (12.5%)	8 (6.3%)
Total	28 (100)	30 (100)	38 (100)	6 (100)	10 (100)	7 (100)	8 (100)	127 (100)

Chi-Square=17.137, DF=18, P=0.514

The results from the table show that a majority 72 (56.7%) of the faculty members are satisfied with the quality of the services offered by the library. Some of them 47 (37%) also rated the quality of the services as satisfactory. Furthermore, 8(6.3%) of the faculty members also revealed their dissatisfaction with the quality of the services offered.

Chi-square tests (Chi-Square=17.137, DF=18, P=0.514) showed that there is no significant relationship between the levels of satisfaction with the quality of library services and the individual faculties.

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4.6.1 Attitude of Library Staff

Table 4.21 shows respondents (Lecturers) perception of the attitude of the library staff to encourage them to visit the library.

Table 4. 21: Attitude of library staff

Response	Freq.	Percentage
Yes	75	63.6
No	12	10.1
Don't know	31	26.3
Total	118	100

Source: Field Data

The majority 75 (64%) of respondents indicated their likeness of the attitude of the library staff towards them, and noted that it was encouraging to them, to visit the library frequently. While only a small minority 12 (10%) were dissatisfied on the attitude of the library staff.

Table 4.22 presents some responses of the description of the library staffs' relation with them.

Table 4. 22: Perception of the library staff

Response	Freq.	Percent
Courteous and Polite	44	32.4
Approachable and welcome	57	41.9
Friendly and easy to talk	50	36.8
Not Reliable	10	7.4

Source: Field Data

They felt that the library staff were approachable and welcoming 57 (42%), friendly and easy to talk with 50 (37%), and were courteous and polite 44 (32%). However, a small percentage of response was that the library staffs were not reliable 10 (7%).

4.7 Faculty satisfaction with the resources of the UGLS

The survey attempted to find out from respondents, their satisfaction with the resources in the University of Ghana Library System. Respondents were asked to rate the statement

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that the library materials meet their course and research need. Respondents impressions are presented in Table 4.23.

Table 4. 23: Library materials meet my course/ research needs

Response	Freq.	Percentage
Strongly agree	3	2.2
Agree	85	63.9
I don't agree	37	27.8
I don't know	8	6.0
Total	133	100

Source: Field Data

The majority of respondents 88 (66%) agreed that the library material were helpful and meet their course and research needs. A sizable minority 45 (27%) felt otherwise.

In ascertaining whether faculty members were satisfied with the resources and facilities available at the library, the respondents were asked to rate their level of satisfaction with the library resources and facilities. Table 4.24 shows the results obtained.

Table 4. 24: Satisfaction with the resources in the library

Response	Freq.	Percentage
Highly satisfied	2	1.5
Satisfied	58	43.9
Satisfactory	54	40.9
Not satisfied	18	13.6
Total	132	100

Source: Field Data

Table 4.24 shows that majority of respondents 60 (44%) noted their satisfaction for the resources and facilities in the libraries. Others 54 (41%) mentioned that the facilities were satisfactory.

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Table 4. 25: Satisfaction with the resources in the library

Response	Name of Faculty N=132							Total
	Arts	Science	Social Science	Law	Agric	Business school	Engineering science	
Highly satisfied	1 (3.4%)	-	1 (2.3%)	-	-	-	-	2 (1.5%)
Satisfied	18 (62.1%)	12 (41.4%)	15 (34.9%)	4 (66.7%)	5 (50%)	2 (28.6%)	2 (25%)	58 (43.9%)
Satisfactory	8 (27.6%)	14 (48.3%)	17 (39.5%)	2 (33.3%)	4 (40%)	4 (57.1%)	5 (62.5%)	54 (40.9%)
Not satisfied	2 (6.9%)	3 (10.3%)	10 (23.3%)	-	1 (10%)	1 (14.3%)	1 (12.5%)	18 (13.6%)
Total	29 (100)	29 (100)	43 (100)	6 (100)	10 (100)	7 (100)	8 (100)	132 (100)

Chi-Square=14.795, DF=18, P=0.676

The results from Table 4.25 showed that most 58 (43.9%) of the faculty members were found to be satisfied with the resources available in the library. A sizable amount 54 (40.9%) also rated these resources as satisfactory. Only a few 18 (13.6%) indicated that they were not satisfied with the resources. Chi-square tests (Chi-Square=14.795, DF=18, P=0.676) showed that there is no significant relationship between the levels of faculty satisfaction with the resources in the library and the individual faculties.

4.8 Alternative sources of information of faculty members

One of the objectives of this survey was to determine the alternative source of information of faculty. In line with this, respondents were asked to indicate the various

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sources where they had alternative information. Table 4.26 shows the alternative sources that respondents stated that they normally get their information.

Table 4. 26: Alternative sources of information

Response	Freq.	Percentage
Consult a knowledgeable person	39	28.7
Public/private institutions	54	39.7
Personal Library	96	70.6
Colleagues	95	69.9

Source: Field Data

An overwhelming majority mentioned that they had their own library 96 (71%) or contacted colleagues 95 (70%). Some lecturers consulted public or private institutions 54 (40%) and others consulted knowledgeable persons 39 (29%).

4.9 Electronic resources faculty members use for their research

As part of the objectives, it was necessary to evaluate the electronic resources that faculty members used for their research. Table 4.27 below shows which electronic journal databases (e-resources) lecturers generally access from the University of Ghana Library System when seeking for information.

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Table 4. 27: Electronic journal databases (e-resources) respondents ever accessed from UGLS

Response	Freq.	Percentage
AGORA	27	19.9
Blackwell-synergy	30	22.1
Cambridge Journal	48	35.3
EBSCO	42	30.9
EMERALD	33	24.3
Oxford University Press	56	41.2
HINARI	26	19.1
JSTOR	17	12.5
Science Direct	4	2.9
Sage	1	0.7
IEEE	1	0.7
Royal Society	1	0.7
Google	2	1.5
BioOne	1	0.7
Optical Society of America	1	0.7
Nature Publishing	1	0.7
Chicago Journals	1	0.7

Source: Field Data

The major e-resources are Oxford University Press 56 (41%), Cambridge Journal 48 (35%), EBSCO 42 (31%), EMERALD (24%), Blackwell-synergy 30 (22%), AGORA 27 (20%) and HINARI 26 (19%) amongst others.

Table 4.28 below, shows what benefits respondents (Lecturers) gain from the utilization of electronic information resource (e resource).

Table 4. 28: Benefits derived from e-resource utilization

Response	Freq.	Percentage
Access to a wider range of information	103	75.7
Faster access to information	79	58.1
Access to current up-to-date information	96	70.6
Easier access to information	75	55.1
Improved academic performance as a result of access to quality information	55	40.4

Source: Field Data

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The Table 4.28 shows that the majority of lecturers use the services for a wider access to different range of information 103 (76%) and have access to current up-to-date information in the global space. The next three known uses of the e-resource provided by the UGLS are for fast access to information 79 (58%), for easier access to information 75 (55%), and for improved academic performance as a result of access to quality information 55 (40%).

4.10 Suggestions for effective use of information resources and services

Respondents were asked to give suggestions that would ensure the effective use of information resource/ services in the libraries. The results are presented in Table 4.29.

Table 4. 29: Suggestions for effective use of information resources and services

Response	Freq.	Percentage
Presentations at official University gatherings	57	41.9
Establish subject librarian at faculty level to serve as link between faculty and library	99	72.8
Create reading areas for academic staff	89	65.4
Library should be proactive	67	49.3
Faculty should be networked with the library	3	2.2
Increase staff to serve increasing student numbers	2	1.5
Enhance speed of internet access	1	0.7
Subscribe to more online databases (PubMed, Elsvier, Springerlink)	1	0.7
Strengthen inter-library book loan facility	1	0.7
There should be regular information flow on small leaflets to Departments and Institutions	2	1.5

Source: Field Data

From the Table, it is observed that the respondents mentioned the need to establish subject librarians at faculty level to serve as links between the faculties and the library. This was the response of 99 (72.8%) of the lecturers. There were suggestions for the creation of reading areas for academic staff 89 (65%), and that presentation can be made

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on how to use these library resources at official university gatherings 57 (42%) amongst others.

This observation of the study is in agreement with Popoola (2008), when in his study of the use of information products and services in social science research in Nigerian universities, recommended planned public relations programmes, library weeks, study tours, user education programmes, library exhibition seminars, and Librarians making contact with faculty, amongst others.

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CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Introduction

This chapter presents a discussion of the findings of the study, as stated in the objectives in chapter one. The main purpose of the study was to identify the various library resources that faculty use in their work. It set out to verify whether faculty members of the University of Ghana use the services and resources of the University of Ghana Libraries to enhance their research, teaching, and publishing productivity, faculty satisfaction with the resources, and also the alternative sources of information faculty members use.

The discussion of the findings of this study was done under the following major headings, namely:

- Faculty use of the libraries
- Impact of library usage
- Productivity of faculty members
- Faculty satisfaction with library services and resources
- Use of electronic resources
- Barriers to use of the libraries

5.2 Faculty use of the libraries

The first objective of the study was to find out if faculty members used the University of Ghana libraries for their teaching and research activities. The study showed that, most of the respondents (93%), liked the location of the libraries, an indication that, they

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probably use them, as against a few of them (2%) who did not like them, and therefore may not be using them.

Directional signs are very important tools in libraries, as they help users access library facilities, and resources more effectively and conveniently. The majority of respondents (73%) agreed that, the directional signs in the libraries were helpful for the usage of the libraries, as against a minority (27%) who did not agree or did not know.

The theory for this study, The Human Attitude Theory, developed by Alreck and Settle (1985) posit that, the information (awareness) that people have on objects, informs their decisions to either use or not to use them. For the awareness of the various UGLS resources, the study showed that, most (82%) of the respondents were aware of the university's journal collections, the Internet (79%), the Online databases (77%), and textbooks (74%). The results also showed that the least known resource were the Abstracts (40%), Database of African Theses and Dissertations (DATAD) (38%), and Indexes (36%). This may be due to the fact that these documents may require some assistance before they are effectively used.

The study also revealed that, journals (86%), were the most used resource, followed by the Internet (77%), textbooks (75%), electronic databases (54%), with the least being the use of audiovisual media (4%). For the awareness of the various services in the libraries, the study showed that, the majority of faculty members were aware of, library orientation (81%), photocopying (81%), followed by User education facilities to train users on how to access databases (67%), Selective Dissemination of information (29%), preparation of bibliographies (28%), with the least being the creation of profiles (6%).

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With regard to the use of library resources and services, the majority of respondents (65%) use them, as against the minority (29%), who do not, and for the reasons which they gave for their usage of the libraries, it was discovered that, majority (79%) of faculty members used it for the research work, followed by Update of knowledge (75%), preparation of lecture notes (71%). The lowest response given was for the confirmation or refute of issues (21%).

The barriers to the effective use of the services and resources of the libraries were found to be largely due to materials not being relevant to their work (15%). This could be solved if there was adequate information flow, between the faculties, and the libraries, to get librarians informed of their needs. The next, is inadequate skills of respondents (12%). This problem therefore calls for more information literacy programmes, and probably, more assistance from library staff.

5.3 Impact of library usage

The objective was to assess the influence of library usage on faculty's academic and social activities. The respondents' perceptions of the impact of library use, corroborate Cobblah's (1999 in Armah (2003) observation that, ILL/DD had had an impact on research work. Ahenkora-Marfo (2006), also agrees that, electronic information delivery services had impacted considerably on faculty members. He observes further that, library usage has affected every sphere of life, including research work, and publishing.

The study reveals that, most of the respondents (89%) in the various faculties use the libraries. It is generally seen that library usage has helped faculty members undertake

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teaching, research, and publishing amongst others. From the data, it could be affirmed that there is a positive impact of the use of the libraries on faculty members.

5.4 Productivity of faculty members

One of the objectives was to find the productivity of faculty members. The studies revealed that, (74%) of respondents have published in refereed journals, (70%) had been involved in public and social activities, and (52%) had also supervised M.Phil and Ph.D thesis. Also the findings show that, library use had helped faculty members in their teaching assignments, as most of them had referred students to library materials in specific subject areas.

These findings implied that, majority of lecturers, in undertaking these assignments, needed the services of the UGLS, and other sources of information. Their experience, regarding this exercise need to be known and improved upon, to enhance their efficiency in the delivery of their social and educational duties. Also, based on the outcome of the survey, it could be found that, majority of faculty members have also published in refereed journals, supervised MPhil and PhD theses, given public lectures or participated in other social activities. It is in the light of this that, Light (1974:14) observed that, 'If the core activity of the scholarly, and academic professions is the advancement of knowledge, the criterion for determining who does, and who does not belong to these professions is, professional publications, or sometimes scholarly reputations'.

Again, it may be concluded that, the publications in refereed journals might have improved upon the academic standings of faculty members, which might also have led to their participation, or invitation to social activities or functions. It could be therefore be

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concluded that library usage has impacted positively on the productivity of faculty members of the University of Ghana. This is supported by the observations of Dundar and Lewis (1998), when they stated that faculty productivity had a multi-dimensional character, and that it relates to both knowledge production and knowledge dissemination through its various forms of research, teaching, and outreach activities. Betsey (2007), also affirms further that, faculty productivity, is usually measured by publications in journals, books, number of citations by discipline.

5.5 Faculty satisfaction with resources and services

This study assessed the satisfaction of faculty, as against the use of library services and resources. According to Cooper and Dempsey (1998), satisfaction is the state that results after a library user has favourably or positively experienced a service or a product. The findings of the study, indicated that majority (57%) of the respondents were satisfied with the services provided by the libraries.

For the resources, majority (46%) of the respondents stated that they were either highly satisfied or satisfied, whilst a sizable number of them (41%) said that they were satisfactory. These observations from the studies, may have been arrived at, as a result of the recent overall improvements in, infrastructure, services, and resources, especially in ICT, and e-resources.

Dickenson (2006), also observed that over half of faculty members had reported that the library supported their teaching objectives by helping students know about information resources in the library, placing print materials on reserve, offering information literacy sessions, and also providing students with skills to refine their research papers, projects

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and presentations. Again, he observed that majority of faculty could find books, and print periodicals at their library, and also find the needed electronic resource through their library.

According to Kumar et al. (2010), problems in libraries affect the satisfaction of its users. The high acceptance rate observed in the study is an indication that faculty members are satisfied with the services and resources provided by the UGLS.

5.6 Alternative sources of information

The study was also to determine the alternative sources of information faculty members used for their teaching and research activities. Findings of the study revealed that, the most (71%) of the respondents consulted their own libraries. Other responses indicated that, they consulted with knowledgeable persons, visited public or private institutions, or consulted their colleauges. This results confirms the findings of Washington-Hoagland and Clougherty (2002), when they observed that, faculty members used personal contacts (consult knowledgeable people in public and private institutions), personal information files (personal library), and faculty groups (colleagues) to obtain their information needs. Dickenson (2006:59) also stated that, 'Most faculty members also expressed confidence at being able to locate resources at other institutions'. These could be public, college or university libraries.

It also confirms the observations of Campbell (2006:16) that the library is losing its supremacy, due to the advent and impact of digital technology, which has changed the information-seeking behaviour and habits of scholars. He states that, 'As digital technology has pervaded every aspect of our civilisation, it has set forth a revolution, not

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only in how we store and transmit recorded knowledge, historical records, and a host of other kinds of communication, but also in how we seek and gain access to these materials'.

5.7 Use of electronic resources

Electronic resources are invaluable research tools that compliment the print-based resources. Examples of e-resources are online databases, electronic (e-) journals, online catalogues, e-mail, and online reference books such as dictionaries, and encyclopedias (Shim et al, 2001). The survey sought to find the electronic resources faculty members of the University of Ghana use for teaching, research, and publishing activities, amongst others. It was revealed from the analysis of data that, the usage of e-resources was popular.

The major e-resources respondent used were Oxford University Press (41%), Cambridge journal (35%), EBSCO (31%), EMERALD (24%). Others included, JSTOR, Science Direct, Sage, IEEE, Royal Society, Google, Bio One, Optical Society of America, Nature Publishing, and Chicago Journals.

This result reveals the popularity of journal articles and full text journal databases (e-resources) amongst faculty members. The reason that may be attributed to this popularity, is the desire to improve upon their careers, and also shows that, the 'publish or perish' mentality (Mason, 2011), is alive among faculty members. It also confirms the observations of Badu and Markwei (2005), Eqbar and Khan (2007), Madhusudhan (2007), Musoke and Kinengyere (2008), Sharma (2009), Nwezeh (2010), and Egberongbe (2011), that the majority of faculty members, and research scholars were

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dependent on e-resources, and commercial databases to get the desired and relevant information. There is therefore the need to equip the UGLS to be able to provide, and maintain these services, and the solution could be found in either forming or joining a library consortium.

Sreekumar and Sunitha (2005) also observed that, the proliferation of e-resources across the world has brought a revolution in scholarly publication, subscription, and also access. This condition has therefore necessitated the need for collection enrichment, hence the need for library consortia, which they state further that, it is a collective activity of a group of libraries towards a common goal of resource sharing.

5.8 Barriers to use of the libraries

In the process of providing a service, various problems may arise, that would go to affect its effective usage. The major problems that the study revealed were that, those who said the material they wanted was not available were (74%), that the material was out of date (52%), while inconvenient reading places (26%) followed. Other problems that the study revealed were, lack of knowledge in the use of the library, inconvenient opening hours, and lastly, that the library staff were not willing to help.

These findings could have implications on the effective usage of library resources and services. The university administration, the Ministry of Education, through the Ghana Education Trust Fund (GETFUND), and the Carnegie Corporation of the United States of America (USA), have already, in many ways, provided the needed resources to remedy the situation. Extensions have been added to both the east and west wings of the

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library, with assistance from the government and the GETFUND, therefore creating more office and reading spaces.

With assistance from the Carnegie Corporation, a Research Commons, with congenial environment has been established for faculty, and graduate students. A Knowledge Commons, has also been provided for undergraduate students as well. More computers have been provided, whilst the Internet service has been enhanced to provide access to e-resources, and other web-based resources. The South Korean government, has also established a Multi-media Centre in the west wing of the Balme Library to provide service to the university community, as well as the public at large.

Several institutions from Europe and the Americas, have in various ways helped to solve the training of library personnel, and also provided assistance in the form of funds, book donations, workshops, and conferences to help build the capacity of the UGLS staff to enable them provide better services to users of the libraries. A twenty four hour (24 hour) reading room has been opened for the university community in the east wing of the Balme Library, to provide some solutions to the problem of inconvenient opening hours for users. This assistance from both local and external sources, have therefore built up the capacity of staff to provide better services to library users, and also provided the necessary motivation for conducting research in the University of Ghana.

It is in the light of this that, Thakuria (2007:413) stated that, “quality should start from the acquisition section, which should be carried uniformly to circulation section”. He also stated that, if these are followed, problems of unavailability of books and, outdated books will be solved. Another study by Kumar et al. (2010), noted that users were not

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satisfied with library staff, and also noted the problem of space, materials, and equipment. Like Thakuria, they also reported that the books were old, and mutilated. From the results of the survey, these problems appear to be present in the UGLS.

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CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter presents the summary of the major findings, in line with the study objectives in chapter one. It also covers the conclusions which are based on the findings. Recommendations for further improvements on library services and resources, have been made to draw the attention of stakeholders. Areas for further studies, have also been suggested.

The study was undertaken, with the main purpose of finding out the impact of library usage on faculty productivity in the University of Ghana, by using the survey method. The study sought to identify library resources and services that faculty members used for their teaching and research functions. In addition, the survey sought to determine the impact of the usage of these on their productivity.

The researcher administered and collected the questionnaires personally. The quantitative data that was collected, were analysed with the help of the Social Package for Social Scientists (SPSS) software. Descriptive and quantitative analysis were then used to present the results of the study.

6.2 Summary of Major Findings

The results of the study discussed are summarised as follows:

- Majority of faculty members liked the central location of the Balme Library.
- Majority of faculty members used the libraries.
- That the directional signs in the libraries were helpful.

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- The view of some minority of lecturers was that, some departmental libraries are located in obscure places, and that the directional signs were not clear and helpful.
- Majority of faculty members were aware of the university library journal collection, the Internet, and the electronic databases than the other resources and services in the UGLS.
- Some faculty members do not use the libraries because of inadequate access skills, that materials available were not relevant to their work, or were outdated.
- Library usage were mainly for research, update of knowledge, preparation of lecture notes, and also career development.
- Majority of faculty members agreed that, the resources and services provided in the libraries had helped academic work, and that without the Internet, and electronic resources, the standard of academic work would suffer.
- The perception of faculty members of library services was high.
- Majority of faculty members felt that, the impact off library usage on their work was high.
- Majority were also satisfied with the resources, and services of the libraries.
- The alternative sources of information of majority of faculty members were their own libraries or the consultation of their colleagues.
- The most popular databases used by faculty members were Oxford University Press, EBSCO, and EMERALD.
- Library orientation and photocopying are the most known services in the libraries.

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6.3 Conclusion

This study on the impact of library usage on the productivity of the faculty of the University of Ghana, has corrected the notion held by many that, faculty members were generally not among the regular patrons of the libraries of the university. The results of the study have shown that majority of faculty members are actually concerned with what goes on in the libraries. It was realised that, the provision of information technology (IT), the Internet, and electronic databases, and an improvement in the services of the libraries was all that was needed to get faculty members to use the resources and services of the libraries of the university fully, therefore discarding the previous negative perceptions that was held about the resources and services of the UGLS libraries.

The summary of the study above, shows that, faculty members use the university libraries for their academic, research, and social responsibilities. The data presented in the study, it is hoped could in future, form the basis for further research, and also for decisions that would be taken on faculty library usage in the University of Ghana, other universities in Ghana, and beyond.

6.4 Recommendations

Based on the findings of the survey, the researcher would like to make the following recommendations:

- Promotions and faculty career development depend on the amount of their publications (Ovadia, 2009, Mason, 2011 & Betsey, 2007). The university administration should therefore take steps to provide permanent structures for all departmental libraries in temporary accommodation, at locations that can be easily accessible by its users as it pertains in some well known university libraries

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(Harvard University, 2009 & Baylor University, 2012) and also stock them with current books and journals, to make them appealing to faculty members, in their research and publishing functions.

- To ensure that faculty library usage and research needs are well catered for, and also to create awareness of the products and facilities that the libraries have for its users, an avenue should be created by the UGLS, to solicit for responses, and ideas on how to develop its resources or serve its users better. This could be done through planned public relations programmes, library weeks, study tours, user education programmes, library exhibitions, organisation of seminars, symposia and workshops, and library awards nights. (Popoola, 2008b). Also, information should be disseminated on leaflets or other media to market the resources and services available at the library.

- The study showed that majority of the respondents use library resources and services to fulfill a need. Some of which are career development, prepare lecture notes, update knowledge, for research, and also for social assignments. In doing so, they use electronic resources frequently. This confirms studies by Dickenson (2006) and Kiran (2010) on faculty usage of e-resources. It is therefore recommended that, uninterrupted Internet services should be provided at all times to enable faculty members use these resources. To be able to achieve this objective, a contingency fund should be set up for the libraries to enable them train their personnel, acquire databases, computers, and other equipment needed, as well as provide uninterrupted power supply at all times.

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- The study also found out that, some faculty members do not use the libraries because of inadequate skills. Ovadia (2009) observed that even though faculty members were interested in document access, and skill development, these depended on the scope of their research skills. It is therefore recommended that the libraries should organize at regular periods, special information literacy programmes for faculty members, because it is this skill that would guarantee a lifelong culture of learning.

- Orientation, and Information Literacy programmes should be organised for all new faculty members, to enable them be aware of the resources, and services that the libraries provide). Older faculty members, should be given refresher programmes, to sharpen their skills in library usage (Popoola, 2008). This will also build their capacity to use the library resources more effectively.

- The study found that, some faculty did not find materials they needed. Others said that they were not relevant to their work, or that they were outdated. This confirms the study by Kiran et al., (2010). The library should therefore organize periodic review of its resources and facilities. Outdated (old) books should be weeded out, and current ones acquired. Faculty members should also be involved in the acquisition process always to ensure that books and other resources acquired are relevant, and up to date.

- There is the need for specialized Subject Librarians to serve as liaisons between the UGLS, and the departments. This is to enable them understand and communicate effectively on issues coming from both directions, that are pertinent

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to the efficient performance of the libraries. These could be on the latest developments in the subject areas, challenges, as well as latest innovations, and additions in the various subject areas in the libraries.

- There should be regular comprehensive training sessions for the staff of the libraries to build their capacities in all aspects of the profession, so that they could offer the needed services to their clients. These training sessions could be in the form of workshops, seminars or attachment to other libraries in the country or abroad.

- The government, university authorities, and all stakeholders should be committed to the mission of academic libraries, in their quest to support research, teaching, and learning, by provided needed funds at the appropriate periods, to promote continuity in service delivery in the libraries. Consortial issues, subscription of online databases, software, hardware, and the acquisition of books and computers should therefore be treated with the urgency that it requires.

- The public should also be encouraged to sponsor, or advocate for the sponsoring of library projects. They could also provide some of the funds, needed for the sustenance of library projects, and also to make amends for unexpected budgetary cuts.

6.5 Areas for further studies

Other areas recommended for further studies are the following:

- Quality issues in collection development in Ghanaian academic libraries.
- Improving non-library services in Ghanaian academic libraries.

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APPENDIX

Appendix A

DEPARTMENT OF INFORMATION STUDIES
UNIVERSITY OF GHANA, LEGON

QUESTIONNAIRE ON THE IMPACT OF LIBRARY USAGE ON THE FACULTY OF THE UNIVERSITY OF GHANA, LEGON

Dear Sir/Madam,

This questionnaire seeks to elicit information from the academic staff of selected faculties of the University of Ghana, as part of a Master of Philosophy Degree Programme.

All information provided, would be treated confidentially.

Thank you for your co-operation.

Yours faithfully,

(Emmanuel Asiedu Akyeampong)
Student/Researcher

Please put a tick in the box by the answer you choose, and fill in as appropriate.

Section A: Background Information

1. Gender: a. Male [ ] b. Female [ ]
2. Name of Faculty/Department:
   a. Faculty of Arts [ ]
   b. Faculty of Science [ ]
   c. Faculty of Social Studies [ ]
   d. Faculty of Law [ ]
   e. Faculty of Engineering Science [ ]
3. Department/School/Institute etc. : …….
4. What is your academic rank?
   a. Professor [ ]
   b. Associate Professor [ ]
   c. Senior Lecturer/Senior Research Fellow [ ]
   d. Lecturer/Research Fellow [ ]
   e. Assistant Lecturer/Assistant Research Fellow [ ]
   f. Other(s) Please, specify ……

   ……

Section B: Knowledge and Perception of Library Resources and Services

5. Do you like the location of the libraries on campus?
   a. Yes [ ] b. No [ ] c. Don't know [ ]

6. If No, why? ……
   ……

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7. Directional signs in the libraries are clear and helpful?
   a. Strongly agree [ ]
   b. Agree [ ]
   c. I don't agree [ ]
   d. I don't know [ ]
   e. Other(s) Please, specify ……
   ……

8. Are you aware of the various information resources and services that University of Ghana Library System (UGLS) has? a. Yes [ ] b. No [ ] c. Don't know [ ]

9. Which of these library resources and facilities are you aware of? (Please tick as many as are applicable)
   a. i. Online Academic Database [ ]
      ii. Database of African Theses and Dissertation (DATAD) [ ]
   b. i. Catalogue [ ]
      ii. Indexes [ ]
      iii. Abstract [ ]
   c. Textbooks [ ]
   d. Theses [ ]
   e. Journals [ ]
   f. Internet [ ]

10. What are some of the services do you know the libraries provide? (Please tick as many as apply)
   a. Preparation of brief bibliographies to help teaching and learning [ ]
   b. User education facility to train users on how to access databases [ ]
   c. Library Orientation [ ]
   d. Selective Dissemination of Information [ ]
   e. Profiles [ ]
   f. Photocopying [ ]
   g. Printing [ ]
   h. Other(s) Please, specify ……
   ……

11. How do you perceive the quality of services in the University of Ghana Library System?
   a. Very High [ ]
   b. High [ ]
   c. Not high [ ]
   d. Not sure [ ]

SECTION C: Use of the Library

12. Do you use the library as often as you would wish? a. Yes [ ]
   b. No [ ] c. Don't know [ ]

13. If Yes, what type of resources do you seek in the University Libraries?
   a. Textbooks [ ]

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b. Journals [ ]
c. Newspapers [ ]
d. Government publications [ ]
e. Theses [ ]
f. Research reports [ ]
g. Electronic resources [ ]
h. Reference materials [ ]
i. Other(s) Please, specify ……

……

14. Which sources/services of information do you generally use when seeking for information? (Please tick as many as apply)

a. Journal Articles [ ]
b. Reprints [ ]
c. Handbooks [ ]
d. Textbooks [ ]
e. Review [ ]
f. Conference Proceedings [ ]
g. Abstracts [ ]
h. Indexes and bibliographies [ ]
i. Card Catalogues [ ]
j. Selective dissemination of information service [ ]
k. Current Awareness services [ ]
l. Audiovisual media [ ]
m. Electronic Database [ ]
n. The Internet [ ]
o. Network with colleague through private correspondence [ ]
p. Discussion Group which you are a member [ ]
q. Discussion with Librarian [ ]
r. Other(s) Please, specify ……

……

15. If No, what prevent you from using them?

a. inconvenient opening hours [ ]
b. Library staff unhelpful [ ]
c. Inadequate access skills [ ]
d. Relay on personal collections [ ]
e. Materials available are not relevant to my work [ ]
f. Other(s) Please, specify ……

……

16. Does the attitude of the library staff, if any encourage you to visit the library as often as possible?

a. Yes [ ] b. No [ ] c. Don't know [ ]

17. How would you describe the library staff?

a. Courteous and polite [ ]
b. Approachable and Welcome [ ]
c. Friendly and easy to talk to [ ]
d. Not reliable [ ]
e. Other(s) Please specify ……

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18. How satisfied are you with the quality of services in the University of Ghana Library System?
    a. Highly Satisfied
    b. Satisfied
    c. Satisfactory
    d Not satisfied
19. Are you satisfied with the resources and facilities in the libraries on campus?
    a. Highly Satisfied
    b. Satisfied
    c. Satisfactory
    d Not satisfied
20. How has the provision of library services and resources impacted on the teaching and learning process?
    a. Very High [ ]
    b. High [ ]
    c. Not high [ ]
    d. Not sure [ ]
21. Do you get access to a networked computer from:
    i. University of Ghana Library System: a. Yes [ ] b. No [ ]
    ii. Home: a. Yes [ ] b. No [ ]
22. When you access a networked computer, what do you mostly use it for? (Please tick as applicable)
    a. Academic purposes [ ]
    b. Browse the Internet [ ]
    c. E-mail service [ ]
    d. News [ ]
    e. Other(s) Please, specify ……

    ……
23. How often do you use the Internet?
    a. Daily [ ] b. At least once a week [ ] c. At least once a fortnight [ ] d. At least once a month [ ] e. Rarely [ ]
24. How often do you use the Library's OPAC (Online Public Access Catalogue) as a guide to e-information/resources?
    a. Always [ ] b. Sometimes [ ] c. Never [ ]
25. What do you seek information for?
    a. Career development (publishing) [ ]
    b. Prepare lecture notes [ ]
    c. Update knowledge [ ]
    d. For research work [ ]
    e. Write a research paper [ ]
    f. Guide researchers/students [ ]
    g. Provide up-to-date reference on courses to students [ ]
    h. Social/Professional Assignments [ ]
    i. Conformation and or refute on issue (Quick reference) [ ]
    j. Other(s) Please, specify ……

    ……
26. Which of these services do you use? (Please tick as many as apply)
    a. preparation of brief bibliographies to help teaching

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and learning [ ]

b. User education facility to train users on how to access databases [ ]

c. Library Orientation [ ]

d. Selective Dissemination of Information [ ]

e. Profile [ ]

f. Photocopying [ ]

g. Printing [ ]

h. Other(s) Please, specify ……

……

27. Which of the following full text journal databases (e-resources) have you ever accessed from University of Ghana Library System:

a. AGORA [ ]

b. Blackwell-Synergy [ ]

c. Cambridge Journal [ ]

d. EBSCO [ ]

e. EMERALD [ ]

f. Oxford University Press [ ]

g. HINARI [ ]

h. Other(s) Please, specify ……

……

…

28. What benefits have you derived from electronic information resource (e-resources) utilisation? (Please choose as applicable)

a. Access to a wider range of information [ ]

b. Faster access to information [ ]

c. Access to current up-to-date information [ ]

e. Easier access to information [ ]

f. Improved academic performance as a result of access to quality information [ ]

29. How did you learn how to use computer to access electronic resources? (Choose as applicable)

a. Trial and error [ ]

b. Guidance from Library Staff [ ]

c. Self taught [ ]

d. Courses offered by the University [ ]

f. Other(s) Please, specify ……

……

30. Please rate your feelings or opinion to the following statement:
"Library materials meet my course/ research needs"

a. Strongly agree [ ]

b. Agree [ ]

c. I don't agree [ ]

d. I don't know [ ]

e. Other(s) Please, specify ……

……

31. Please rate your feelings or opinion to the following statement:

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"I feel that the standard of my academic work would suffer without the internet and electronic resources"

a. Strongly agree [ ]
b. Agree [ ]
c. I don't agree [ ]
d. I don't know [ ]
e. Other(s) Please, specify ……

……

32. Where do you normally get alternative information sources? (please tick as many as apply)

a. Consult a knowledgeable person [ ]
b. Public / Private Institutions [ ]
c. Personal Library [ ]
d. Colleagues [ ]
e. Other(s) Please, specify ……

……

33. Have you ever referred students to materials that are available in your subject area? a. Yes [ ] b. No [ ] c. Don't know [ ]

34. What are the problems (if any) you encountered while seeking information in the University of Ghana Libraries?

a. Material not available [ ]
b. Material out of date [ ]
c. Library staff not willing to help [ ]
d. Lack of knowledge in the use of Library [ ]
e. Inconvenient reading space [ ]
f. Other(s) Please, specify ……

……

35. Which of the following apply to you?

a. Have published a book(s) [ ]
b. Have published in a refereed journal [ ]
c. Have ever supervised of M.Phil. & Ph.D. Programmes [ ]
d. Give public lectures/ Other social activities [ ]

36. Please suggest measures that could be put in place to ensure effective use of information resources/services in the Libraries (Please tick as many as apply)?

a. Presentations at official university gatherings (e.g., Faculty Board, Meetings, Convocation, etc.) [ ]
b. Establish subject librarian at faculty level to serve as links between Faculty and library [ ]
c. Create reading areas for academic staff [ ]
d. Library should be proactive [ ]
e. Other(s) Please, specify ……

……

Thank you.